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Back-formation from automation automate (third-person singular simple present automates, present participle automating, simple past and past participle automated) (ambitransitive) To replace or enhance human labor with machines. Many offices still need to automate. We saved time and money by automating the process. 1966 March, Thomas Pynchon, chapter 5, in The Crying of Lot 49, New York, N.Y.: Bantam Books, published November 1976, →ISBN, page 83:In the early '60's a Yoyodyne executive living near L.A. and located someplace in the corporate root-system above supervisor but below vice-president, found himself, at age 39, automated out of a job. automatabilityautomatiseinformatesemiautomate automatautomatableautomaticautomationautomatizationautomatizeautomaton From Ancient Greek αὐτόματον (autómaton), neuter of αὐτόματος (autómatos, “self moving, self willed”). IPA(key): /o.tɔ.mat/, /ɔ.tɔ.mat/ automate m (plural automates) automaton 2020 June 19, “Stopper la haine sur Internet”, in Le Monde[1]:Des monceaux de messages racistes, antisémites, misogynes ou homophobes s'étalent en permanence sur les réseaux sociaux, générés par des individus, mais aussi par des automates, soufflant sur les braises et semant le désordre à grande échelle.Mountains of racist, antisemitic, misogynistic and homophobic messages are permanently visible on social media, generated by people, but also by bots, fanning the flames and causing chaos on a vast scale. → Russian: автома́т (avtomát) → Turkish: otomat automate nominative/accusative feminine/neuter plural of automat automate You can't perform that action at this time. Home Assistant 2024.12! Holidays are coming, and it is time for the last release of the year! 2024 has been a crazy year for Home Assistant. Not just in terms of features like drag-and-drop dashboards, organization capabilities like labels, and the countless improvements to our voice efforts. But also the founding of the Open Home Foundation, and even more in the growth of our lovely community as we've risen up to become the #1 open source project on GitHub! ❤ However, the year ain't over yet! This month, we want to learn about all your “What the heck?!” moments with Home Assistant. Tell us about any little annoyances, bugs, ideas, or suggestions. You can read all about it in the WTH announcement blog, or join the conversation on our WTH forums! Honestly, the biggest announcement of the year has yet to come though… I'm pretty sure it is voice hardware related. 😉 So make sure you aren't missing the live stream on 19 December! You will not be disappointed! Before you check out everything in this release, I just want to close this year with a big thank you to every single person in our community, which includes you! Thank you for using Home Assistant! ❤ Happy holidays! And for the last time in 2024: Enjoy the release! ../Frenck Improved scene editor experience ScenesScenes capture the states you want certain entities to be. For example, a scene can specify that light A should be turned on and light B should be bright red. [Learn more] are a great way to set the mood in your home. They allow you to capture the state of your devices at a specific moment and restore it later, using a button on your dashboard, an automation, or even a voice command. One of the common frustrations with editing scenes in Home Assistant is that it would immediately activate and apply the scene if you opened the scene editor. Not the best experience if you are doing some midnight tinkering and accidentally activate a scene that turns on all the lights in the house, waking up everyone. 😅 @karwosts & @marcinbauer85 to the rescue! As of this release, the scene editor has two modes. A review mode and an edit mode. The “review mode” is how your scene will open, and it will show you the scene as it is currently set up, but it will not apply it. You can then switch to the “edit mode”; only then will the scene activate, allowing you to adjust the actual scenery and snapshot it again once you are happy with the changes. Additionally, if you prefer YAMLYAML is a human-readable data serialization language. It is used to store and transmit data in a structured format. In Home Assistant, YAML is used for configuration, for example in the configuration.yaml or automations.yaml files. [Learn more], you can edit scenes directly from the scene editor by selecting “Edit in YAML” from the three-dotted overflow menu in the top right corner. Voice It has almost been two years since we started our journey into building our very own open source voice assistants, with the goal of letting users control Home Assistant in their own language. Today, we are getting even closer to the finish line. Not just with the features that ship in this release, but you might have heard about our voice hardware that is coming soon… With some help from Santa and his elves, we have prepared a product launch YouTube live stream on 19 December 2024, at 20:00 GMT / 12:00 PT / 21:00 CET! Curious? Be sure to join the live stream, hit like , subscribe to our channel, and the little bell to get notified when we go live! You really don't want to miss this one! But before we get there, let's dive into the features that ship in this release! Let your voice assistant fall back to an LLM-based agent Exactly 6 months ago, we bridged the gap between our default conversation agent and the wonderful (and scary) world of LLMs. We allowed you to experiment and let an LLM-based conversation agent control your home instead of relying on our built-in sentences. This choice was an interesting first step. LLMs are generally much better at interpreting natural language and more knowledgeable about the world than our default agent. However, they are often slow and/or expensive. And let's face it: Even if the demos are cool, 90% of the commands we say in our homes are simple: “Turn this on” or “Turn that off”. Today, we're finally allowing users to mix these worlds. Starting from this release, you can set up a voice assistant that targets our fast, community-driven conversation agent first and only falls back to an LLM-based agent if no matches are found. This allows you to mix the pros of both worlds with almost none of the cons. Specific known commands will be processed locally and extremely fast, and the power of an LLM will only be used for more complex queries that Home Assistant does not natively understand. Language leaders are accelerating the pace It is no secret: our voice hardware will be revealed on 19 December 2024. Language leaders have already got their hands on the device, and are working extremely hard to polish support for their language. The number of contributions to our intents repository (where we store the supported sentences) skyrocketed during the last month, which we all truly appreciate. More and more languages are becoming usable or even complete! You can follow the progress here. We won't list them all, but rest assured, someone is likely working hard to ensure your native language works seamlessly, so you can use it comfortably at home. A faster voice experience Our default conversation agent was built from the ground up to match a sentence to its underlying intention extremely fast and on cheap hardware. Release after release, we added more use cases and sentences to Home Assistant, and our sentence-matching logic became slower and slower. In some languages, a non-matching sentence could take more than 15 seconds to process! This release adds a lot of love to this matching logic; we completely reengineered the way we match sentences. On top of that, language leaders spent some time reducing the complexity of their sentences. Some languages saw a 99% reduction in the number of possible combinations! The results speak for themselves: Revised Integration Quality Scale The Integration Quality Scale (IQS) is a way we classify the “quality” of an integration. It gives users an idea of what to expect from an integration. You might have noticed our IQS indicator listed on each integration documentation page. The scale was initially introduced in 2018 and aimed more at the technical side and code of an integration back then. Over the years, it didn't really evolve with the rest of Home Assistant and the general expectations of our community. It was time for a change! Over the last few months, we have worked with the community to revise and improve the scale. Involving not just our community developers but also documentation writers, user experience designers, and anyone interested in the community. As a result, the new Integration Quality Scale is not just focused on the code but even more on the overall user experience. It is now a more holistic view of the integration, and we hope it will help everyone make better decisions about what to use in their homes. We now have a total of 4 scaled tiers: Bronze: The new minimum set of requirements we've set for new integrations. Silver: Ensuring reliability and robustness of integrations. Gold: Ensuring a gold standard user experience, including documentation. Platinum: The epitome of quality, supreme code quality, and optimal performance. We also have four additional (non-scaled) special tiers: No score: For integrations that are not yet scored against the new scale. Internal For integrations Home Assistant itself uses, like the automation engine. Legacy For older integrations that can't be set up through the UI. Custom For custom integrations, as we can't score those. You can read all about these tiers, what they have been designed for, and a summary of their characteristics on our dedicated Integration Quality Scale page. We sincerely hope this new scale will not just help our users, but also our community developers to understand what is expected by providing a clear path to improving their integrations. To help with that, we have now extensively documented every rule and requirement for each tier in our developer documentation. Integrations Thanks to our community for keeping pace with the new integrationsIntegrations connect and integrate Home Assistant with your devices, services, and more. [Learn more] and improvements to existing ones! You're all awesome. New integrations We welcome the following new integrations in this release: Noteworthy improvements to existing integrations It is not just new integrationsIntegrations connect and integrate Home Assistant with your devices, services, and more. [Learn more] that have been added; existing integrations are also being constantly improved. Here are some of the noteworthy changes to existing integrations: The UniFi Protect integration now has support for fingerprint and NFC events. You can even automate on the specific fingerprint or NFC scanned! Awesome, @RaHehl! The TP-Link integration now supports the H200 hubs and adds more energy-monitoring sensors for Tapo devices. It also exposes new entities like a motion sensor switch, a child lock switch for thermostats, and the last water leak alert timestamp. Thanks to @sdb9696, @rytilahti, and @ryenitcher! @starKillerOG added selector entities for bitrate, framerate, and vehicle tone to the Reolink integration. Additionally, a tilt position sensor for PTZ cameras has been added. Thanks! @fwestenberg updated the Stookwijzer integration, with some new sensors, right on time for the winter season. Nice! The Habitica integration now provides actions for quest handling, scoring habits, and rewards. It also adds calendars for your to-do and daily reminders. Nice, @tr4nt0r! The eQ-3 Bluetooth Smart integration now provides several helpful switches and sensors (like away mode, boost, battery). Thanks, @EuleMitKeule! @YogevBokobza added Switcher Lights support to the Switcher integration. Thanks! Other noteworthy changes There are many more improvements in this release; here are some of the other noteworthy changes this release: @jpbede added a download snapshot button to the camera entity information dialog. Super nice! Thanks! The UI now displays durations using a timer format (like 03:26:00) in natural language (3h 26min). Thanks @piitaya! Support for new units of measurement has been added: Units for area sizes (and conversions between metric and US). Thanks @mikey0000! @jschlyter has added support for MW, GW, TW, GWh, and TWh. Nice! µV has been added as a unit of electric potential. Thanks @tr4nt0r! Lastly, mL/s has been added as a unit of volume flow rate. Thanks @zweckj! If you are editing an automation using YAML via our UI and you make a mistake… you will now actually see the parsing error message in the UI. This is really helpful! Thanks, @karwosts! Translations for units of measurement Over the last few years, we have been working hard to make every little bit of Home Assistant accessible for everyone by providing translations for every part of the system. However, we still have some edge cases, where we are not able to provide translations for everything. One of those edge cases is the units of measurement. Although units do not need translation (like °C or kWh) in most cases, many sensors in a home might use specific and non-standardized units. For example, a sensor that measures the number of “people” in a home or one that tells you how many “movies” are in your collection. So, suppose you now have a sensor with a custom measurement unit, like the amount of “movies” in your collection. In that case, integrations can now provide translations for those units. Several integrations have already added translations for their units, including Jellyfin, Lyrion Music Server, Transmission, Pi-hole, QBitTorrent, NextDNS, Mastodon, and Mealie! We've upgraded to Python 3.13 This release comes packaged with Python 3.13! Wondering what that means? Python is the programming language that powers Home Assistant behind the scenes. Why does it matter? Every new Python release brings improvements that we can tap into—better performance, fewer bugs, and a smoother developer experience for our contributors. Plus, Python 3.13 offers a speed boost to Home Assistant overall—what's not to love? Running Home Assistant OS or using the Home Assistant Container? No sweat—we've got you covered. The upgrade to Python 3.13 is handled automatically. Just update Home Assistant as usual, and you're good to go. Easy, right? 😎 Patch releases We will also release patch releases for Home Assistant 2024.12 in December. These patch releases only contain bug fixes. Our goal is to release a patch release every Friday. 2024.12.1 - December 6 2024.12.2 - December 10 2024.12.3 - December 13 2024.12.4 - December 17 2024.12.5 - December 20 Need help? Join the community! Home Assistant has a great community of users who are all more than willing to help each other out. So, join us! Our very active Discord chat server is an excellent place to be at, and don't forget to join our amazing forums. Found a bug or issue? Please report it in our issue tracker, to get it fixed! Or, check our help page for guidance for more places you can go. Are you more into email? Sign-up for our Building the Open Home Newsletter to get the latest news about features, things happening in our community and other news about building an Open Home; straight into your inbox. Backward-incompatible changes We do our best to avoid making changes to existing functionality that might unexpectedly impact your Home Assistant installation. Unfortunately, sometimes, it is inevitable. We always make sure to document these changes to make the transition as easy as possible for you. This release has the following backward-incompatible changes: Brother Printer The unit of measurement for pages changed from p to pages. This could potentially break use cases if it was used in templates where a state with a unit is used, such as states('sensor.pages', with_unit=True). (@bieniu - #131275) (documentation) Ecovacs Ecovacs devices not recognized by the library will no longer use the fallback vacuum. Instead, the device will not be added to Home Assistant, and a warning log will created. (@edenhaus - #131525) (documentation) History Stats After this change, history_stats in time or ratio mode will only count definitively known time-based recorded data. Prior to this change, if the start of the time window was earlier than the oldest datapoint in the recorder, history_stats would count time using the assumption that an entity was in the first state it found since the beginning of time. This could lead to wild overcalculations when a switch was turned on after a long period of inactivity, and history_stats would assume it had always been on and calculate a huge value based on that. (@karwosts - #126271) (documentation) Jewish Calendar To support Rosh Chodesh this creates a breaking change as the holiday sensor will return “Chanukah, Rosh Chodesh” when both of those days fall on the same date. If you have an automation expecting the “Chanukah” value, you must update it. (@tsvi - #130456) (documentation) Plugwise For the Plugwise Adam, all device-based climate entities will be replaced by new zone-based climate entities, which will most likely have different entity names. This change aligns with the Plugwise App's representation of climate entities as zones (as discovered in Issue #130597). (@bouwew - #131659) (documentation) QNAP The QNAP sensors will no longer have the following extra state attributes: memory_free memory_percent_used memory_size memory_used network_err network_link_status network_max_speed network_rx network_tx status system_temp uptime volume_percentage_used volume_size_free volume_size_total volume_size_used These extra state attributes were deprecated in Home Assistant 2024.6 and have now been removed. If you are using this in your automation or script, use the separate available sensors instead. (@jbouwh - #130310) (documentation) Spotify The Spotify audio feature sensors have been removed since Spotify removed access for them, starting 27 November. Additionally, featured and category playlists have been removed from the Spotify media browser since Spotify deprecated the API, starting on 27 November. (@joostlek - #131754 #131758) (documentation) Statistics Previously the attributes of the entity states of the Statistics integration were only provided when they had a non None value. This has now changed so the attributes are always provided even with None values. You might need to modify your automations or scripts depending on whether these attributes are present or not. (@gjohansson-ST - #129353) (documentation) Stookwijzer The Stookwijzer sensor has migrated to the new API provided by Atlas Leefomgeving. As a result, the reported states are slightly different. Old versus new: Blue (blauw) -> Yellow (code_yellow) Orange (oranje) -> Orange (code_orange) Red (rood) -> Red (code_red) If you use the Stookwijzer sensor in your automations or scripts, you might need to adjust those for this change. (@frenck - #131567) (documentation) Templates The this template variable which is available in some templatable helpers was previously based on the new state instead of the current state. The change affects the following integrations, if templates use the this variable. The user might have to update their templates to reflect the above change using the value variable instead, which holds the new value. command_line rest scrape snmp sql (@gjohansson-ST - #130135) Z-Wave With this release, you will need to update your zwave-js-server instance. You must use zwave-js-server 1.39.0 or greater (schema 39). If you use the Z-Wave JS add-on, you need at least version 0.9.0. If you use the Z-Wave JS UI add-on, you need at least version 3.17.0. If you use the Z-Wave JS UI Docker container, you need at least version 9.26.0. If you run your own Docker container or some other installation method, you will need to update your zwave-js-server instance to at least 1.39.0. (@MindFreeze - #129482) (documentation) If you are a custom integration developer and want to learn about changes and new features available for your integration: Be sure to follow our developer blog. The following are the most notable for this release: All changes Of course, there is a lot more in this release. You can find a list of all changes made here: Full changelog for Home Assistant Core 2024.12 15,042 followers 4d In September, we're celebrating our 12th Birthday! This year, we're doing something new - we want to share YOUR stories. Does Home Assistant help you in unexpected ways? Do you know of or have projects that inspire others? Fill out this Form and tell us about it! In the last article in this series about home automation, I started digging into Home Assistant. I set up a Zigbee integration with a Sonoff Zigbee Bridge and installed a few add-ons, including Node-RED, File Editor, Mosquitto broker, and Samba. I wrapped up by walking through Node-RED's configuration, which I will use heavily later on in this series. The four articles before that one discussed what Home Assistant is, why you may want local control, some of the communication protocols for smart home components, and how to install Home Assistant in a virtual machine (VM) using libvirt. In this sixth article, I'll walk through the YAML configuration files. This is largely unnecessary if you are just using the integrations supported in the user interface (UI). However, there are times, particularly if you are pulling in custom sensor data, where you have to get your hands dirty with the configuration files. Let's dive in. Examine the configuration files There are several potential configuration files you will want to investigate. Although everything I am about to show you can be done in the main configuration.yaml file, it can help to split your configuration into dedicated files, especially with large installations. Below I will walk through how I configure my system. For my custom sensors, I use the ESP8266 chipset, which is very maker-friendly. I primarily use Tasmota for my custom firmware, but I also have some components running ESPHome. Configuring firmware is outside the scope of this article. For now, I will assume you set up your devices with some custom firmware (or you wrote your own with Arduino IDE). The /config/configuration.yaml file Configuration.yaml is the main file Home Assistant reads. For the following, use the File Editor you installed in the previous article. If you do not see File Editor in the left sidebar, enable it by going back into the Supervisor settings and clicking on File Editor. You should see a screen like this: Make sure Show in sidebar is toggled on. I also always toggle on the Watchdog setting for any add-ons I use frequently. Once that is completed, launch File Editor. There is a folder icon in the top-left header bar. This is the navigation icon. The /config folder is where the configuration files you are concerned with are stored. If you click on the folder icon, you will see a few important files: The following is a default configuration.yaml: The notation script: !include scripts.yaml indicates that Home Assistant should reference the contents of scripts.yaml anytime it needs the definition of a script object. You'll notice that each of these files correlates to files observed when the folder icon is clicked. I added three lines to my configuration.yaml: input_boolean: !include input_boolean.yaml binary_sensor: !include binary_sensor.yaml sensor: !include sensor.yamlAs a quick aside, I configured my MQTT settings (see Home Assistant's MQTT documentation for more details) in the configuration.yaml file: mqtt: discovery: true discovery_prefix: homeassistant broker: 192.168.11.11 username: mqtt password: superpasswordIf you make an edit, don't forget to click on the Disk icon to save your work. The /config/binary_sensor.yaml file After you name your file in configuration.yaml, you'll have to create it. In the File Editor, click on the folder icon again. There is a small icon of a piece of paper with a + sign in its center. Click on it to bring up this dialog: I have three main types of binary sensors: door, motion, and power. A binary sensor has only two states: on or off. All my binary sensors send their data to MQTT. See my article on cloud vs. local control for more information about MQTT. My binary_sensor.yaml file looks like this: - platform: mqtt state_topic: "BRMotion/state/PIR1" name: "BRMotion" qos: 1 payload_on: "ON" payload_off: "OFF" device_class: motion - platform: mqtt state_topic: "IRBlaster/state/PROJECTOR" name: "ProjectorStatus" qos: 1 payload_on: "ON" payload_off: "OFF" device_class: power - platform: mqtt state_topic: "MainHallway/state/DOOR" name: "FrontDoor" qos: 1 payload_on: "open" payload_off: "closed" device_class: doorTake a look at the definitions. Since platform is self-explanatory, start with state_topic. state_topic, as the name implies, is the topic where the device's state is published. This means anyone subscribed to the topic will be notified any time the state changes. This path is completely arbitrary, so you can name it anything you like. I tend to use the convention location/state/object, as this makes sense for me. I want to be able to reference all devices in a location, and for me, this layout is the easiest to remember. Grouping by device type is also a valid organizational layout. name is the string used to reference the device inside Home Assistant. It is normally referenced by type.name, as seen in this card in the Home Assistant Lovelace interface: qos, short for quality of service, refers to how an MQTT client communicates with the broker when posting to a topic. payload_on and payload_off are determined by the firmware. These sections tell Home Assistant what text the device will send to indicate its current state. device_class: There are multiple possibilities for a device class. Refer to the Home Assistant documentation for more information and a description of each type available. The /config/sensor.yaml file This file differs from binary_sensor.yaml in one very important way: The sensors within this configuration file can have vastly different data inside their payloads. Take a look at one of the more tricky bits of sensor data, temperature. Here is the definition for my DHT temperature sensor: - platform: mqtt state_topic: "Steve_Desk_Sensor/tele/SENSOR" name: "Steve Desk Temperature" value_template: '{{ value_json.DHT11.Temperature }}' - platform: mqtt state_topic: "Steve_Desk_Sensor/tele/SENSOR" name: "Steve Desk Humidity" value_template: '{{ value_json.DHT11.Humidity }}'You'll notice two things right from the start. First, there are two definitions for the same state_topic. This is because this sensor publishes three different statistics. Second, there is a new definition of value_template. Most sensors, whether custom or not, send their data inside a JSON payload. The template tells Home Assistant where the important information is in the JSON file. The following shows the raw JSON coming from my homemade sensor. (I used the program jq to make the JSON more readable.) { "Time": "2020-12-23T16:59:11", "DHT11": { "Temperature": 24.8, "Humidity": 32.4, "DewPoint": 7.1 }, "BH1750": { "Illuminance": 24 }, "TempUnit": "C" }There are a few things to note here. First, as the sensor data is stored in a time-based data store, every reading has a Time entry. Second, there are two different sensors attached to this output. This is because I have both a DHT11 temperature sensor and a BH1750 light sensor attached to the same ESP8266 chip. Finally, my temperature is reported in Celsius. Hopefully, the Home Assistant definitions will make a little more sense now. value_json is just a standard name given to any JSON object ingested by Home Assistant. The format of the value_template is value_json... For example, to retrieve the dewpoint: value_template: '{{ value_json.DHT11.DewPoint}}'While you can dump this information to a file from within Home Assistant, I use Tasmota's Console to see the data it is publishing. (If you want me to do an article on Tasmota, please let me know in the comments below.) As a side note, I also keep tabs on my local Home Assistant resource usage. To do so, I put this in my sensor.yaml file: - platform: systemmonitor resources: - type: disk_use_percent arg: / - type: memory_free - type: memory_use - type: processor_useWhile this is technically not a sensor, I put it here, as I think of it as a data sensor. For more information, see the Home Assistant's system monitoring documentation. The /config/input_boolean file This last section is pretty easy to set up, and I use it for a wide variety of applications. An input boolean is used to track the status of something. It's either on or off, home or away, etc. I use these quite extensively in my automations. My definitions are: steve_home: name: steve steve_in_bed: name: 'steve in bed' guest_home: kitchen_override: name: kitchen kitchen_fan_override: name: kitchen_fan laundryroom_override: name: laundryroom bathroom_override: name: bathroom hallway_override: name: hallway livingroom_override: name: livingroom ensuite_bathroom_override: name: ensuite_bathroom steve_desk_light_override: name: steve_desk_light projector_led_override: name: projector_led project_power_status: name: 'Projector Power Status' tv_power_status: name: 'TV Power Status' bed_time: name: "It's Bedtime"I use some of these directly in the Lovelace UI. I create little badges that I put at the top of each of the pages I have in the UI: These can be used to determine whether I am home, if a guest is in my house, and so on. Clicking on one of these badges allows me to toggle the boolean, and this object can be read by automations to make decisions about how the “smart devices” react to a person's presence (if at all). I'll revisit the booleans in a future article when I examine Node-RED in more detail. Wrapping up In this article, I looked at the YAML configuration files and added a few custom sensors into the mix. You are well on the way to getting some functioning automation with Home Assistant and Node-RED. In the next article, I'll dive into some basic Node-RED flows and introduce some basic automations. Stick around; I've got plenty more to cover, and as always, leave a comment below if you would like me to examine something specific. If I can, I'll be sure to incorporate the answers to your questions into future articles. , the free encyclopedia that anyone can edit. 107,766 active editors 7,028,867 articles in English Liz Truss (born 26 July 1975) is a British politician who was prime minister from September to October 2022. A Liberal Democrat in her youth, she defected to the Conservatives in 1996. After several bids for public office she was elected as an MP in 2010 and served continuously in government in the Cameron, May and Johnson ministries, latterly as foreign secretary. After Johnson resigned in July 2022 Truss stood in the election to replace him, defeating Rishi Sunak and becoming the leader of the party. Two days after her appointment as prime minister Queen Elizabeth II died, freezing government business for ten days during a national mourning period; after its conclusion Truss's ministry announced a mini-budget which was received badly by markets, the fallout from which subsequently engulfed her government. Facing a rapid loss of confidence in her leadership, Truss resigned fifty days into her premiership and was succeeded by Sunak, becoming the shortest-serving British prime minister. (Full article...) Recently featured: Lesley J. McNair Second Test, 1948 Ashes series Daily News Building Archive By email More featured articles About USS Sabine, which took 35 years to finish ... that the Potomac-class frigates (example pictured) were built slowly for the sake of quality, only for the last ships to be outdated by the time they were finished? ... that Indonesian mystic Mbah Suro reportedly consumed only coffee and cigarettes for two years? ... that the United States' first capitol building was later sold for $425 and then demolished? ... that the mascot of an Australian HIV prevention campaign was a condom-wielding superhero? ... that Audichron estimated that Don Elliot Heald's voice was heard on 12 million Audichron phone calls a day in 1971? ... that the British indie rock band Girl Ray named themselves after the surrealist visual artist Man Ray? ... that avery r. young became the first poet laureate of Chicago in 2023? ... that by spinning off Lord Fitzhenry (1794) from a four-volume work in progress, Elizabeth Gunning was paid for two novels instead of one? ... that American Civil War chaplain Thomas Mooney was pulled from service after baptizing a cannon? Archive Start a new article Nominate an article Ozzy Osbourne Armed clashes erupt in the Cambodia–Thailand border conflict. Ozzy Osbourne (pictured), the lead singer of Black Sabbath, dies at the age of 76. A fighter jet crashes into a college in Dhaka, Bangladesh, killing more than 30 people. In golf, Scottie Scheffler wins the Open Championship. A tourist boat capsizes during a thunderstorm in Hạ Long Bay, Vietnam, leaving at least 36 people dead. Ongoing: Gaza war Russian invasion of Ukraine timeline Sudanese civil war timeline Recent deaths: Chuck Mangione Hulk Hogan Thomas Anthony Durkin Giora Epstein Béatrice Uria-Monzon Rex White Nominate an article July 26: Independence Day in the Maldives (1965), Kargil Vijay Diwas in India Hillary Clinton 1551 – The Knights Hospitaller surrendered the Castello of Gozo to the Ottoman Empire following a brief siege, leading to the mass enslavement and dispersal of the Gozitan population. 1778 – On the orders of Catherine the Great the first of tens of thousands of Greek and Armenian Christians were removed from Crimea and resettled in Pryazovia. 1953 – In Short Creek, Arizona, police conducted a mass arrest of approximately 400 Mormon fundamentalists for polygamy. 1993 – Asiana Airlines Flight 733 crashed into a mountain during a failed attempt to land at Mokpo Airport, South Korea, leading to the deaths of 68 people on board. 2016 – Hillary Clinton (pictured) became the first female nominee for president of the United States by a major political party at the Democratic National Convention in Philadelphia. Carl Jung (b. 1875)Ana María Matute (b. 1925)George W. Romney (d. 1995)Olivia de Havilland (d. 2020) More anniversaries: July 25 July 26 July 27 Archive By email List of days of the year About Cytoplasmic streaming is a biological process in which cytoplasm flows inside a cell, driven by forces from the cytoskeleton. It is usually observed in large plant and animal cells, as well as amoebae, fungi, and slime moulds. It is likely that its function is, at least in part, to speed up the transport of molecules and organelles around the cell. The process was first discovered by the Italian scientist Bonaventura Corti in 1774, within the algae genera Nitella and Chara. While its mechanism is not fully understood, what is clearly visible in plant cells which exhibit cytoplasmic streaming is the motion of the chloroplasts moving with the cytoplasmic flow. This motion results from fluid being entrained by moving motor molecules of the plant cell. This video, taken through a microscope, shows cytoplasmic streaming occurring in an onion epidermal cell. Video credit: Heiti Paves Recently featured: Hudson Yards Emperor angelfish Amália Rodrigues Archive More featured pictures Community portal – The central hub for editors, with resources, links, tasks, and announcements. Village pump – Forum for discussions about Wikipedia itself, including policies and technical issues. Site news – Sources of news about Wikipedia and the broader Wikimedia movement. Teahouse – Ask basic questions about using or editing Wikipedia. Help desk – Ask questions about using or editing Wikipedia. Reference desk – Ask research questions about encyclopedic topics. Content portals – A unique way to navigate the encyclopedia. Wikipedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content news WikiquoteCollection of quotations WikisourceFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide WiktionaryDictionary and thesaurus This Wikipedia is written in English. Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles العربية Deutsch Español فارسی Français Italiano Nederlands 日本語 Polski Português Русский Svenska Українська Tiếng Việt 中文 250,000+ articles Bahasa Indonesia Bahasa Melayu Bân-lâm-gú Български Català Čeština Dansk Eesti Ελληνικά Esperanto Euskara עברית Հայերեն Magyar Norsk bokmål Română Simple English Slovenčina Srpski Srpskohrvatski Suomi Türkçe Oʻzbekcha 50,000+ articles Asturianu Azərbaycanca Bosanski کوردی Frysk Gaeilge Galego Hrvatski ქართული Kurdî Latviešu Lietuvių Македонски Norsk nynorsk Shqip Slovenščina اردو Retrieved from " 2 This article is about the year 1965. For other uses, see 1965 (disambiguation). 1965 January February March April May June July August September October November December From top to bottom, left to right: The Vietnam War escalates as the United States begins regular bombing campaigns in Operation Rolling Thunder and deploys ground combat troops for the first time; the Indo-Pakistani War of 1965 erupts over Kashmir, drawing international concern and resulting in thousands of casualties before a UN-brokered ceasefire; the Voting Rights Act of 1965 is signed into law by President Lyndon B. Johnson, prohibiting racial discrimination in voting; Malcolm X is assassinated while delivering a speech in New York City, silencing one of the most influential and controversial voices in the civil rights movement; the Dominican Civil War breaks out as constitutionalist and loyalist factions clash, prompting a U.S. military intervention amid fears of a second Cuba; former British Prime Minister Winston Churchill dies at the age of 90, prompting a global outpouring of tributes and a state funeral attended by world leaders; the Battle of Ia Drang becomes the first major battle between U.S. and North Vietnamese forces, signaling a new phase of intense ground combat in the Vietnam War; the Indonesian mass killings of 1965–66 begin following an attempted coup, leading to the deaths of an estimated 500,000 to 1,000,000 people in a brutal anti-communist purge; the Selma to Montgomery marches for voting rights take place in Alabama, culminating in the violent crackdown known as Bloody Sunday and ultimately leading to new federal protections. Calendar year Years Millennium 2nd millennium Centuries 19th century 20th century 21st century Decades 1940s 1950s 1960s 1970s 1980s Years 1962 1963 1964 1965 1966 1967 1968 vte 1965 by topic Subject Animation Archaeology Architecture Art Aviation Awards Comics Film Literature Poetry Meteorology Music Country Jazz Rail transport Radio Science Spaceflight Sports Football Television American Belgian Brazilian British Scottish Canadian Danish Irish Italian By country Afghanistan Argentina Australia Belgium Brazil Bulgaria Canada Denmark France Germany India Indonesia Ireland Iran Israel Italy Japan Kuwait Luxembourg Malaysia New Zealand Norway Pakistan Philippines Portugal Singapore South Africa South Korea Soviet Union Spain Sweden Switzerland Thailand Turkey United Kingdom United States Lists of leaders Sovereign states Sovereign state leaders Territorial governors Religious leaders Law Birth and death categories Births Deaths Establishments and disestablishments categories Establishments Disestablishments Works category Works Introductions vte 1965 in various calendarsGregorian calendar1965MCMLXVAb urbe condita2718Armenian calendar1414ԹՎ ՌՆԺԴAssyrian calendar6715Bahá'í calendar121–122Balinese saka calendar1886–1887Bengali calendar1371–1372Berber calendar2915British Regnal year13 Eliz. 2 – 14 Eliz. 2Buddhist calendar2509Burmese calendar1327Byzantine calendar7473–7474Chinese calendar甲辰年 (Wood Dragon)4662 or 4455 — to —乙巳年 (Wood Snake)4663 or 4456Coptic calendar1681–1682Discordian calendar3131Ethiopian calendar1957–1958Hebrew calendar5725–5726Hindu calendars - Vikram Samvat2021–2022 - Shaka Samvat1886–1887 - Kali Yuga5065–5066Holocene calendar11965Igbo calendar965–966Iranian calendar1343–1344Islamic calendar1384–1385Japanese calendarShōwa 40(昭和４０年)Javanese calendar1896–1897Juche calendar54Julian calendarGregorian minus 13 daysKorean calendar4298Minguo calendarROC 54民國54年Nanakshahi calendar497Thai solar calendar2508Tibetan calendar(male Wood-Dragon)2091 or 1710 or 938 — to —(female Wood-Snake)2092 or 1711 or 939 Wikimedia Commons has media related to 1965. 1965 (MCMLXV) was a common year starting on Friday of the Gregorian calendar, the 1965th year of the Common Era (CE) and Anno Domini (AD) designations, the 965th year of the 2nd millennium, the 65th year of the 20th century, and the 6th year of the 1960s decade. Calendar year Main article: January 1965 Main article: February 1965 January 14 – The First Minister of Northern Ireland and the Taoiseach of the Republic of Ireland meet for the first time in 43 years. January 20 Lyndon B. Johnson is sworn in for a full term as President of the United States. Indonesian President Sukarno announces the withdrawal of the Indonesian government from the United Nations. January 29 – Hakametsä, the first ice rink of Finland, is inaugurated in Tampere.[1] January 30 – The state funeral of Sir Winston Churchill takes place in London with the largest assembly of dignitaries in the world until the 2005 funeral of Pope John Paul II.[2] February 4 – Trofim Lysenko is removed from his post as director of the Institute of Genetics at the Academy of Sciences in the Soviet Union. Lysenkoist theories are now treated as pseudoscience.[3][4] February 12 – The African and Malagasy Common Organization (Organization Commune Africaine et Malgache; OCAM) is formed as successor to the Afro-Malagasy Union for Economic Cooperation (Union Africaine et Malgache de Cooperation Economique; UAMCE), formerly the African and Malagasy Union (Union Africaine et Malgache; UAM). February 18: Flag of the newly independent Gambia February 15 – The maple leaf is adopted as the flag of Canada, replacing the Canadian Red Ensign flag. February 18 – The Gambia becomes independent from the United Kingdom. February 20 Ranger 8 crashes into the Moon, after a successful mission of photographing possible landing sites for the Apollo program astronauts. Suat Hayri Ürgüplü forms the new (interim) government of Turkey (29th government). February 21 – Malcolm X is gunned down while giving a speech at the Audubon Ballroom in Harlem. Main article: March 1965 Main article: April 1965 March 2 – Vietnam War: Operation Rolling Thunder – The United States Air Force 2nd Air Division, United States Navy and South Vietnamese air force begin a 3½-year aerial bombardment campaign against North Vietnam. March 7 Mass in the Catholic Church worldwide is said in local languages (rather than Latin) for the first time.[5][6] "Bloody Sunday": Some 200 Alabama State Troopers attack 525 civil rights demonstrators in Selma, Alabama, as they attempt to march to the state capitol of Montgomery. March 8 – Vietnam War: Some 3,500 United States Marines arrive in Da Nang, South Vietnam, becoming the first American ground combat troops in Vietnam. March 9 – The "Turnaround Tuesday" march from Selma to Montgomery, Alabama, under the leadership of Martin Luther King Jr., stops at the site of "Bloody Sunday", to hold a prayer service and return to Selma, in obedience to a court restraining order. On the same day, White supremacists attack three white ministers, leaving Unitarian Universalist minister James J. Reeb in a coma. March 10 – An engagement is announced between Princess Margriet of the Netherlands and Pieter van Vollenhoven, who will become the first commoner and the first Dutchman to marry into the Dutch royal family. March 18 – Cosmonaut Alexei Leonov leaves his Voskhod 2 spacecraft for 12 minutes, becoming the first person to walk in space.[7] March 20 "Poupée de cire, poupée de son", sung by France Gall (music and lyrics by Serge Gainsbourg), wins the Eurovision Song Contest 1965 (staged in Naples) for Luxembourg.[8] The Indo-Pakistani War of 1965 begins. March 23 Events of March 23, 1965: Large student demonstration in Morocco, joined by discontented masses, meets with violent police and military repression. Gemini 3: NASA launches the United States' first 2-person crew (Gus Grissom, John Young) into Earth orbit. The first issue of The Vigilant is published from Khartoum. March 25 – Martin Luther King Jr. and 25,000 civil rights activists successfully end the 4-day march from Selma, Alabama, to the capitol in Montgomery. March 28 – At least 400 are killed or missing after an earthquake triggered a series of dam failures in La Ligua, Chile.[9] March 30 – The second ODECA charter, signed by Central American states on December 12, 1962, becomes effective. April 3 – The world's first space nuclear power reactor, SNAP-10A, is launched by the United States from Vandenberg AFB, California. The reactor operates for 43 days and remains in low Earth orbit. April 5 – At the 37th Academy Awards, My Fair Lady wins 8 Academy Awards, including Best Picture and Best Director. Rex Harrison wins an Oscar for Best Actor. Mary Poppins takes home 5 Oscars. Julie Andrews wins an Academy Award for Best Actress for her performance in the title role. Sherman Brothers receives 2 Oscars including Best Song, "Chim Chim Cher-ee". April 6 – The Intelsat I ("Early Bird") communications satellite is launched. It becomes operational May 2 and is placed in commercial service in June. April 9 – The West German parliament extends the statute of limitations on Nazi war crimes. April 12 – A historic and extremely destructive tornado outbreak struck the Midwest region of the United States, killing 266. April 18 – Consecration of Saint Clement of Ohrid Macedonian Orthodox Cathedral in Toronto, Canada. April 23 – The Pennine Way officially opens. April 24 The 1965 Yerevan demonstrations start in Yerevan, demanding recognition of the Armenian genocide. The bodies of Portuguese opposition politician Humberto Delgado and his secretary Arajaryr Moreira de Campos are found in a forest near Villanueva del Fresno, Spain (they were killed February 12). In the Dominican Republic, officers and civilians loyal to deposed President Juan Bosch mutiny against the right-wing junta running the country, setting up a provisional government. Forces loyal to the deposed military-imposed government stage a countercoup the next day, and civil war breaks out, although the new government retains its hold on power. April 26 – Rede Globo is founded in Rio de Janeiro, Brazil. April 28 U.S. troops occupy the Dominican Republic. Vietnam War: Prime Minister of Australia Robert Menzies announces that the country will substantially increase its number of troops in South Vietnam, supposedly at the request of the Saigon government (it is later revealed that Menzies had asked the leadership in Saigon to send the request at the behest of the Americans). April 29 – Australia announces that it is sending an infantry battalion to support the South Vietnam government. Main article: May 1965 Main article: June 1965 May 1 Bob Askin replaces Jack Renshaw as Premier of New South Wales. The Battle of Dong-Yin occurs as a conflict between Taiwan and the People's Republic of China. May 9 – Pianist Vladimir Horowitz returns to the stage after a 12-year absence, performing a legendary concert in Carnegie Hall in New York. May 12 –West Germany and Israel establish diplomatic relations. Muhammad Ali standing over Sonny Liston May 25 – Muhammad Ali knocks out Sonny Liston in the first round of their championship rematch with the "Phantom Punch" at the Central Maine Civic Center in Lewiston. May 27 – Internazionale beats Benfica 1–0 at the San Siro, Milan and wins the 1964–65 European Cup in Association football. May 29 – A mining accident in Dhanbad, India, kills 274. May 31 – Scottish racing driver Jim Clark wins the Indianapolis 500, later this year winning the Formula One world driving championship. June 1 – A coal mine explosion in Fukuoka, Japan, kills 237. June 2 – Vietnam War: The first contingent of Australian combat troops arrives in South Vietnam. June 7 – Kakanj mine disaster: A mining accident in Kakanj, Bosnia and Herzegovina, results in 128 deaths. June 10 – Vietnam War – Battle of Dong Xoai: About 1,500 Viet Cong mount a mortar attack on Đồng Xoài, overrunning its military headquarters and the adjoining militia compound. June 19 Houari Boumédiène's Revolutionary Council ousts Ahmed Ben Bella, in a bloodless coup in Algeria. Air Marshal Nguyen Cao Ky, head of the South Vietnamese Air Force, was appointed prime minister at the head of the military junta, with General Nguyễn Văn Thiệu becoming a figurehead president, ending two years of short-lived military juntas.[10][non sequitur] June 20 – Police in Algiers break up demonstrations by people who have taken to the streets chanting slogans in support of deposed President Ahmed Ben Bella. June 22 – The Treaty on Basic Relations between Japan and the Republic of Korea is signed in Tokyo. June 25 – A U.S. Air Force Boeing C-135 Stratolifter bound for Okinawa crashes just after takeoff at MCAS El Toro in Orange County, California, killing all 85 on board. Main article: July 1965 Main article: August 1965 July – The Commonwealth secretariat is created. July 14 – U.S. spacecraft Mariner 4 flies by Mars, becoming the first spacecraft to return images from the Red Planet. July 15 – Greek Prime minister Georgios Papandreou and his government are dismissed by King Constantine II. July 16 – The Mont Blanc Tunnel, a highway tunnel between France and Italy, is inaugurated by presidents Giuseppe Saragat and Charles de Gaulle. July 24 – Vietnam War: Four F-4C Phantoms escorting a bombing raid at Kang Chi are targeted by antiaircraft missiles, in the first such attack against American planes in the war. One is shot down and the other 3 sustain damage. July 26 – The Maldives obtains full independence from Great Britain.[11] July 27 – Edward Heath becomes Leader of the British Conservative Party. July 28 – Vietnam War: U.S. President Lyndon B. Johnson announces his order to increase the number of United States troops in South Vietnam from 75,000 to 125,000, and to more than double the number of men drafted per month - from 17,000 to 35,000. July 30 – War on Poverty: U.S. President Lyndon B. Johnson signs the Social Security Act of 1965 into law, establishing Medicare and Medicaid. August 7 – Tunku Abdul Rahman, Prime Minister of Malaysia, recommends the expulsion of Singapore from the Federation of Malaysia following a deterioration of PAP–UMNO relations, negotiating its separation with Lee Kuan Yew, Prime Minister of Singapore. August 9 Proclamation of Singapore: Singapore is expelled from the Federation of Malaysia, which recognises it as a sovereign nation. Lee Kuan Yew announces Singapore's independence and assumes the position of Prime Minister of the new island nation – a position he holds until 1990. An explosion at an Arkansas missile plant kills 53. Indonesian president Sukarno collapses in public. August 11 – Racial rioting in the Los Angeles, California neighborhood of Watts breaks out after an African American motorist, Marquette Frye,[12] is stopped on suspicion of drunken driving. Six days of unrest are quelled by over 14,000 members of the California National Guard. There are 34 deaths and over $40 million in property damage. It is the largest and costliest urban rebellion of the Civil Rights movement.[13] August 18 – Vietnam War: Operation Starlite – 5,500 United States Marines destroy a Viet Cong stronghold on the Van Tuong peninsula in Quảng Ngãi Province, in the first major American ground battle of the war. The Marines were tipped off by a Viet Cong deserter who said that there was an attack planned against the U.S. base at Chu Lai. August 19 – At the conclusion of the Frankfurt Auschwitz trials, 66 ex-SS personnel receive life sentences, 15 others shorter ones. August 21 – NASA launches Gemini 5 (Gordon Cooper, Pete Conrad) on the first 1-week space flight, as well as the first test of fuel cells for electrical power on such a mission. August 30 – An avalanche buries a dam construction site at Saas-Fee, Switzerland, killing 90 workers. August 31 – U.S. President Johnson signs a law penalizing the burning of draft cards with up to 5 years in prison and a $1,000 fine. Main article: September 1965 Main article: October 1965 September 2 Pakistani troops enter the Indian sector of Kashmir, while Indian troops counter at Lahore. The People's Republic of China announces that it will reinforce its troops on the Indian border. Vietnam War: In a follow-up to August's Operation Starlite, United States Marines and South Vietnamese forces initiate Operation Piranha on the Batangan Peninsula, 23 miles (37 km) south of the Chu Lai Marine base. September 8 India opens 2 additional fronts against Pakistan. The Pakistan Navy destroys Indian Port of Dwarka. Operation Dwarka (Pakistan celebrates Victory Day annually). September 9 U.N. Secretary General U Thant negotiates with Pakistan President Ayub Khan. U Thant recommends China for United Nations membership. September 14 – The fourth and final period of the Second Vatican Council opens. September 16 – In Iraq, Prime Minister Arif Abd ar-Razzaq's attempted coup fails. September 17 – King Constantine II of Greece forms a new government with Prime Minister Stephanos Stephanopoulos, in an attempt to end a 2-year-old political crisis. September 18 In Denmark, Palle Sørensen shoots 4 policemen in pursuit; he is apprehended the same day. Comet Ikeya–Seki is first sighted by Japanese astronomers. Soviet Premier Alexei Kosygin invites the leaders of India and Pakistan to meet in the Soviet Union to negotiate. September 19 – Pakistani Forces achieve a decisive victory at the Battle of Chawinda, ultimately halting the Indian advance and successfully stabilizing the Sialkot Front, it is the world's largest tank battle since the Battle of Kursk in the Second World War between Nazi Germany and the Soviet Union September 20 – Vietnam War: An USAF F-104 Starfighter piloted by Captain Philip Eldon Smith is shot down by a Chinese MiG-19 Farmer. The pilot is held until March 15, 1973. September 21 – Gambia, Maldives and Singapore are admitted as members of the United Nations. September 22 – Radio Peking announces that Indian troops have dismantled their equipment on the Chinese side of the border. September 24 Fighting resumes between Indian and Pakistani troops. The British governor of Aden cancels the constitution and takes direct control of the protectorate, due to the bad security situation. September 27 – The largest tanker ship at this time, Tokyo Maru, is launched in Yokohama, Japan. September 28 Fidel Castro announces that anyone who wants to can emigrate to the United States. Taal Volcano in Luzon, Philippines, erupts, killing hundreds. September 30 The Indonesian army, led by General Suharto, crushes an alleged communist coup attempt (see Transition to the New Order and 30 September Movement). The classic family sci-fi show Thunderbirds debuts on ITV in the United Kingdom. October 3 – Fidel Castro announces that Che Guevara has resigned and left Cuba. October 4 At least 150 are killed when a commuter train derails at the outskirts of Durban, KwaZulu-Natal, South Africa. Prime minister Ian Smith of Rhodesia and Arthur Bottomley of the Commonwealth of Nations begin negotiations in London. Pope Paul VI makes the first papal visit to the United States. He appears for a Mass in Yankee Stadium and makes a speech at the United Nations. The University of California, Irvine opens its doors. October 5 – Pakistan severs diplomatic relations with Malaysia because of their disagreement in the UN. October 6 – Ian Brady, a 27-year-old stock clerk from Hyde in Cheshire, is arrested for allegedly hacking to death (with a hatchet) 17-year-old apprentice electrician Edward Evans at a house on the Hattersley housing estate. October 7 – Seven Japanese fishing boats are sunk off Guam by Super Typhoon Carmen; 209 are killed. October 8 Indonesian mass killings of 1965–1966: The Indonesian army instigates the arrest and execution of communists which last until next March.[14] The 7 Fundamental Principles of the Red Cross and Red Crescent are adopted at the XX International Conference in Vienna, Austria. The International Olympic Committee admits East Germany as a member. October 10 – The first group of Cuban refugees travels to the U.S. October 12 Per Borten forms a government in Norway. The U.N. General Council recommends that the United Kingdom try everything to stop a rebellion in Rhodesia. October 13 – Congo President Joseph Kasavubu fires Prime Minister Moise Tshombe and forms a provisional government, with Évariste Kimba in a leading position. October 15 – Vietnam War: The Catholic Worker Movement stages an anti-war protest in Manhattan. One draft card burner is arrested, the first under the new law. October 17 – The New York World's Fair at Flushing Meadows, closes. Due to financial losses, some of the projected site park improvements fail to materialize. October 18 – The Indonesian government outlaws the Communist Party of Indonesia.[15] October 20 – Ludwig Erhard is re-elected Chancellor of West Germany (he had first been elected in 1963). October 21 Comet Ikeya–Seki approaches perihelion, passing 450,000 kilometres (280,000 mi) from the sun. The Organization of African Unity meets in Accra, Ghana. October 22 African countries demand that the United Kingdom use force to prevent Rhodesia from declaring unilateral independence. Colonel Christophe Soglo stages a second coup in Dahomey. October 25 – The Soviet Union declares its support of African countries in case Rhodesia unilaterally declares independence. October 27 Brazilian president Humberto de Alencar Castelo Branco removes power from parliament, legal courts and opposition parties. Süleyman Demirel of AP forms the new government of Turkey (30th government). October 28 – Pope Paul VI promulgates Nostra aetate, a "Declaration on the Relation of the (Roman Catholic) Church with Non-Christian Religions" by the Second Vatican Council which includes a statement that Jews are not collectively responsible for the death of Jesus (Jewish deicide). October 29 – An 80-kiloton nuclear device is detonated at Amchitka Island, Alaska, as part of the Vela Uniform program, code-named Project Long Shot. October 30 – Vietnam War: Near Da Nang, United States Marines repel an intense attack by Viet Cong forces, killing 56 guerrillas. A sketch of Marine positions is found on the dead body of a 13-year-old Vietnamese boy who sold drinks to the Marines the day before. Main article: November 1965 Main article: December 1965 November 1 – A trolleybus plunges into the Nile at Cairo, Egypt, killing 74 passengers. November 3 – French President Charles de Gaulle announces (just short of his 75th birthday) that he will stand for re-election. November 5 – Martial law is announced in Rhodesia. The United Nations General Assembly accepts British intent to use force against Rhodesia if necessary by a vote of 82–9. November 6 – Freedom Flights begin: Cuba and the United States formally agree to start an airlift for Cubans who want to go to the United States (by 1971, 250,000 Cubans take advantage of this program). November 8 – Vietnam War – Operation Hump: The United

States Army 173rd Airborne is ambushed by over 1,200 Viet Cong. November 11 In Rhodesia (modern-day Zimbabwe), the white-minority government of Ian Smith unilaterally declares de facto independence ('UDI'). United Airlines Flight 227 crashes short of the runway and catches fire at Salt Lake City International Airport, killing 43 out of 91 passengers and crew. November 12 – A UN Security Council resolution (voted 10–0) recommends that other countries not recognize independent Rhodesia. November 13 The SS Yarmouth Castle burns and sinks 60 miles (97 km) off Nassau, Bahamas, with the loss of 90 lives. British theatre critic Kenneth Tynan says "fuck" during a discussion on BBC satirical programme BBC-3 for what many believed was the first time on British television. The corporation later issues a public apology. November 14 – Vietnam War – Battle of Ia Drang: In the Ia Drang Valley of the Central Highlands in Vietnam, the first major engagement of the war between regular United States and North Vietnamese forces begins. November 15 – U.S. racer Craig Breedlove sets a new land speed record of 600.601 mph (966.574 km/h). November 16 – Venera program: The Soviet Union launches the Venera 3 space probe from Baikonur, Kazakhstan toward Venus (on March 1, 1966, it becomes the first spacecraft to reach the surface of another planet). November 20 – The United Nations Security Council recommends that all states stop trading with Rhodesia. November 22 – The United Nations Development Programme (UNDP) is established as a specialized agency of the United Nations. November 23 – Soviet general Mikhail Kazakov assumes command of the Warsaw Pact. November 24 – Congolese lieutenant general Mobutu ousts Joseph Kasavubu and declares himself president. November 26 – At the Hammaguir launch facility in the Sahara Desert, France launches a Diamant A rocket with its first satellite, Astérix-1 on board, becoming the third country to enter outer space. November 27 Tens of thousands of Vietnam War protesters picket the White House, then march on the Washington Monument. Vietnam War: The Pentagon tells U.S. President Lyndon B. Johnson that if planned major sweep operations to neutralize Viet Cong forces during the next year are to succeed, the number of American troops in Vietnam will have to be increased from 120,000 to 400,000. November 28 – Vietnam War: In response to U.S. President Lyndon B. Johnson's call for "more flags" in Vietnam, Philippines President-elect Ferdinand Marcos announces he will send troops to help fight in South Vietnam. November 29 – The Canadian satellite Alouette 2 is launched. December 5 Charles de Gaulle is re-elected as French president with 10,828,421 votes. The "Glasnost Meeting" in Moscow becomes the first spontaneous political demonstration, and the first demonstration for civil rights in the Soviet Union. December 8: End of the Second Vatican Council December 8 The Second Vatican Council closes. Rhodesian prime minister Ian Smith warns that Rhodesia will resist a trade embargo by neighboring countries with force. The Race Relations Act becomes the first legislation to address racial discrimination in the UK. December 9 – A Charlie Brown Christmas, the first Peanuts television special, debuts on CBS in the United States. It becomes a Christmas tradition. December 15 The Caribbean Free Trade Association (CARIFTA) is formed. Gemini 6 and Gemini 7 perform the first controlled rendezvous in Earth orbit. December 20 – The World Food Programme is made a permanent agency of the United Nations. December 21 The Soviet Union announces that it has shipped rockets to North Vietnam. In West Germany, Konrad Adenauer resigns as chairman of the Christian Democratic Party. The United Nations adopts the International Convention on the Elimination of All Forms of Racial Discrimination. A new 1-hour German-American production of the ballet The Nutcracker, with an international cast that includes Edward Villella in the title role, makes its U.S. television debut. It is repeated annually by CBS over the next 3 years but after that is virtually forgotten until issued on DVD in 2009 by Warner Archive. December 22 – A military coup is launched in Dahomey. December 25 – The Yemeni Nasserist Unionist People's Organisation is founded in Ta'izz. December 30: Ferdinand Marcos is the 10th President of the Philippines December 30 Ferdinand Marcos becomes President of the Philippines. President Kenneth Kaunda of Zambia announces that Zambia and the United Kingdom have agreed on a deadline before which the Rhodesian white government should be ousted. December 31 – Bokassa takes power in the Central African Republic. Aborigines are given the vote in Queensland, Australia. Hainzl Industriesysteme GmbH company is founded in Austria.[16] Tokyo officially becomes the largest city of the world, taking the lead from New York City.[17] World population 1965 1960 1970 World 3,334,874,000 3,021,475,000 313,399,000 3,692,492,000 357,618,000 Africa 313,744,000 277,398,000 36,346,000 357,283,000 43,539,000 Asia 1,899,424,000 1,701,336,000 198,088,000 2,143,118,000 243,694,000 Europe 634,026,000 604,401,000 29,625,000 655,855,000 21,829,000 Latin America 250,452,000 218,300,000 32,152,000 284,856,000 34,404,000 Northern America 219,570,000 204,152,000 15,418,000 231,937,000 12,367,000 Oceania 17,657,000 15,888,000 1,769,000 19,443,000 1,786,000 Julia Ormond Vinnie Jones Joely Richardson Diane Lane January 4 Julia Ormond, British actress[18] Yvan Attal, Israeli-born French actor and director January 5 Vinnie Jones, British footballer-turned-actor[19] Patrik Sjöberg, Swedish high jumper[20] January 9 Haddaway, German singer Farah Khan, Indian choreographer, film director Joely Richardson, British actress January 10 – Butch Hartman, American animator and voice actor January 12 Nikolai Borschevsky, Russian ice hockey player Maybrit Illner, German television journalist and presenter Rob Zombie, American musician January 14 Shamil Basayev, Chechen terrorist (d. 2006) Marc Delissen, Dutch field hockey player Bob Essensa, Canadian ice hockey player January 15 Adam Jones, American musician, guitarist of metal band Tool James Nesbitt, Northern Irish actor[21] January 20 – Sophie, Duchess of Edinburgh, wife of Prince Edward, Duke of Edinburgh January 21 – Jam Master Jay, American DJ, rapper and producer (d. 2002) January 22 DJ Jazzy Jeff, American disc jockey Diane Lane, American actress January 23 – Catherine Guillouard, French businesswoman January 24 – Porfirio Fisac, Spanish basketball coach January 25 – Esa Tikkanen, Finnish ice hockey player January 26 – Natalia Yurchenko, Soviet artistic gymnast January 27 Alan Cumming, Scottish actor Ignacio Noé, Argentine artist January 29 Dominik Hašek, Czech hockey player Jo Min-su, South Korean actress Chris Rock Adama Barrow Michael Bay Dr. Dre February 1 Dave Callaghan, South African cricketer Brandon Lee, Chinese-American actor (d. 1993) Sherilyn Fenn, American actress Princess Stéphanie of Monaco February 3 – Maura Tierney, American actress February 5 – Gheorghe Hagi, Romanian footballer, manager and club owner[22] February 7 – Chris Rock, African-American actor, comedian, and film director February 8 – Dicky Cheung, Hong Kong actor February 11 – Roberto Moya, Cuban athlete (d. 2020) February 12 – Brett Kavanaugh, American attorney and Supreme Court Justice February 15 – Héctor Beltrán Leyva, Mexican drug lord (d. 2018) February 16 – Adama Barrow, Gambian politician, 3rd President of Gambia February 17 – Michael Bay, American film director[23] February 18 – Dr. Dre, African-American rapper and music producer February 23 Kristin Davis, American actress[24] Michael Dell, American computer manufacturer[25] Vincent Chalvon-Demersay, French producer Helena Suková, Czech tennis player[26] February 25 – Sylvie Guillem, French ballerina February 27 – Claudia Zobel, Filipina actress (d. 1984) February 28 – Park Gok-ji, South Korean film editor Aamir Khan Mark Carney Rick Harrison The Undertaker Sarah Jessica Parker March 1 Mike Dean, Record producer Stewart Elliott, Canadian jockey Jack Tu, Taiwanese-Canadian cardiologist (d. 2018) March 2 – Ami Bera, American politician[27] March 3 Tedros Adhanom, Director of the World Health Organization March 4 Greg Alexander, Australian rugby league player Paul W. S. Anderson, British filmmaker, producer and screenwriter March 5 – Harry Bevers, Dutch politician March 8 Mac Jack, South African educator and politician (d. 2020) Caio Júnior, Brazilian football forward and manager (d. 2016) March 9 – Antonio Saca, 43rd President of El Salvador March 11 Catherine Fulop, Venezuelan actress, model, beauty pageant contestant, and television presenter Jesse Jackson Jr., African-American politician Laurence Llewelyn-Bowen, British designer and television presenter March 14 – Aamir Khan, Indian film director, producer, film and scriptwriter and actor March 16 Utut Adianto, Indonesian chess grandmaster and politician Mark Carney, Canadian economist and politician, 24th Prime Minister of Canada[28] March 22 – Rick Harrison, American businessman and reality television personality March 23 – Marti Pellow, Scottish singer (Wet Wet Wet) March 24 Rob MacCachren, American racecar driver The Undertaker, American professional wrestler March 25 Stefka Kostadinova, Bulgarian high jumper and president of the Bulgarian Olympic Committee Sarah Jessica Parker, American actress March 26 – Prakash Raj, Indian actor, producer and director March 29 – Voula Patoulidou, Greek athlete March 30 – Piers Morgan, British journalist and television personality Robert Downey Jr. Martin Lawrence Leni Robredo Kevin James April 1 Brian Marshall, Canadian retired track and field athlete Bekir Bozdağ, Turkish theologian, lawyer, and politician April 3 – Nazia Hassan, Pakistani pop singer-songwriter, lawyer and social activist (d. 2000) April 4 – Robert Downey Jr., American actor, producer, and singer April 6 Black Francis, American musician Rica Reinisch, German swimmer April 9 – Paulina Porizkova, Swedish-American model and actress April 10 Anna-Leena Härkönen, Finnish author[29] Jure Robič, Slovenian cyclist (d. 2010) April 11 – Eelco van Asperen, Dutch computer scientist April 12 – Kim Bodnia, Danish actor and director April 15 – Linda Perry, American musician April 16 – Martin Lawrence, American actor, comedian, and producer April 18 – Camille Coduri, English actress April 19 – Suge Knight, American record producer and convicted felon April 20 – Jovy Marcelo, Filipino racing driver (d. 1992) April 21 – Julio Robaina, Republican politician, Mayor of Hialeah, Florida April 23 – Leni Robredo, 14th Vice President of the Philippines April 24 – Michel Leclerc, French director and screenwriter April 25 – Édouard Ferrand, French politician (d. 2018) April 26 – Kevin James, American comedian and actor April 27 – Edwin Poots, Irish politician April 29 – David Shafer, American politician, Georgia April 30 – Adrian Pasdar, Iranian-American actor and voice artist Trent Reznor John C. Reilly Yahya Jammeh Brooke Shields May 2 – Myriam Hernández, Chilean singer May 3 Gary Mitchell, Irish playwright Rob Brydon, Welsh actor, comedian, impressionist and presenter May 7 Owen Hart, Canadian professional wrestler (d. 1999)[30] Norman Whiteside, Northern Irish football player May 9 – Steve Yzerman, Canadian hockey player May 10 – Linda Evangelista, Canadian supermodel May 11 – Monsour del Rosario, Filipino Olympic athlete and actor May 12 – Renée Simonsen, Danish model and writer May 13 – José Antonio Delgado, Venezuelan mountain climber (d. 2006) May 14 – Eoin Colfer, Irish novelist May 16 Rodica Dunca, Romanian artistic gymnast Krist Novoselic, American musician and activist (Nirvana) May 17 – Trent Reznor, American rock musician (Nine Inch Nails) May 19 – Philippe Dhondt, French singer May 23 Melissa McBride, American actress (The Walking Dead) May 24 Carlos Franco, Paraguayan golfer John C. Reilly, American actor and comedian Shinichirō Watanabe, Japanese anime director May 25 – Yahya Jammeh, President of the Gambia May 29 – Emilio Sánchez, Spanish tennis player May 30 – Guadalupe Grande, Spanish poet (d. 2021) May 31 – Brooke Shields, American actress and model Mick Foley Frank Grillo Elizabeth Hurley Kim Dickens June 1 Larisa Lazutina, Russian cross-country skier Nigel Short, English chess player June 2 – Steve and Mark Waugh, Australian cricketers June 4 Mick Doohan, Australian motorcycle racer Andrea Jaeger, American tennis player[31] June 6 Cam Neely, Canadian ice hockey player Megumi Ogata, Japanese voice actress and singer[32] June 7 Mick Foley, American professional wrestler Damien Hirst, British artist Christine Roque, French singer June 8 Frank Grillo, American actor[33] Rob Pilatus, German model, dancer and singer (d. 1998) June 10 Veronica Ferres, German actress Elizabeth Hurley, English model and actress June 11 – Manuel Uribe, morbidly obese Mexican (d. 2014) June 12 – Carlos Luis Morales, Ecuadorian journalist (d. 2020) June 13 – Infanta Cristina of Spain, Spanish princess June 15 – Bernard Hopkins, American boxer June 16 – Andrea M. Ghez, American astronomer, recipient of the Nobel Prize in Physics[34] June 17 Dana Eskelson, American actress[35] Dan Jansen, American speedskater Dara O'Kearney, Irish ultra runner and professional poker player June 18 Kim Dickens, American actress Hani Mohsin, Malaysian celebrity, actor and host (d. 2006) June 21 Yang Liwei, Chinese major general, military pilot and China National Space Administration astronaut Gabriella Selmeczi, Hungarian jurist and politician Tim Lajcik, Czech American mixed martial artist, stuntman, actor and writer June 22 – Anubhav Sinha, Indian film director June 23 – Paul Arthurs, English Musician (Oasis) June 24 – Son Hyun-joo, South Korean actor June 25 – Jean Castex, French politician June 26 – Jana Hybášková, Czech politician and diplomat June 27 Frédéric Lemoine, French businessman S. Manikavasagam, Malaysian politician June 28 – Belayneh Dinsamo, Ethiopian long-distance runner June 29 Véronique Laury, French businesswoman Dado Villa-Lobos, Brazilian musician Matthew Weiner, American television writer, director and producer[36] June 30 Philippe Duquesne, French actor Cho Jae-hyun, South Korean actor Mitch Richmond, American basketball player Connie Nielsen Hailemariam Desalegn Shawn Michaels Slash Illeana Douglas Jeremy Piven J. K. Rowling July 1 Teddy McCarthy, hurler and Gaelic footballer Carl Fogarty, English motorcycle racer Mohammed Abdul Hussein, Iraqi former footballer Ramdas Ambatkar, Indian politician, Maharashtra MLC (d. 2025)[37] July 2 – Fredrik Sejersted, Norwegian jurist July 3 Komsan Pohkong, Thai lawyer Shinya Hashimoto, Japanese professional wrestler (d. 2005) Connie Nielsen, Danish actress Tommy Flanagan, Scottish actor July 4 – Tracy Letts, American actor, playwright and screenwriter July 5 Kathryn Erbe, American actress Eyran Katsenelenbogen, Israeli jazz pianist July 7 Paula Devicq, Canadian actress Jeremy Kyle, English radio and television presenter July 10 Danny Boffin, Belgian footballer Princess Alexia of Greece and Denmark Alec Mapa, American comedian July 11 – Ernesto Hoost, Dutch kickboxer July 12 – Mama Kandeh, Gambian politician July 13 – Akina Nakamori, Japanese singer and actress July 14 – Lou Savarese, American boxer July 15 – Dafna Rechter, Israeli actress and singer July 17 Santiago Segura, Spanish actor, screenwriter, producer and director Rosa Gumataotao Rios, 43rd Treasurer of the United States Alex Winter, British actor July 18 – Eva Ionesco, French actress, film director and screenwriter July 19 Dame Evelyn Glennie, Scottish virtuoso percussionist Hailemariam Desalegn, 15th Prime Minister of Ethiopia July 21 – Guðni Bergsson, Icelandic footballer July 22 – Shawn Michaels, American professional wrestler July 23 Grace Mugabe, First Lady of Zimbabwe Slash (Saul Hudson), English-born American rock guitarist July 25 – Illeana Douglas, American actress and producer[38] July 26 Vladimir Cruz, Cuban actor Jeremy Piven, American actor Jimmy Dore, American comedian and political commentator July 27 José Luis Chilavert, Paraguayan footballer[39] Trifon Ivanov, Bulgarian footballer (d. 2016)[40] July 28 – Daniela Mercury, Brazilian singer, songwriter, dancer, producer, actress and television host July 29 – Chang-Rae Lee, Korean-American novelist July 31 – J. K. Rowling, English author Sir Sam Mendes Viola Davis Kyra Sedgwick August 1 – Sam Mendes, English film director August 2 Sandra Ng, Hong Kong actress Hisanobu Watanabe, Japanese baseball player and coach August 4 Terri Lyne Carrington, American jazz drummer Dennis Lehane, American crime writer Fredrik Reinfeldt, Swedish Prime Minister[41] August 5 – Monica Ward, Italian actress and voice actress August 6 – David Robinson, American basketball player August 10 Claudia Christian, American actress, writer, singer, musician, and director Mike E. Smith, American jockey John Starks, American basketball player August 11 – Viola Davis, African-American actress August 15 – Vincent Kok, Hong Kong director and actor August 16 – Michael O'Gorman, American coxswain (d. 2018) August 19 Kevin Dillon, American actor Maria de Medeiros, Portuguese actress Kyra Sedgwick, American actress James Tomkins, Australian rower August 22 – David Reimer, Canadian man, born male but reassigned female and raised as a girl after a botched circumcision (d. 2004)[42] August 24 – Reggie Miller, American basketball player and commentator August 25 – Mia Zapata, American singer (d. 1993) August 26 – Azela Robinson, Mexican actress August 28 Satoshi Tajiri, Japanese video game designer and Pokémon creator[43] Amanda Tapping, Canadian actress Shania Twain, Canadian country singer and songwriter August 31 – Daniel Bernhardt, Swiss actor and martial artist Charlie Sheen Bashar al-Assad Dmitry Medvedev Kyle Chandler Tim Scott Petro Poroshenko September 1 – Craig McLachlan, Australian actor and singer September 2 – Lennox Lewis, British boxer September 3 Costas Mandylor, Greek-Australian actor Charlie Sheen, American actor and producer September 5 – Derby Makinka, Zambian footballer (d. 1993) September 6 – Gleisi Hoffmann, Brazilian lawyer and politician September 7 – Jörg Pilawa, German television presenter September 8 Tutilo Burger, German Benedictine monk and abbot Darlene Zschech, Australian singer and worship leader September 10 – Marco Pastors, Dutch politician September 11 Bashar al-Assad, President of Syria Moby, American musician September 12 Einstein Kristiansen, Norwegian cartoonist, designer, and television host September 14 – Dmitry Medvedev, former President of Russia September 15 – Fernanda Torres, Brazilian actress September 16 – Katy Kurtzman, American actress, director and producer September 17 Kyle Chandler, American actor Yuji Naka, Japanese video game programmer September 19 Goldie, English record producer and DJ Iliya Lazarov, Bulgarian politician Tim Scott, African-American politician and businessman Tshering Tobgay, former Prime Minister of Bhutan September 20 – Robert Rusler, American actor September 21 Cheryl Hines, American actress Johanna Vuoksenmaa, Finnish film director David Wenham, Australian actor Pramila Jayapal, American politician September 23 – Mark Woodforde, Australian tennis player September 25 – Scottie Pippen, American basketball player September 26 Radisav Ćurčić, Serbian-Israeli basketball player[44] Alexei Mordashov, Russian businessman Petro Poroshenko, former President of Ukraine September 27 – Steve Kerr, American basketball player Lennie James Steve Coogan October 1 – Andreas Keller, German field hockey player October 2 Gerardo Reyero, Mexican voice actor Ferhan and Ferzan Önder, Turkish-Austrian pianists[45][46] October 3 Adriana Calcanhotto, Brazilian singer and composer Jan-Ove Waldner, Swedish table tennis player[47] October 5 Mario Lemieux, Canadian ice hockey player Patrick Roy, Canadian ice hockey player October 6 – Steve Scalise, House Majority Whip and U.S. Representative of Louisiana's 1st district[48] October 8 Matt Biondi, American swimmer C. J. Ramone, American musician October 9 – Dionicio Cerón, Mexican long-distance runner October 10 – Chris Penn, American actor (d. 2006) October 11 Julianne McNamara, American artistic gymnast Lennie James, English actor, screenwriter, and playwright[49] October 13 – Kalpana, Indian film actress (d. 2016) October 14 Steve Coogan, British comedian and actor Jüri Jaanson, Estonian rower and politician October 16 – Kang Kyung-ok, South Korean artist October 17 Aravinda de Silva, Sri Lankan cricketer Rhys Muldoon, Australian actor, writer, and director October 18 – Zakir Naik, Indian doctor and Islamic activist October 19 The Renegade, American professional wrestler (d. 1999) Ty Pennington, American television presenter Tracy Griffith, American actress, sushi chef, and painter October 20 Amos Mansdorf, Israeli tennis player[50] Stefano Pioli, Italian football player and manager[51] October 22 – Sumito Estévez, Venezuelan chef[52] October 26 Aaron Kwok, Hong Kong singer and actor Kelly Rowan, Canadian actress Kenneth Rutherford, New Zealand cricketer October 29 – Christy Clark, Canadian politician October 30 – Zaza Urushadze, Georgian film director, producer and screenwriter (d. 2019) October 31 – Rob Rackstraw, British actor Shah Rukh Khan Björk Mads Mikkelsen Ben Stiller November 1 Patrik Ringborg, Swedish conductor November 2 Paweł Adamowicz, Polish politician and lawyer (d. 2019) Shah Rukh Khan, Indian actor, film/television producer and television presenter November 4 – Wayne Static, American singer and musician (Static-X) (d. 2014) November 7 – Sigrun Wodars, German athlete November 8 – Patricia Poleo, Venezuelan journalist[53] November 9 – Sir Bryn Terfel, Welsh baritone November 10 – Eddie Irvine, Northern Irish racing driver November 11 – Max Mutchnick, American television producer November 13 – Rick Roberts, Canadian actor November 17 – Pam Bondi, American attorney and politician, 87th U.S. Attorney General [54] November 19 Paulo Barreto, Brazilian cryptographer Laurent Blanc, French football player and manager November 20 – Yoshiki Hayashi, Japanese rock composer, pianist and drummer November 21 Björk, Icelandic singer-songwriter and musician Reggie Lewis, American basketball player (d. 1993) Alexander Siddig, Sudanese-British actor November 22 – Mads Mikkelsen, Danish actor November 23 – Radion Gataullin, Uzbek-Russian pole-vaulter November 24 – Shirley Henderson, Scottish actress November 25 – Ana Paula Padrão, Brazilian journalist, chief editor, entrepreneur, writer and television presenter November 26 – Scott Adsit, American actor November 29 Lauren Child, American author Raffaella Reggi, Italian tennis player[55] November 30 Ben Stiller, American actor, comedian and filmmaker Tashi Tenzing, Indian mountaineer Salman Khan Andrew Stanton Jeffrey Wright Andy Dick December 3 Steve Harris, American actor Katarina Witt, German figure skater Andrew Stanton, American animator, storyboard artist, film director, and screenwriter December 5 – Johnny Rzeznik, American rock singer and guitarist December 7 Teruyuki Kagawa, Japanese actor Jeffrey Wright, African-American actor December 8 – David Harewood, English actor December 9 – Brad Savage, American actor December 10 – Stephanie Morgenstern, Canadian actress December 15 – Luis Fabián Artime, Argentine footballer December 16 – J. B. Smoove, African-American actor and comedian December 18 – John Moshoeu, South African footballer (d. 2015)[56] December 19 – Jessica Steen, Canadian actress December 21 Andy Dick, American actor and comedian Anke Engelke, German comedian, actress and voice-over actress December 23 – Andreas Kappes, German cyclist (d. 2018) December 27 – Salman Khan, Indian actor, television presenter December 30 Valentina Legkostupova, Soviet and Russian pop singer, teacher and producer (d. 2020) Robert Rep, Dutch politician December 31 Nicholas Sparks, American author[57] Gong Li, Chinese actress Yklymberdi Paromov, Turkmen politician Marga Hoek, Dutch businesswoman T. S. Eliot Winston Churchill January 4 – T. S. Eliot, American-British poet, Nobel Prize laureate (b. 1888)[58] January 10 Antonín Bečvář, Czechoslovak astronomer (b. 1901) Frederick Fleet, British sailor and lookout aboard the RMS Titanic (b. 1887) January 12 – Lorraine Hansberry, African-American playwright and writer (b. 1930) January 14 – Jeanette MacDonald, American actress and singer (b. 1903) January 15 – Pierre Ngendandumwe, 4th and 6th Prime Minister of Burundi (assassinated) (b. 1930) January 20 – Alan Freed, American disc jockey (b. 1921) January 24 – Sir Winston Churchill, British politician and statesman, twice Prime Minister of the United Kingdom, World War II leader, recipient of the Nobel Prize in Literature (b. 1874)[59] January 27 – Hassan Ali Mansur, Iranian politician, 69th Prime Minister of Iran (b. 1923) January 28 Taimur bin Feisal, Sultan of Oman (b. 1886) Tich Freeman, English cricketer (b. 1888)[60] Maxime Weygand, French general (b. 1867) January 31 – Konstantin Muraviev, 31st Prime Minister of Bulgaria (b. 1893) Nat King Cole Malcolm X February 5 – Irving Bacon, American actor (b. 1893) February 6 – Frederick, Prince of Hohenzollern (b. 1891) February 7 – Nance O'Neil, American stage and film actress (b. 1874) February 9 – Khan Bahadur Ahsanullah, Indian educationist, philosopher, philanthropist, social reformer and spiritualist (b. 1874)[61] February 13 Humberto Delgado, Portuguese general and opposition politician (b. 1906) William Heard Kilpatrick, American mathematician and philosopher (b. 1871) February 14 – Désiré-Émile Inghelbrecht, French composer (b. 1880) February 15 – Nat King Cole, American singer and musician (b. 1919)[62] February 19 Forrest Taylor, American actor (b. 1883)[63] Tom Wilson, American actor (b. 1880) February 20 – Michał Waszyński, Polish film director and producer (b. 1904)[64] February 21 – Malcolm X, American civil rights activist (b. 1925)[65] February 22 – Felix Frankfurter, U.S. Supreme Court Justice (b. 1882) February 23 – Stan Laurel, British actor (b. 1890)[66] February 24 – Takeo Itō, Japanese general (b. 1889) February 28 – Adolf Schärf, Austrian politician, 6th President of Austria (b. 1890) King Farouk of Egypt Mary, Princess Royal and Countess of Harewood March 5 – Salvador Castaneda Castro, 31st President of El Salvador (b. 1888) March 6 Margaret Dumont, American actress (b. 1889) Herbert Morrison, British politician (b. 1888)[67] March 7 – Louise Mountbatten, queen consort of Sweden as second wife of King Gustaf VI Adolf (b. 1889) March 13 Corrado Gini, Italian statistician (b. 1884)[68] Vittorio Jano, Italian automobile designer (b. 1891)[69] Fan Noli, Albanian bishop, poet and politician, 13th Prime Minister of Albania (b. 1882) March 14 – Marion Jones Farquhar, American tennis champion (b. 1879) March 17 Nancy Cunard, English writer, heiress and political activist (b. 1896) Amos Alonzo Stagg, American baseball, basketball and football player and coach (b. 1862) March 18 – Farouk of Egypt, deposed king (b. 1920) March 19 – Gheorghe Gheorghiu-Dej, Romanian communist leader, 47th Prime Minister of Romania (b. 1901) March 22 – Fidel Dávila, Spanish general and minister (b. 1878) March 23 – Mae Murray, American silent film actress (b. 1885) March 25 – Viola Liuzzo, American Unitarian Universalist and civil rights activist (b. 1925) March 28 Mary, Princess Royal and Countess of Harewood, member of the British royal family (b. 1897) Jack Hoxie, American actor, rodeo performer (b. 1885) March 30 – Philip Showalter Hench, American physician, recipient of the Nobel Prize in Physiology or Medicine (b. 1896) Edward Victor Appleton April 3 – Ray Enright, American film director (b. 1896) April 9 – Sherman Minton, American politician and Associate Justice of the Supreme Court of the United States (b. 1890)[70] April 10 Linda Darnell, American actress (b. 1923) La Belle Otero, Spanish actress, dancer and courtesan (b. 1868) April 14 Leonard Mudie, English actor (b. 1883)[71] Perry Smith (b. 1928) and Richard Hickock (b. 1931), American convicted murderers April 16 – Sydney Chaplin, English actor (b. 1885) April 18 – Guillermo González Camarena, Mexican inventor (b. 1917) April 21 Sir Edward Victor Appleton, English physicist, Nobel Prize laureate (b. 1892) Pedro Albizu Campos, advocate of Puerto Rican independence (b. 1891)[72] April 23 – George Adamski, Polish-American UFO writer (b. 1891) April 24 – Louise Dresser, American actress (b. 1878) April 27 – Edward R. Murrow, American journalist (b. 1908)[73] April 30 – Helen Chandler, American actress (b. 1906) Leopold Figl May 1 – Spike Jones, American musician and bandleader (b. 1911) May 6 – Oren E. Long, American politician, 10th Governor of Hawai'i (b. 1889) May 7 Charles Sheeler, American photographer (b. 1883) Alf Bjørnskau Bastiansen, Norwegian priest and politician (b. 1883) May 9 – Leopold Figl, 14th Chancellor of Austria and acting President of Austria (b. 1902) May 10 – Hubertus van Mook, Dutch Governor-General of the Dutch East Indies (b. 1894)[74] May 14 – Frances Perkins, first woman appointed as a United States presidential cabinet member (Labor) (b. 1880) May 15 – Yisrael Bar-Yehuda, Zionist activist and Israel politician (b. 1895) May 18 – Eli Cohen, Israeli spy (b. 1924) May 19 – Maria Dąbrowska, Polish writer (b. 1889) May 21 – Sir Geoffrey de Havilland, British aviation pioneer and aircraft company founder (b. 1882)[75] May 23 Rosina Anselmi, Italian actress (b. 1880) David Smith, American sculptor (b. 1906) May 24 – Sonny Boy Williamson, American blues musician (b. 1899) May 27 – John Rinehart Blue, American military officer, educator, businessperson, and politician (b. 1905)[76] Martin Buber June 1 – Curly Lambeau, American football player and coach (b. 1898) June 5 Eleanor Farjeon, British author of children's literature (b. 1881) Prince Wilhelm, Duke of Södermanland (b. 1884) June 7 – Judy Holliday, American actress, comedian, and singer (b. 1921) June 11 – José Mendes Cabeçadas, Portuguese navy officer, 94th Prime Minister of Portugal and 9th President of Portugal (b. 1883) June 13 – Martin Buber, Austrian-Israeli philosopher (b. 1878) June 15 – Steve Cochran, American actor (b. 1917) June 19 – James Collip, Canadian biochemist (b. 1892) June 20 – Bernard Baruch, American financier and presidential adviser (b. 1870) June 22 – David O. Selznick, American film producer (b. 1902) June 23 – Mary Boland, American actress (b. 1882) June 28 – Red Nichols, American jazz cornettist (b. 1905) June 30 – Bessie Barriscale, American actress (b. 1884) Syngman Rhee July 1 – Wally Hammond, English cricketer (b. 1903) July 7 – Moshe Sharett, 2nd Prime Minister of Israel (b. 1894) July 8 – T. S. Stribling, American novelist (b. 1881)[77] July 11 – Ray Collins, American actor (b. 1889) July 13 – Laureano Gómez, 43rd President of Colombia (b. 1889) July 14 Adlai Stevenson II, American politician (b. 1900) Max Woosnam, English sportsman (b. 1892) July 19 Clyde Beatty, American animal trainer (b. 1903) Ingrid Jonker, South African Afrikaans poet (b. 1933) Syngman Rhee, Korean statesman, 1st President of South Korea (b. 1875) July 24 – Constance Bennett, American actress (b. 1904) July 28 – Rampo Edogawa, Japanese author and critic (b. 1894) July 30 Pier Ruggero Piccio, Italian World War I fighter ace, air force general (b. 1880)[78] Jun'ichirō Tanizaki, Japanese writer (b. 1886) Le Corbusier August 1 – John Miller, American Olympic rower - Men's eights (b. 1903) August 6 Nancy Carroll, American actress (b. 1903) Everett Sloane, American actor (b. 1909) August 8 – Shirley Jackson, American author (b. 1916) August 9 – Creighton Hale, American actor (b. 1882) August 13 – Hayato Ikeda, Japanese politician, 38th Prime Minister of Japan (b. 1899) August 25 – Johnny Hayes, American Olympic athlete (b. 1886) August 27 – Le Corbusier, Swiss architect (b. 1887) August 28 Rashid Ali al-Gaylani, Iraqi politician, 9th Prime Minister of Iraq (b. 1892) Giulio Racah, Israeli physicist (b. 1909) August 29 – Paul Waner, American baseball player (b. 1903) Yunus Hussain Dorothy Dandridge September 4 Tommy Hampson, British Olympic athlete (b. 1907) Albert Schweitzer, Alsatian physician and missionary, recipient of the Nobel Peace Prize (b. 1875) September 6 – Yunus Hussain, Pakistani fighter pilot (b. 1935) September 8 Dorothy Dandridge, American actress (b. 1922) Hermann Staudinger, German chemist, Nobel Prize laureate (b. 1881) September 12 – Lucian Truscott, American general (b. 1895) September 16 – Fred Quimby, American animated film producer (b. 1886) September 17 – Alejandro Casona, Spanish poet and playwright (b. 1903) September 22 – Othmar Ammann, Swiss-born American engineer (b. 1879)[79] September 27 – Clara Bow, American silent film actress (b. 1905) Samir Al-Rifai Paul Hermann Müller October 1 – Anton Boisen, American founder of the clinical pastoral education movement (b. 1876)[80] October 3 – Zachary Scott, American actor (b. 1914) October 8 – Thomas B. Costain, Canadian author and journalist (b. 1885)[81] October 11 Dorothea Lange, American photographer (b. 1895) Walther Stampfli, member of the Swiss Federal Council (b. 1884) October 12 – Samir Al-Rifai, 6-time Prime Minister of Jordan (b. 1901) October 13 – Paul Hermann Müller, Swiss chemist, recipient of the Nobel Prize in Physiology or Medicine (b. 1899) October 14 – Randall Jarrell, American poet (b. 1914) October 15 – Abraham Fraenkel, Israeli mathematician and recipient of the Israel Prize (b. 1891) October 17 – Bart King, American cricketer (b. 1873)[82] October 18 Oscar Beregi, Hungarian actor (b. 1876) Henry Travers, English actor (b. 1874) October 21 Bill Black, American musician and bandleader (b. 1926) Marie McDonald, American actress (b. 1923) October 22 – Paul Tillich, German American Christian existentialist philosopher and theologian (b. 1886) October 23 – Luis de la Puente Uceda, Peruvian guerrilla leader (b. 1926) October 24 – Hans Meerwein, German chemist (b. 1879) October 26 – Sylvia Likens, American murder victim (b. 1949) October 29 – Miller Anderson, American Olympic diver (b. 1922) October 30 – Arthur Schlesinger, Sr., American historian (b. 1888)[83] October 31 – Rita Johnson, American actress (b. 1913) Henry A. Wallace Emir Abdullah III Al-Salim Al-Sabah November 2 Félix Paiva, 28th President of Paraguay (b. 1877) H.V. Evatt, Australian politician, judge (b. 1894) November 6 Edgard Varèse, French-born American composer (b. 1883) Clarence Williams, American musician (b. 1893) November 8 Dorothy Kilgallen, American newspaper columnist and television personality (b. 1913) Emma Gramatica, Italian actress (b. 1874) Mirza Basheer-ud-Din Mahmood Ahmad, second caliph (b. 1889) November 12 – Taher Saifuddin, Indian Bohra spiritual leader (b. 1888)[84] November 16 Harry Blackstone Sr., American magician and illusionist (b. 1885)[85] W. T. Cosgrave, Irish politician, president of the Provisional Government and the Executive Council of the Irish Free State (b. 1880) November 18 Khalid al-Azm, 5-time Prime Minister of Syria and acting President of Syria (b. 1903) Henry A. Wallace, 33rd Vice President of the United States (b. 1888) November 24 – Abdullah III Al-Salim Al-Sabah, Emir of Kuwait (b. 1895) November 25 – Dame Myra Hess, English pianist (b. 1890) Somerset Maugham December 5 – Joseph Erlanger, American physiologist and academic, Nobel Prize laureate (b. 1874) December 9 – Branch Rickey, American baseball executive (b. 1881) December 10 – Henry Cowell, American composer (b. 1897) December 11 – George Constantinescu, Romanian scientist (b. 1881) December 15 – Joseph Bamina, 8th Prime Minister of Burundi (executed) (b. 1927) December 16 W. Somerset Maugham, English writer (b. 1874) Tito Schipa, Italian tenor (b. 1889) Queen Sālote Tupou III of Tonga, (b. 1900)[86] December 24 – William M. Branham, American minister (b. 1909) December 27 – Edgar Ende, German painter (b. 1901) December 29 – Kosaku Yamada, Japanese composer and conductor (b. 1886) Physics – Shin'ichirō Tomonaga, Julian Schwinger, Richard P. Feynman Chemistry – Robert Burns Woodward Physiology or Medicine – François Jacob, André Michel Lwoff, Jacques Monod Literature – Mikhail Sholokhov Peace – United Nation's Children's Fund (UNICEF)

^ Matson-Mäkelä, Kirsi (January 29, 2015). "Suomen ensimmäinen jäähalli täyttää 50 vuotta – "Hakamettä" on monelle kiekkoilijalle toinen koti". Yle (in Finnish). Retrieved January 29, 2025. ^ "Holding history's largest funeral". BBC News. April 8, 2005. Retrieved March 29, 2010. ^ Cohen, Barry M. (1965). "The descent of Lysenko". Journal of Heredity. 56 (5): 229–33. doi:10.1093/oxfordjournals.jhered.a107425. ^ Joravsky, David (1970). The Lysenko Affair. Russian Research Center studies, 61. Cambridge, Mass.: Harvard University Press. ISBN 0-674-53985-0. ^ "Biggest Change Greets Catholics Tomorrow". Daily Citizen. Tucson. March 6, 1965. p. 10. ^ Marini, Piero (2007). A Challenging Reform: Realizing the Vision of the Liturgical Renewal, 1963-1975. Liturgical Press. p. 97. ^ "Alexei Leonov: First person to walk in space dies aged 85". BBC News. October 11, 2019. Retrieved October 11, 2019. ^ "Official Eurovision Song Contest 1965 scoreboard". Eurovision Song Contest. ^ "M 7.4 - Valparaiso, Chile". earthquake.usgs.gov. USGS. Retrieved April 12, 2021. ^ Moyar, Mark (2004). "Political Monks: The Militant Buddhist Movement during the Vietnam War". Modern Asian Studies. 38 (4). New York City: Cambridge University Press: 749–784. doi:10.1017/S0026749X04001295. S2CID 145723264. ^ "Timeline – Story of Independence". Maldives Independent. July 26, 2015. Archived from the original on June 24, 2016. Retrieved July 26, 2015. ^ Mars, Shaun Michael (January 21, 2007). "Marquette Frye, 1944-1986". BlackPast. Retrieved October 2, 2024. ^ "Watts Riots". Digital Library of Georgia. University of Georgia, University Libraries. Retrieved October 2, 2024. ^ Vickers, Adrian (2013). A History of Modern Indonesia (2nd ed.). New York: Cambridge University Press. pp. 160–165. ISBN 9781107624450. ^ Bartrop, Paul (2012). A Biographical Encyclopedia of Contemporary Genocide: Portraits of Evil and Good. ABC-CLIO. p. 355. ISBN 978-0313386787. ^ "Geschichte". Archived from the original on March 11, 2012. Retrieved July 30, 2012.) ^ "Largest Cities Through History". Geography. About.com. Archived from the original on August 18, 2016. Retrieved February 27, 2006. ^ Editors of Chase's (September 30, 2018). Chase's Calendar of Events 2019: The Ultimate Go-to Guide for Special Days, Weeks and Months. Rowman & Littlefield. p. 73. ISBN 978-1-64143-264-1. ^ Vinnie Jones (July 17, 2014). It's Been Emotional. Simon and Schuster. p. 9. ISBN 978-1-4711-2759-5. ^ "Patrik Sjöberg". IOC. Retrieved March 3, 2021. ^ Staff (15 January 2010). "Happy birthday". The Times (Times Newspapers): p. 47. ^ "Gheorghe Hagi – FIFA competition record". Archived from the original on March 5, 2016. Retrieved March 10, 2022. ^ "Monitor". Entertainment Weekly. No. 1194. February 17, 2012. p. 26. ^ The World Almanac & Book of Facts. World Almanac Books. 2007. p. 218. 2/23/65. ^ "Biography of Michael Dell". businessweek.com. January 31, 2007. Archived from the original on February 13, 2010. Retrieved March 1, 2022. ^ "Helena Sukova". wtatennis.com. Women's Tennis Association. ^ "BERA, Ami". bioguide.congress.gov. ^ Stevis-Gridneff, Matina (March 9, 2025). "Banker Mark Carney Wins Race to Lead Liberal Party, and Canada". The New York Times. ^ "About the Author". annaleenaharkonen.com. Retrieved April 10, 2024. ^ Sybex (1999). Hardcore Wrestling! (Ultimate Strategy Guide). John Wiley & Sons. p. 1952 pp. ISBN 978-0782126914. ^ "Andrea Jaeger". wtatennis.com. Women's Tennis Association. ^ "Ogata Megumi". Hitoshi Doi. Retrieved January 22, 2010. ^ Frank Grillo [@FrankGrillo] (June 8, 2014). "Thanks all for the B-Day wishes. Much love and appreciation!!!" (Tweet). Archived from the original on May 1, 2016 – via Twitter. ^ "Andrea Ghez - Facts". Nobel Prize. Retrieved March 2, 2022. ^ "Dana Eskelson". IMDb. ^ Augustyn, Adam. "Matthew Weiner: American writer and producer". Britannica.com. Retrieved May 21, 2015. ^ Ex-MLC Ramdas Ambatkar Passes Away After Prolonged Illness in Chennai ^ "Illeana Douglas Biography". TCM Movie Database. Turner Entertainment Networks, Inc. A Time Warner Company. Retrieved April 2, 2014. ^ 1965 – FIFA competition record (archived) ^ 1965 – FIFA competition record (archived) ^ Turner, Barry (2012). The statesman's yearbook : the politics, cultures and economies of the world. Basingstoke: Palgrave Macmillan. p. 1176. ISBN 9781349595419. ^ "David Reimer and John Money Gender Reassignment Controversy: The John/Joan Case - The Embryo Project Encyclopedia". embryo.asu.edu. ^ "Satoshi Tajiri Biography". IGN. News Corporation. 2010. Archived from the original on November 5, 2016. Retrieved January 27, 2010. ^ "Radisav Ćurčić Stats". Basketball-Reference.com. ^ "Önder, Ferhan". Catalogue.bnf.fr (in French). Bibliothèque nationale de France. January 30, 2015. Retrieved May 7, 2024. ^ "Önder, Ferzan". Catalogue.bnf.fr (in French). Bibliothèque nationale de France. January 30, 2015. Retrieved May 7, 2024. ^ "Jan-Ove Waldner at old.ittf.com". Archived from the original on January 11, 2017. Retrieved March 9, 2022. ^ Printing, Congress (U S.) Joint Committee on (March 30, 2016). Official Congressional Directory 114th Congress, 2015-2016, Convened January 2015. United States Government Publishing Office. ISBN 9780160929977 – via Google Books. ^ "Lennie James". TVGuide.com. Retrieved June 19, 2014. ^ "Amos Mansdorf | Overview | ATP Tour | Tennis". ATP Tour. ^ "S. Pioli". soccerway.com. Soccer way. ^ Quintana, Marsolaire. Sumito Estevez and ginger to taste. Excess Magazine. 2 April 2003, issue number 34. ^ "Biografía de Patricia Poleo". Cuandoacio. Archived from the original on July 23, 2018. Retrieved November 6, 2017. ^ "Pam Bondi Fast Facts | CNN Politics". CNN. February 13, 2025. ^ "Raffaella Reggi". Women's Tennis Association. ^ 1965 at National-Football-Teams.com ^ Chase's calendar of events 2022 : the ultimate go-to guide for special days, weeks and months. Lanham, Maryland: Rowman & Littlefield. 2021. p. 618. ISBN 9781641435048. ^ Grantq, Michael (1997). T.S. Eliot: The Critical Heritage, Volume 1. Psychology Press. p. 55. ISBN 9780415159470. ^ Jenkins, Roy (2001). Churchill. London: Macmillan Press. p. 911. ISBN 978-03-30488-05-1. ^ Tich Freeman England ^ "Founder | Dhaka Ahsania Mission". www.ahsaniamission.org.bd. September 18, 2014. ^ Epstein, Daniel Mark (1999). Nat King Cole. New York: Farrar Straus Giroux. p. 356. ISBN 978-0-374-21912-3. ^ Forrest Taylor ^ "Michal Waszynski". IMDb. ^ Kihss, Peter (February 22, 1965). "Malcolm X Shot to Death at Rally". The New York Times – via NYTimes.com. ^ Bergan, Ronald. The Life and Times of Laurel and Hardy. New York: Smithmark, 1992. ISBN 0-8317-5459-1 pages 119-120 ^ "Morrison Asked For "Jolly" Funeral Music". The Daily Telegraph. March 8, 1965. p. 1. Retrieved May 27, 2024 – via Newspapers.com. ^ Garzia, Mino (1998). Political communities and calculus: sociological analysis in the Italian scientific tradition (1924-1943). Bern; New York: P. Lang. p. 21. ISBN 9780820442006. ^ Barker, Ronald (1970). Automobile design: great designers and their work. Cambridge, Mass: R. Bentley. p. 254. ISBN 9780837600451. ^ Sherman Minton United States jurist ^ "Leonard Mudie - Actor Filmography, photos, Video". elCinema.com. ^ Pedro Albizu Campos Puerto Rican attorney, social activist, and nationalist ^ "Edward R. Murrow". NCPedia. State Library of North Carolina. Retrieved August 10, 2016. ^ Today's History, May 30, 1894: The Birth Of NICA Leader Hubertus Johannes Van Mook ^ "Captain Sir Geoffrey De Havilland | De Havilland - The Man and the Company | Archive Exhibitions | Research". Retrieved December 26, 2022. ^ "John R. Blue". Cumberland Evening Times. Cumberland, Maryland. May 28, 1965. p. 20. Archived from the original on January 3, 2021. Retrieved January 3, 2021 – via Newspapers.com. ^ Alabama, University of North. "T.S. Stribling - Biography". una.edu. ^ "The Italian Monarchist: General Count Pier Ruggero Piccio". July 27, 2013. ^ "Othmar Herman Ammann | American engineer | Britannica". www.britannica.com. February 12, 2024. ^ "The Biography of Anton Theophilus Boisen" (PDF). Retrieved December 26, 2022. ^ Current Biography: Who's News and Why, 1953. Hw Wilson Company. June 1953. p. 124. ISBN 978-0-8242-0119-7. {{cite book}}: ISBN / Date incompatibility (help) ^ "Bart King: 16 facts about the greatest cricketer from USA". Latest Sports Updates, Cricket News, Cricket World Cup, Football, Hockey & IPL. October 19, 2016. ^ Arthur M. Schlesinger American historian ^ HIS HOLINESS DR SYEDNA TAHER SAIFUDDIN ^ Harry Blackstone, Sr. American magician ^ Wood-Ellem, Elizabeth (1999). Queen Sālote of Tonga: The Story of an Era 1900–1965. Auckland, N.Z: Auckland University Press. p. 1. ISBN 978-0-8248-2529-4. OCLC 262293605. Retrieved from "

3One hundred years, from 1801 to 1900 For other uses, see 19th century (disambiguation). An 1835 illustration of power loom weaving, as part of the Industrial Revolution Millennia 2nd millennium Centuries 18th century 19th century 20th century Timelines 18th century 19th century 20th century State leaders 18th century 19th century 20th century Decades 1800s 1810s 1820s 1830s 1840s 1850s 1860s 1870s 1880s 1890s Categories: Births – Deaths Establishments – Disestablishments vte The 19th century began on 1 January 1801 (represented by the Roman numerals MDCCCI), and ended on 31 December 1900 (MCM). It was the 9th century of the 2nd millennium. It was characterized by vast social upheaval. Slavery was abolished in much of Europe and the Americas. The First Industrial Revolution, though it began in the late 18th century, expanded beyond its British homeland for the first time during the 19th century, particularly remaking the economies and societies of the Low Countries, France, the Rhineland, Northern Italy, and the Northeastern United States. A few decades later, the Second Industrial Revolution led to ever more massive urbanization and much higher levels of productivity, profit, and prosperity, a pattern that continued into the 20th century. The Catholic Church, in response to the growing influence and power of modernism, secularism and materialism, formed the First Vatican Council in the late 19th century to deal with such problems and confirm certain Catholic doctrines as dogma. Religious missionaries were sent from the Americas and Europe to Asia, Africa and the Middle East. In the Middle East, it was an era of change and reform. The Islamic gunpowder empires fell into decline and European imperialism brought much of South Asia, Southeast Asia, and almost all of Africa under colonial rule. Reformers were opposed at every turn by conservatives who strove to maintain the centuries-old Islamic laws and social order.[1] The 19th century also saw the collapse of the large Spanish, Portuguese, French and Mughal empires, which paved the way for the growing influence of the British, French, German, Russian, Austro-Hungarian, Italian, and Japanese empires along with the United States. Following the defeat of France in the Napoleonic Wars, it marked the end of France's status as the world superpower. Britain took France's status as the world superpower, the British and Russian empires expanded considerably, becoming two of the world's leading powers. Russia expanded its territory to the Caucasus and Central Asia. The Ottoman Empire underwent a period of Westernization and reform known as the Tanzimat, vastly increasing its control over core territories in the Middle East. However, it remained in decline and became known as the sick man of Europe, losing territory in the Balkans and North Africa. The remaining powers in the Indian subcontinent, such as the Maratha and Sikh empires, suffered a massive decline, and their dissatisfaction with the British East India Company's rule led to the Indian Rebellion of 1857 and the company's dissolution. India was later ruled directly by the British Crown through the establishment of the British Raj. During the post-Napoleonic era (after 1815), Britain enforced what became known as the Pax Britannica, which ushered in unprecedented globalization on a massive scale. Britain's overseas possessions grew rapidly in the first half of the century, especially with the expansion of vast territories in Canada, Australia, India, and in the last two decades of the century in Africa. By the end of the 19th century, the British controlled a fifth of the world's land and a quarter of the world's population. By the end of the century, Britain, France, Germany, and the United States had colonized almost all of Oceania. In East Asia, China under the Qing dynasty endured its century of humiliation by foreign powers that lasted until the first half of the 20th century. The last surviving man and woman, respectively, verified to have been born in the 19th century were Jiroemon Kimura (1897–2013) and Nabi Tajima (1900–2018), both Japanese. Official portrait of Queen Victoria, 1859 The first electronics appeared in the 19th century, with the introduction of the electric relay in 1835, the telegraph and its Morse code protocol in 1837, the first telephone call in 1876,[2] and the first functional light bulb in 1878.[3] The 19th century was an era of rapidly accelerating scientific discovery and invention, with significant developments in the fields of mathematics, physics, chemistry, biology, electricity, and metallurgy that laid the groundwork for the technological advances of the 20th century.[4] The Industrial Revolution began in Great Britain and spread to continental Europe, North America, and Japan.[5] The Victorian era was notorious for the employment of young children in factories and mines, as well as strict social norms regarding modesty and gender roles.[6] Japan embarked on a program of rapid modernization following the Meiji Restoration, before defeating China, under the Qing dynasty, in the First Sino-Japanese War. Advances in medicine and the understanding of human anatomy and disease prevention took place in the 19th century, and were partly responsible for rapidly accelerating population growth in the Western world. Europe's population doubled during the 19th century, from approximately 200 million to more than 400 million.[7] The introduction of railroads provided the first major advancement in land transportation for centuries, changing the way people lived and obtained goods, and fuelling major urbanization movements in countries across the globe. Numerous cities worldwide surpassed populations of a million or more during this century. London became the world's largest city and capital of the British Empire. Its population increased from 1 million in 1800 to 6.7 million a century later. The last remaining undiscovered landmasses of Earth, including vast expanses of interior Africa and Asia, were explored during this century, and with the exception of the extreme zones of the Arctic and Antarctic, accurate and detailed maps of the globe were available by the 1890s. Liberalism became the pre-eminent reform movement in Europe.[8] Arab slave traders and their captives along the Ruvuma River, 19th century Slavery was greatly reduced around the world. Following a successful slave revolt in Haiti, Britain and France stepped up the battle against the Barbary pirates and succeeded in stopping their enslavement of Europeans. The UK's Slavery Abolition Act 1833 charged the British Royal Navy with ending the global slave trade.[9] The first colonial empire in the century to abolish slavery was the British, who did so in 1834. America's Thirteenth Amendment following their Civil War abolished slavery there in 1865, and in Brazil slavery was abolished in 1888 (see abolitionism). Similarly, serfdom was abolished in Russia in 1861. The 19th century was remarkable in the widespread formation of new settlement foundations which were particularly prevalent across North America and Australia, with a significant proportion of the two continents' largest cities being founded at some point in the century. Chicago in the United States and Melbourne in Australia were non-existent in the earliest decades but grew to become the 2nd largest cities in the United States and British Empire respectively by the end of the century. In the 19th century, approximately 70 million people left Europe, with most migrating to the United States.[10] The 19th century also saw the rapid creation, development, and codification of many sports, particularly in Britain and the United States. Association football, rugby union, baseball, and many other sports were developed during the 19th century, while the British Empire facilitated the rapid spread of sports such as cricket to many different parts of the world. Also, women's fashion was a very sensitive topic during this time, as women showing their ankles was viewed to be scandalous. The boundaries set by the Congress of Vienna, 1815 It also marks the fall of the Ottoman rule of the Balkans which led to the creation of Serbia, Bulgaria, Montenegro, and Romania as a result of the second Russo-Turkish War, which in itself followed the great Crimean War. Map of the world from 1897. The British Empire (marked in pink) was the superpower of the 19th century. Industrial Revolution European imperialism British Regency, Victorian era (UK, British Empire) Bourbon Restoration, July Monarchy, French Second Republic, Second French Empire, French Third Republic (France) Risorgimento (Italy) Belle Époque (Europe) Edo period, Meiji period (Japan) Qing dynasty (China) Nguyen dynasty (Vietnam) Joseon dynasty (Korea) Zulu Kingdom (South Africa) Tanzimat, First Constitutional Era (Ottoman Empire) Russian Empire Manifest destiny, Antebellum era, Reconstruction era, American frontier, Gilded Age (United States) Main article: Napoleonic Wars For a chronological guide, see Timeline of the Napoleonic era. Napoleon's retreat from Russia in 1812. The war is turning decisively against the French Empire. The Napoleonic Wars were a series of major conflicts from 1803 to 1815 pitting the French Empire and its allies, led by Napoleon I, against a fluctuating array of European powers formed into various coalitions, financed and usually led by the United Kingdom. The wars stemmed from the unresolved disputes associated with the French Revolution and its resultant conflict. In the aftermath of the French Revolution, Napoleon Bonaparte gained power in France in 1799. In 1804, he crowned himself Emperor of the French. In 1805, the French victory over an Austrian-Russian army at the Battle of Austerlitz ended the War of the Third Coalition. As a result of the Treaty of Pressburg, the Holy Roman Empire was dissolved. Later efforts were less successful. In the Peninsular War, France unsuccessfully attempted to establish Joseph Bonaparte as King of Spain. In 1812, the French invasion of Russia had massive French casualties, and was a turning point in the Napoleonic Wars.Napoleon Bonaparte, Emperor of the First French EmpireIn 1814, after defeat in the War of the Sixth Coalition, Napoleon abdicated and was exiled to Elba. Later that year, he escaped exile and began the Hundred Days before finally being defeated at the Battle of Waterloo and exiled to Saint Helena, an island in the South Atlantic Ocean. After Napoleon's defeat, the Congress of Vienna was held to determine new national borders. The Concert of Europe attempted to preserve this settlement was established to preserve these borders, with limited impact. Main article: Spanish American wars of independence The Chilean Declaration of Independence, 18 February 1818 Mexico and the majority of the countries in Central America and South America obtained independence from colonial overlords during the 19th century. In 1804, Haiti gained independence from France. In Mexico, the Mexican War of Independence was a decade-long conflict that ended in Mexican independence in 1821. Due to the Napoleonic Wars, the royal family of Portugal relocated to Brazil from 1808 to 1821, leading to Brazil having a separate monarchy from Portugal. The Federal Republic of Central America gained independence from Spain in 1821 and from Mexico in 1823. After several rebellions, by 1841 the federation had dissolved into the independent countries of Guatemala, El Salvador, Honduras, Nicaragua, and Costa Rica.[11] In 1830, the post-colonial nation of Gran Colombia dissolved and the nations of Colombia (including modern-day Panama), Ecuador, and Venezuela took its place. Main article: Revolutions of 1848 Liberal and nationalist pressure led to the European revolutions of 1848. The Revolutions of 1848 were a series of political upheavals throughout Europe in 1848. The revolutions were essentially democratic and liberal in nature, with the aim of removing the old monarchical structures and creating independent nation states. The first revolution began in January in Sicily.[clarification needed] Revolutions then spread across Europe after a separate revolution began in France in February. Over 50 countries were affected, but with no coordination or cooperation among their respective revolutionaries. According to Evans and von Strandmann (2000), some of the major contributing factors were widespread dissatisfaction with political leadership, demands for more participation in government and democracy, demands for freedom of the press, other demands made by the working class, the upsurge of nationalism, and the regrouping of established government forces.[12] Main articles: Abolitionism and American Civil War Politician and philanthropist William Wilberforce (1759–1833) was a leader of the movement to abolish the slave trade. The abolitionism movement achieved success in the 19th century. The Atlantic slave trade was abolished in the United States in 1808, and by the end of the century, almost every government had banned slavery. The Slavery Abolition Act 1833 banned slavery throughout the British Empire, and the Lei Áurea abolished slavery in Brazil in 1888. Abolitionism in the United States continued until the end of the American Civil War. Frederick Douglass and Harriet Tubman were two of many American abolitionists who helped win the fight against slavery. Douglass was an articulate orator and incisive antislavery writer, while Tubman worked with a network of antislavery activists and safe houses known as the Underground Railroad. The American Civil War took place from 1861 to 1865. Eleven southern states seceded from the United States, largely over concerns related to slavery. In 1863, President Abraham Lincoln issued the Emancipation Proclamation. Lincoln issued a preliminary[13] on September 22, 1862, warning that in all states still in rebellion (Confederacy) on January 1, 1863, he would declare their slaves "then, thenceforward, and forever free."[14] He did so.[15] The Thirteenth Amendment to the Constitution,[16] ratified in 1865, officially abolished slavery in the entire country. Five days after Robert E. Lee surrendered at Appomattox Courthouse, Virginia, Lincoln was assassinated by actor and Confederate sympathizer John Wilkes Booth. Main article: Decline and modernization of the Ottoman Empire Ibrahim Pasha of Egypt, leader of the Egyptian Army in the Egyptian–Ottoman War (1831–1833)[17] In 1817, the Principality of Serbia became suzerain from the Ottoman Empire, and in 1867, it passed a constitution that defined its independence from the Ottoman Empire. In 1830, Greece became the first country to break away from the Ottoman Empire after the Greek War of Independence. In 1831, the Bosnian Uprising against Ottoman rule occurred. In 1831, The First Egyptian–Ottoman War (1831–1833) occurred, between the Ottoman Empire and Egypt brought about by Muhammad Ali Pasha's demand to the Sublime Porte for control of Greater Syria, as reward for aiding the Sultan during the Greek War of Independence. As a result, Egyptian forces temporarily gained control of Syria, advancing as far north as Kütahya.[18] In 1876, Bulgarians instigated the April Uprising against Ottoman rule. Following the Russo-Turkish War, the Treaty of Berlin recognized the formal independence of the Serbia, Montenegro, and Romania. Bulgaria became autonomous. Main article: Taiping Rebellion A scene of the Taiping Rebellion The Taiping Rebellion was the bloodiest conflict of the 19th century, leading to the deaths of around 20–30 million people. Its leader, Hong Xiuquan, declared himself the younger brother of Jesus Christ and developed a new Chinese religion known as the God Worshipping Society. After proclaiming the establishment of the Taiping Heavenly Kingdom in 1851, the Taiping army conquered a large part of China, capturing Nanjing in 1853. In 1864, after the death of Hong Xiuquan, Qing forces recaptured Nanjing and ended the rebellion.[19] Main article: Meiji Restoration During the Edo period, Japan largely pursued an isolationist foreign policy. In 1853, United States Navy Commodore Matthew C. Perry threatened the Japanese capital Edo with gunships, demanding that they agree to open trade. This led to the opening of trade relations between Japan and foreign countries, with the policy of Sakoku formally ended in 1854. By 1872, the Japanese government under Emperor Meiji had eliminated the daimyō system and established a strong central government. Further reforms included the abolition of the samurai class, rapid industrialization and modernization of government, closely following European models.[20] Main articles: Western imperialism in Asia and Scramble for Africa Arrival of Marshal Randon in Algiers, French Algeria in 1857 The Maratha Confederacy and the East India Company sign the Treaty of Bassein in 1802. 1803: United States more than doubles in size when it buys out France's territorial claims in North America via the Louisiana Purchase. This begins the U.S.'s westward expansion to the Pacific, referred to as its Manifest Destiny, which involves annexing and conquering land from Mexico, Britain, and Native Americans. 1817 – 1819: British Empire annexed the Maratha Confederacy after the Third Anglo-Maratha War. 1823 – 1887: British Empire annexed Burma (now also called Myanmar) after three Anglo-Burmese Wars. 1848 – 1849: Sikh Empire is defeated in the Second Anglo-Sikh War. Therefore, the entire Indian subcontinent is under British control. 1862: France gained its first foothold in Southeast Asia and in 1863 annexed Cambodia. 1867: United States purchased Alaska from Russia. Comparison of Africa in the years 1880 and 1913 In Africa, European exploration and technology led to the colonization of almost the entire continent by 1898. New medicines such as quinine and more advanced firearms allowed European nations to conquer native populations.[21] Motivations for the Scramble for Africa included national pride, desire for raw materials, and Christian missionary activity. Britain seized control of Egypt to ensure control of the Suez Canal, but Ethiopia defeated Italy in the First Italo–Ethiopian War at the Battle of Adwa. France, Belgium, Portugal, and Germany also had substantial colonies. The Berlin Conference of 1884–1885 attempted to reach agreement on colonial borders in Africa, but disputes continued, both amongst European powers and in resistance by the native populations.[21] In 1867, diamonds were discovered in the Kimberley region of South Africa. In 1886, gold was discovered in Transvaal. This led to colonization in Southern Africa by the British and business interests, led by Cecil Rhodes.[21] 1801–1815: First Barbary War and the Second Barbary War between the United States and the Barbary States of North Africa. 1802: Tay Son army recaptured Phu Xuan, causing Vo Tanh to commit suicide, Nguyen Phuc Anh successfully captured Thang Long, founded the Nguyen dynasty 1804–1810: Fulani Jihad in Nigeria. 1804–1813: Russo-Persian War. 1806–1812: Russo-Turkish War, Treaty of Bucharest. 1807–1837: Musket Wars among Māori in many parts of New Zealand. 1808–1809: Russia conquers Finland from Sweden in the Finnish War.1816: Shaka rises to power over the Zulu Kingdom. Zulu expansion was a major factor of the Mfecane ("Crushing") that depopulated large areas of southern Africa. 1810: Grito de Dolores begins the Mexican War of Independence. 1811: Battle of Tippecanoe: U.S. outnumbering Native Americans resulting in defeat and burning of community 1812–1815: War of 1812 between the United States and Britain; ends in a draw, except that Native Americans lose power. 1813–1837: Afghan–Sikh Wars. 1814–1816: Anglo-Nepalese War between Nepal (Gurkha Empire) and British Empire. 1817: First Seminole War begins in Florida. 1817: Russia commences its conquest of the Caucasus. 1820: Revolutions of 1820 in Southern Europe 1821–1830: Greek War of Independence against the Ottoman Empire. 1825–1830: Java War begins. 1826–1828: After the final Russo-Persian War, the Persian Empire took back territory lost to Russia from the previous war. 1828–1832: Black War in Tasmania leads to the near extinction of the Tasmanian aborigines 1830: July Revolution overthrew old line of Bourbons. 1830: November Uprising in Poland against Russia. 1830: Belgian Revolution results in Belgium's independence from Netherlands. 1830: End of the Java War. The whole area of Yogyakarta and Surakarta Manca nagara Dutch seized. 27 September, Klaten Agreement determines a fixed boundary between Surakarta and Yogyakarta and permanently divide the kingdom of Mataram was signed by Sasradiningrat, Pepatih Dalem Surakarta, and Danurejo, Pepatih Dalem Yogyakarta. Mataram is a de facto and de yure controlled by the Dutch East Indies. 1831: France invades and occupies Algeria. 1831–1833: Egyptian–Ottoman War. 1832–1875: Regimental rebellions of Brazil 1835–1836: Texas Revolution results in Texas's independence from Mexico. 1839–1842: First Opium War begins. 1846–1848: Mexican–American War leads to Mexico's cession of much of the modern-day Southwestern United States. 1848: February Revolution overthrew Louis Philippe's government. Second Republic proclaimed; Louis Napoleon, nephew of Napoleon I, elected president. 1853–1856: Crimean War between France, the United Kingdom, the Ottoman Empire and Russia. 1856–1860: Second Opium War 1857: Indian Rebellion against the Company Raj. After this the power of the East India Company is transferred to the British Crown. 1859: Franco-Austrian War is part of the wars of Italian unification. 1861–1865: American Civil War between the Union and seceding Confederacy. Dead Confederate soldiers. In the American Civil War, 30% of all Southern white males aged 18–40 were killed.[22] 1861–1867: French intervention in Mexico and the creation of the Second Mexican Empire, ruled by Maximilian I of Mexico and his consort Carlota of Mexico. 1863–1865: January Uprising against the Russian Empire. 1864–1870: Paraguayan War ends Paraguayan ambitions for expansion and destroys much of the Paraguayan population. 1866: Austro-Prussian War results in the dissolution of the German Confederation and the creation of the North German Confederation and the Austrian-Hungarian Dual Monarchy. 1868–1869: Boshin War results in end of the shogunate and the founding the Japanese Empire. 1868–1878: Ten Years' War between Cuba and Spain. 1870–1871: Franco-Prussian War results in the unifications of Germany and Italy, the collapse of the Second French Empire and the emergence of a New Imperialism. 1870: Napoleon III abdicated after unsuccessful conclusion of Franco-Prussian War. Third Republic proclaimed. 1876: The April Uprising in Bulgaria against the Ottoman Empire. 1879: Anglo-Zulu War results in British victory and the annexation of the Zulu Kingdom. 1879–1880: Little War against Spanish rule in Cuba leads to rebel defeat. 1879–1883: Chile battles with Peru and Bolivia over Andean territory in the War of the Pacific. 1880–1881: First Boer War begins. 1881–1899: Mahdist War in Sudan.A depiction of the Battle of Omdurman, 1898. During the battle, Winston Churchill took part in a cavalry charge. 1882: Anglo-Egyptian War British invasion and subsequent occupation of Egypt 1883–1898: Mandingo Wars between the French colonial empire and the Wassoulou Empire of the Mandingo people led by Samory Touré. 1894–1895: After the First Sino-Japanese War, China cedes Taiwan to Japan and grants Japan a free hand in Korea. 1895: Taiwan is ceded to the Empire of Japan as a result of the First Sino-Japanese War. 1895–1896: Ethiopia defeats Italy in the First Italo–Ethiopian War at the Battle of Adwa. 1895–1898: Cuban War for Independence results in Cuban independence from Spain. 1896–1898: Philippine Revolution results in a Filipino victory. 1898: Spanish–American War results in the independence of Cuba. 1899–1901: Boxer Rebellion in China is suppressed by the Eight-Nation Alliance. 1899–1902: Thousand Days' War in Colombia breaks out between the "Liberales" and "Conservadores", culminating with the loss of Panama in 1903. 1899–1902: Second Boer War begins. 1899–1902: Philippine–American War begins. Distinguished Men of Science.[23] Use the cursor to see who is who.[24] Main article: 19th century in science The 19th century saw the birth of science as a profession; the term scientist was coined in 1833 by William Whewell,[25] which soon replaced the older term of natural philosopher. Among the most influential ideas of the 19th century were those of Charles Darwin (alongside the independent researches of Alfred Russel Wallace), who in 1859 published the book The Origin of Species, which introduced the idea of evolution by natural selection. Another important landmark in medicine and biology were the successful efforts to prove the germ theory of disease. Following this, Louis Pasteur made the first vaccine against rabies, and also made many discoveries in the field of chemistry, including the asymmetry of crystals. In chemistry, Dmitri Mendeleev, following the atomic theory of John Dalton, created the first periodic table of elements. In physics, the experiments, theories and discoveries of Michael Faraday, André-Marie Ampère, James Clerk Maxwell, and their contemporaries led to the creation of electromagnetism as a new branch of science. Thermodynamics led to an understanding of heat and the notion of energy was defined. Other highlights include the discoveries unveiling the nature of atomic structure and matter, simultaneously with chemistry – and of new kinds of radiation. In astronomy, the planet Neptune was discovered. In mathematics, the notion of complex numbers finally matured and led to a subsequent analytical theory; they also began the use of hypercomplex numbers. Karl Weierstrass and others carried out the arithmetization of analysis for functions of real and complex variables. It also saw rise to new progress in geometry beyond those classical theories of Euclid, after a period of nearly two thousand years. The mathematical science of logic likewise had revolutionary breakthroughs after a similarly long period of stagnation. But the most important step in science at this time were the ideas formulated by the creators of electrical science. Their work changed the face of physics and made possible for new technology to come about including a rapid spread in the use of electric illumination and power in the last two decades of the century and radio wave communication at the end of the 1890s. Michael Faraday (1791–1867) Charles Darwin (1809–1882) 1807: Potassium and Sodium are individually isolated by Sir Humphry Davy. 1831–1836: Charles Darwin's journey on HMS Beagle. 1859: Charles Darwin publishes On the Origin of Species. 1861: James Clerk Maxwell publishes On Physical Lines of Force, formulating the four Maxwell's equations. 1865: Gregor Mendel formulates his laws of inheritance. 1869: Dmitri Mendeleev creates the Periodic table. 1873: Maxwell's A Treatise on Electricity and Magnetism published. 1877: Asaph Hall discovers the moons of Mars 1896: Henri Becquerel discovers radioactivity; J. J. Thomson identifies the electron, though not by name. Robert Koch discovered the tuberculosis bacilli. In the 19th century, the disease killed an estimated 25% of the adult population of Europe.[26] 1804: Morphine first isolated. 1842: Anesthesia used for the first time. 1847: Chloroform invented for the first time, given to Queen Victoria at the birth of her eighth child, Prince Leopold in 1853 1855: Cocaine is isolated by Friedrich Gaedcke. 1885: Louis Pasteur creates the first successful vaccine against rabies for a young boy who had been bitten 14 times by a rabid dog. 1889: Aspirin patented. Thomas Edison was an American inventor, scientist, and businessman who

developed many devices that greatly influenced life around the world, including the motion picture camera, phonograph and long-lasting, practical electric light bulb. Built for the Netphener bus company in 1895, the Benz Omnibus was the first motor bus in history. 1804: First steam locomotive begins operation. 1816: Laufmaschine invented by Karl von Drais. 1825: Erie Canal opened connecting the Great Lakes to the Atlantic Ocean. 1825: First isolation of aluminium. 1827: First photograph taken (technique of heliography) by Joseph Nicephore Niepce. 1825: The Stockton and Darlington Railway, the first public railway in the world, is opened. 1826: Samuel Morey patents the internal combustion engine. 1829: First electric motor built. 1837: Telegraphy patented. 1841: The word "dinosaur" is coined by Richard Owen. 1844: First publicly funded telegraph line in the world—between Baltimore and Washington—sends demonstration message on 24 May, ushering in the age of the telegraph. This message read "What hath God wrought?" (Bible, Numbers 23:23) 1849: The safety pin and the gas mask are invented. 1852: The first successful blimp is invented 1855: Bessemer process enables steel to be mass-produced. 1856: World's first oil refinery in Romania 1858: Invention of the phonautograph, the first true device for recording sound. 1859: The first ironclad was launched into sea by the French Navy. 1860: Benjamin Tyler Henry invents the 16-shot Henry Rifle 1861: Richard Gatling invents the Gatling Gun, first modern machine gun used notably in the battles of Cold Harbor and Petersburg 1862: First meeting in combat of ironclad warships, USS Monitor and CSS Virginia, during the American Civil War. 1863: First section of the London Underground opens. 1866: Successful transatlantic telegraph cable follows an earlier attempt in 1858. 1867: Alfred Nobel invents dynamite. 1868: Safety bicycle invented. 1869: First transcontinental railroad completed in United States on 10 May. 1870: Rasmus Malling-Hansen's invention the Hansen Writing Ball becomes the first commercially sold typewriter. 1873: Blue jeans and barbed wire are invented. 1877: Thomas Edison invents the phonograph 1878: First commercial telephone exchange in New Haven, Connecticut. c. 1875/1880: Introduction of the widespread use of electric lighting. These included early crude systems in France and the UK and the introduction of large scale outdoor arc lighting systems by 1880.[27] 1879: Thomas Edison patents a practical incandescent light bulb. 1882: Introduction of large scale electric power utilities with the Edison Holborn Viaduct (London) and Pearl Street (New York) power stations supplying indoor electric lighting using Edison's incandescent bulb.[28][29] 1884: Sir Hiram Maxim invents the first self-powered Machine gun, the Maxim gun. 1885: Singer begins production of the 'Vibrating Shuttle'. which would become the most popular model of sewing machine. 1886: Karl Benz sells the first commercial automobile. 1890: The cardboard box is invented. 1892: John Froelich develops and constructs the first gasoline/petrol-powered tractor. 1894: Karl Elsener invents the Swiss Army knife. 1894: First gramophone record. 1895: Wilhelm Röntgen identifies x-rays. Brigham Young led the LDS Church from 1844 until his death in 1877. 1818: The first permanent Reform Judaism congregation, the Neuer Israelitischer Tempel, is founded in Hamburg on October 18. Around the same time, through the development of Wissenschaft des Judentums, the seeds of Conservative Judaism are sown. 1830: The Church of Jesus Christ of Latter Day Saints is established. 1844: The Báb announces his revelation on 23 May, founding Bábism. He announced to the world of the coming of "He whom God shall make manifest". He is considered the forerunner of Bahá'u'lláh, the founder of the Bahá'í Faith. 1850s–1890s: In Islam, Salafism grows in popularity. 1851: Hong Xiuquan, the leader of the God Worshipping Society, founds the Taiping Heavenly Kingdom. 1857: In Paris, France, Allan Kardec, publishes The Spirits' Book and founds the Spiritism. 1868: In Japan, State Shinto is established amidst the Meiji Restoration. 1869–1870: The First Vatican Council is convened, articulating the dogma of papal infallibility and promoting a revival of scholastic theology. 1871–1878: In Germany, Otto von Bismarck challenges the Catholic Church in the Kulturkampf ("Culture War") 1875: Helena Blavatsky co-founds the Theosophical Society and becomes the leading articulator of Theosophy. 1879: Mary Baker Eddy founds the Church of Christ, Scientist. The Watchtower, published by the Jehovah's Witnesses, releases its first issue. 1881: In the Sudan, Muhammad Ahmad claims to be the Mahdi, founding the Mahdist State and declaring war on the Khedivate of Egypt. 1889: Mirza Ghulam Ahmad establishes the Ahmadiyya Muslim Community. 1891: Pope Leo XIII issues the papal encyclical Rerum novarum, the first major document informing modern Catholic social teaching. The Great Exhibition in London. Starting during the 18th century, the UK was the first country in the world to industrialize. 1808: Beethoven composes his Fifth Symphony 1813: Jane Austen publishes Pride and Prejudice 1818: Mary Shelley publishes Frankenstein; or, The Modern Prometheus. 1819: John Keats writes his six of his best-known odes. 1819: Théodore Géricault paints his masterpiece The Raft of the Medusa, and exhibits it in the French Salon of 1819 at the Louvre. 1824: Premiere of Beethoven's Ninth Symphony. 1829: Johann Wolfgang von Goethe's Faust premieres. 1833–1834: Thomas Carlyle publishes Sartor Resartus. 1837: Charles Dickens publishes Oliver Twist. 1841: Ralph Waldo Emerson publishes Self-Reliance. 1845: Frederick Douglass publishes Narrative of the Life of Frederick Douglass, an American Slave. 1847: The Brontë sisters publish Jane Eyre, Wuthering Heights and Agnes Grey. 1848: Karl Marx and Friedrich Engels publish The Communist Manifesto. 1849: Josiah Henson publishes The Life of Josiah Henson, Formerly a Slave, Now an Inhabitant of Canada, as Narrated by Himself. 1851: Herman Melville publishes Moby-Dick. 1851: Sojourner Truth delivers the speech "Ain't I a Woman?". 1852: Harriet Beecher Stowe publishes Uncle Tom's Cabin. 1855: Walt Whitman publishes the first edition of Leaves of Grass. 1855: Frederick Douglass publishes the first edition of My Bondage and My Freedom. 1862: Victor Hugo publishes Les Misérables. 1863: Jules Verne begins publishing his collection of stories and novels, Voyages extraordinaires, with the novel Cinq semaines en ballon. 1865: Lewis Carroll publishes Alice's Adventures in Wonderland. 1869: Leo Tolstoy publishes War and Peace.Auguste Renoir, Bal du moulin de la Galette, 1876, Musée d'Orsay 1875: Georges Bizet's opera Carmen premiers in Paris. 1876: Richard Wagner's Ring Cycle is first performed in its entirety. 1883: Robert Louis Stevenson's Treasure Island is published. 1884: Mark Twain publishes the Adventures of Huckleberry Finn. 1886: Strange Case of Dr Jekyll and Mr Hyde by Robert Louis Stevenson is published. 1887: Sir Arthur Conan Doyle publishes his first Sherlock Holmes story, A Study in Scarlet. 1889: Vincent van Gogh paints The Starry Night. 1889: Moulin Rouge opens in Paris. 1892: Tchaikovsky's Nutcracker Suite premières in St Petersburg. 1894: Rudyard Kipling's The Jungle Book is published 1895: Trial of Oscar Wilde and premiere of his play The Importance of Being Earnest. 1897: Bram Stoker writes Dracula. 1900: L. Frank Baum publishes The Wonderful Wizard of Oz. Main articles: Romantic poetry and 19th century in literature Russian writer Leo Tolstoy, author of War and Peace and Anna Karenina On the literary front the new century opens with romanticism, a movement that spread throughout Europe in reaction to 18th-century rationalism, and it develops more or less along the lines of the Industrial Revolution, with a design to react against the dramatic changes wrought on nature by the steam engine and the railway. William Wordsworth and Samuel Taylor Coleridge are considered the initiators of the new school in England, while in the continent the German Sturm und Drang spreads its influence as far as Italy and Spain. French arts had been hampered by the Napoleonic Wars but subsequently developed rapidly. Modernism began.[30] The Goncourts and Émile Zola in France and Giovanni Verga in Italy produce some of the finest naturalist novels. Italian naturalist novels are especially important in that they give a social map of the new unified Italy to a people that until then had been scarcely aware of its ethnic and cultural diversity. There was a huge literary output during the 19th century. Some of the most famous writers included the Russians Alexander Pushkin, Nikolai Gogol, Leo Tolstoy, Anton Chekhov and Fyodor Dostoyevsky; the English Charles Dickens, John Keats, Alfred, Lord Tennyson and Jane Austen; the Scottish Sir Walter Scott, Thomas Carlyle and Arthur Conan Doyle (creator of the character Sherlock Holmes); the Irish Oscar Wilde; the Americans Edgar Allan Poe, Ralph Waldo Emerson, and Mark Twain; and the French Victor Hugo, Honoré de Balzac, Jules Verne, Alexandre Dumas and Charles Baudelaire.[31] Some American literary writers, poets and novelists were: Walt Whitman, Mark Twain, Harriet Ann Jacobs, Nathaniel Hawthorne, Ralph Waldo Emerson, Herman Melville, Frederick Douglass, Harriet Beecher Stowe, Joel Chandler Harris, and Emily Dickinson to name a few. See also: History of photography, List of photojournalists, Photojournalism, and Daguerreotype One of the first photographs, produced by Nicéphore Niépce in 1826 Nadar, self-portrait, c. 1860 Ottomar Anschütz, chronophotographer Mathew Brady, documented the American Civil War Edward S. Curtis, documented the American West notably Native Americans Louis Daguerre, inventor of daguerreotype process of photography, chemist Thomas Eakins, pioneer motion photographer George Eastman, inventor of roll film Hércules Florence, pioneer inventor of photography Auguste and Louis Lumière, pioneer film-makers, inventors Étienne-Jules Marey, pioneer motion photographer, chronophotographer Eadweard Muybridge, pioneer motion photographer, chronophotographer Nadar a.k.a. Gaspard-Félix Tournachon, portrait photographer Nicéphore Niépce, pioneer inventor of photography Louis Le Prince, motion picture inventor and pioneer film-maker Sergey Prokudin-Gorsky, chemist and photographer William Fox Talbot, inventor of the negative / positive photographic process. Main articles: History of art § 19th century, Western painting, and Ukiyo-e Francisco Goya, The Third of May 1808, 1814, Museo del Prado Eugène Delacroix, Liberty Leading the People, 1830, Louvre Vincent van Gogh, Self-portrait, 1889, National Gallery of Art Biscuits Lefèvre-Utile poster artwork by Alphonse Mucha, 1897 The Realism and Romanticism of the early 19th century gave way to Impressionism and Post-Impressionism in the later half of the century, with Paris being the dominant art capital of the world. In the United States the Hudson River School was prominent. 19th-century painters included: Ivan Aivazovsky Léon Bakst Albert Bierstadt William Blake Arnold Böcklin Rosa Bonheur William Burges Mary Cassatt Camille Claudel Paul Cézanne Frederic Edwin Church Thomas Cole Jan Matejko John Constable Camille Corot Gustave Courbet Honoré Daumier Edgar Degas Eugène Delacroix Thomas Eakins Caspar David Friedrich Paul Gauguin Théodore Géricault Vincent van Gogh William Morris Francisco Goya Andō Hiroshige Hokusai Winslow Homer Jean-Auguste-Dominique Ingres Isaac Levitan Édouard Manet Claude Monet Gustave Moreau Berthe Morisot Edvard Munch Mikhail Nesterov Camille Pissarro Augustus Pugin Pierre-Auguste Renoir Ilya Repin Auguste Rodin Albert Pinkham Ryder John Singer Sargent Valentin Serov Georges Seurat Ivan Shishkin Vasily Surikov James Tissot Henri de Toulouse-Lautrec Joseph Mallord William Turner Viktor Vasnetsov Eugène Viollet-le-Duc Mikhail Vrubel James Abbott McNeill Whistler Tsukioka Yoshitoshi Main articles: List of Romantic-era composers, Romantic music, and Romanticism Ludwig van Beethoven (1770–1827) Pyotr Ilyich Tchaikovsky (1840–1893) Sonata form matured during the Classical era to become the primary form of instrumental compositions throughout the 19th century. Much of the music from the 19th century was referred to as being in the Romantic style. Many great composers lived through this era such as Ludwig van Beethoven, Franz Liszt, Frédéric Chopin, Pyotr Ilyich Tchaikovsky, and Richard Wagner. The list includes: Mily Balakirev Ludwig van Beethoven Hector Berlioz Georges Bizet Alexander Borodin Johannes Brahms Anton Bruckner Frédéric Chopin Claude Debussy Antonín Dvořák Mikhail Glinka Edvard Grieg Scott Joplin Alexandre Levy Franz Liszt Gustav Mahler Felix Mendelssohn Modest Mussorgsky Jacques Offenbach Niccolò Paganini Nikolai Rimsky-Korsakov Gioachino Rossini Anton Rubinstein Camille Saint-Saëns Antonio Salieri Franz Schubert Robert Schumann Alexander Scriabin Arthur Sullivan Pyotr Ilyich Tchaikovsky Giuseppe Verdi Richard Wagner 1858: The Melbourne Football Club was formed, starting the sport of Australian Rules Football 1867: The Marquess of Queensberry Rules for boxing are published. 1872: The first recognised international football match, between England and Scotland, is played. 1877: The first test cricket match, between England and Australia, is played. 1891: Basketball is invented by James Naismith. 1895: Volleyball is invented. 1896: Olympic Games revived in Athens. For a chronological guide, see Timeline of the 19th century. Main articles: 1800s, 1810s, 1820s, 1830s, and 1840s 1801: The Kingdom of Great Britain and the Kingdom of Ireland merge to form the United Kingdom. 1801: Thomas Jefferson is elected the third President of the United States; he serves until 1809. 1802: The Wahhabis of the First Saudi State sack Karbala. 1803: William Symington demonstrates his Charlotte Dundas, the "first practical steamboat". 1803: The Wahhabis of the First Saudi State capture Mecca and Medina. 1804: Austrian Empire founded by Francis I. 1804: World population reaches 1 billion. 1805: The Battle of Trafalgar eliminates the French and Spanish naval fleets and allows for British dominance of the seas, a major factor for the success of the British Empire later in the century. 1805–1848: Muhammad Ali modernizes Egypt. 1819: 29 January, Stamford Raffles arrives in Singapore with William Farquhar to establish a trading post for the British East India Company; 8 February, the treaty is signed between Sultan Hussein of Johor, Temenggong Abdul Rahman and Stamford Raffles. Farquhar is installed as the first Resident of the settlement. 1810: The University of Berlin was founded. Among its students and faculty are Hegel, Marx, and Bismarck. The German university reform proves to be so successful that its model is copied around the world (see History of European research universities). 1814: Elisha Collier invents the Flintlock Revolver. 1814 : February 1 Eruption of Mayon Volcano 1815: April, Mount Tambora in Sumbawa island erupts, becoming the largest volcanic eruption in recorded history, destroying Tambora culture, and killing at least 71,000 people, including its aftermath. The eruption created global climate anomalies known as "volcanic winter".[32] 1816: Year Without a Summer: Unusually cold conditions wreak havoc throughout the Northern Hemisphere, likely influenced by the 1815 explosion of Mount Tambora. 1816–1828: Shaka's Zulu Kingdom becomes the largest in Southern Africa. 1819: The Republic of Colombia (Gran Colombia) achieves independence after Simón Bolívar's triumph at the Battle of Boyacá. 1819: The modern city of Singapore is established by the British East India Company. 1820: Discovery of Antarctica. 1820: Liberia founded by the American Colonization Society for freed American slaves. 1820: Dissolution of the Maratha Empire. 1821–1823: First Mexican Empire, as Mexico's first post-independence government, ruled by Emperor Agustín I of Mexico. 1822: Pedro I of Brazil declared Brazil's independence from Portugal on 7 September. 1823: Monroe Doctrine declared by US President James Monroe. 1825: The Decembrist revolt. Decembrists at the Senate Square 1829: Sir Robert Peel founds the Metropolitan Police Service, the first modern police force. Emigrants leaving Ireland. From 1830 to 1914, almost 5 million Irish people emigrated to the U.S. 1830: Anglo-Russian rivalry over Afghanistan, the Great Game, commences and concludes in 1895. 1831: November Uprising ends with crushing defeat for Poland in the Battle of Warsaw. 1832: The British Parliament passes the Great Reform Act 1832. 1834–1859: Imam Shamil's rebellion in Russian-occupied Caucasus. 1835–1836: The Texas Revolution in Mexico resulted in the short-lived Republic of Texas. 1836: Samuel Colt popularizes the revolver and sets up a firearms company to manufacture his invention of the Colt Paterson revolver, a six bullets firearm shot one by one without reloading manually. 1837–1838: Rebellions of 1837 in Canada. 1838: By this time, 46,000 Native Americans have been forcibly relocated in the Trail of Tears. 1839–1860: After the First and Second Opium Wars, France, the United Kingdom, the United States and Russia gain many trade and associated concessions from China resulting in the start of the decline of the Qing dynasty. 1839–1919: Anglo-Afghan Wars lead to stalemate and the establishment of the Durand line 1842: Treaty of Nanking cedes Hong Kong to the British. 1843: The first wagon train sets out from Missouri. 1844: Rochdale Society of Equitable Pioneers establish what is considered the first cooperative in the world. 1845–1849: The Great Famine of Ireland leads to the Irish diaspora. 1848: The Communist Manifesto published. 1848: Seneca Falls Convention is the first women's rights convention in the United States and leads to the battle for women's suffrage. 1848–1855: California Gold Rush. 1849: Earliest recorded air raid, as Austria employs 200 balloons to deliver ordnance against Venice. 1850: The Little Ice Age ends around this time. 1850: Franz Hermann Schulze-Delitzsch establishes the first cooperative financial institution. Historical territorial expansion of the United States Main articles: 1850s, 1860s, 1870s, 1880s, 1890s, and 1900s For later events, see Timeline of the 20th century. 1851: The Great Exhibition in London was the world's first international Expo or World Fair. 1852: Frederick Douglass delivers his speech "The Meaning of July Fourth for the Negro" in Rochester, New York. 1857: Sir Joseph Whitworth designs the first long-range sniper rifle. 1857–1858: Indian Rebellion of 1857. The British Empire assumes control of India from the East India Company. 1858: Construction of Big Ben is completed. 1859–1869: Suez Canal is constructed. The first vessels sail through the Suez Canal. 1860: Giuseppe Garibaldi launches the Expedition of the Thousand. 1861: Russia abolishes serfdom. 1862–1877: Muslim Rebellion in north-west China. 1863: Formation of the International Red Cross is followed by the adoption of the First Geneva Convention in 1864. 1865–1877: Reconstruction in the United States; Slavery is banned in the United States by the Thirteenth Amendment to the United States Constitution. 1867: Canada is formed, via the process of Canadian Confederation. 1868: Michael Barrett is the last person to be publicly hanged in England. 1869: The Suez Canal opens linking the Mediterranean to the Red Sea. A barricade in the Paris Commune, 18 March 1871. Around 30,000 Parisians were killed, and thousands more were later executed. Black Friday, 9 May 1873, Vienna Stock Exchange. The Panic of 1873 and Long Depression followed. 1870: Official dismantling of the Cultivation System and beginning of a 'Liberal Policy' of deregulated exploitation of the Netherlands East Indies.[33] 1870–1890: Long Depression in Western Europe and North America. 1871–1872: Famine in Persia is believed to have caused the death of 2 million. 1871: The Paris Commune briefly rules the French capital. 1872: Yellowstone National Park, the first national park, is created. 1874: The Société Anonyme Coopérative des Artistes Peintres, Sculpteurs, and Graveurs, better known as the Impressionists, organize and present their first public group exhibition at the Paris studio of the photographer Nadar. 1874: The Home Rule Movement is established in Ireland. 1875: HMS Challenger surveys the deepest point in the Earth's oceans, the Challenger Deep 1876: Battle of the Little Bighorn leads to the death of General Custer and victory for the alliance of Lakota, Cheyenne and Arapaho 1876–1914: The massive expansion in population, territory, industry and wealth in the United States is referred to as the Gilded Age. 1877: Great Railroad Strike in the United States may have been the world's first nationwide labour strike. 1881: Wave of pogroms begins in the Russian Empire. 1881–1882: The Jules Ferry laws are passed in France establishing free, secular education. 1883: Krakatoa volcano explosion, one of the largest in modern history. 1883: The quagga is rendered extinct. 1886: Construction of the Statue of Liberty; Coca-Cola is developed. 1888: Founding of the shipping line Koninklijke Paketvaart-Maatschappij (KPM) that supported the unification and development of the colonial economy.[33] 1888: The Golden Law abolishes slavery in Brazil. 1889: Eiffel Tower is inaugurated in Paris. Studio portrait of Ilustrados in Europe, c. 1890 1889: A republican military coup establishes the First Brazilian Republic. The parliamentary constitutional monarchy is abolished. 1889–1890: 1889–1890 pandemic kills 1 million people. 1890: First use of the electric chair as a method of execution. 1892: The World's Columbian Exposition was held in Chicago celebrating the 400th anniversary of Christopher Columbus's arrival in the New World. 1892: Fingerprinting is officially adopted for the first time. 1893: New Zealand becomes the first country to enact women's suffrage. 1893: The Coremans-de Vriendt law is passed in Belgium, creating legal equality for French and Dutch languages. 1894: The Dutch intervention in Lombok and Karangasem[33] resulted in the looting and destruction of Cakranegara Palace in Mataram.[34] J. L. A. Brandes, a Dutch philologist, discovers and secures Nagarakretagama manuscript in Lombok royal library. 1896: Philippine Revolution ends declaring Philippines free from Spanish rule. 1898: The United States gains control of Cuba, Puerto Rico, and the Philippines after the Spanish–American War. 1898: Empress Dowager Cixi of China engineers a coup d'état, marking the end of the Hundred Days' Reform; the Guangxu Emperor is arrested. 1900: Exposition Universelle held in Paris, prominently featuring the growing art trend Art Nouveau. 1900–1901: Eight nations invade China at the same time and ransack Forbidden City. Born on 19 April 1897, Japanese Jiroemon Kimura died on 12 June 2013, marking the death of the last man verified to have been born in the century.[35][36][37] Kimura remains to date the oldest verified man in history.[38] Subsequently, on 21 April 2018, Japanese Nabi Tajima (born 4 August 1900) died as the last person to verifiably have been born in the century.[39] Carl Friedrich Gauss Charles Darwin Victor Hugo, c. 1876 Dmitri Mendeleev Louis Pasteur, 1878 Marie Curie, c. 1898 Nikola Tesla José Rizal Jane Austen Leo Tolstoy, c. 1897 Edgar Allan Poe Jules Verne Charles Dickens Arthur Rimbaud, c. 1872 Mark Twain, 1894 Ralph Waldo Emerson Henry David Thoreau, 1861 Émile Zola, c. 1900 Anton Chekhov Fyodor Dostoevsky, 1876 John L Sullivan in his prime, c. 1882 David Livingstone 1864, left Britain for Africa in 1840 Jesse and Frank James, 1872 Sitting Bull and Buffalo Bill, in a studio portrait from 1885 Geronimo, 1887, prominent leader of the Chiricahua Apache William Bonney aka Henry McCarty aka Billy the Kid, c. late 1870s Deputies Bat Masterson and Wyatt Earp in Dodge City, 1876 Mathew Brady, self-portrait, c. 1875 Alfred, Lord Tennyson Thomas Nast, c. 1860–1875, photo by Mathew Brady or Levin Handy Mirza Ghulam Ahmad Mikhail Bakunin Søren Kierkegaard Solomon Northup Dred Scott Madam C. J. Walker Claude Monet's Impression, Sunrise (1872) gave the name to Impressionism. Paul Cézanne, self-portrait, 1880–1881 Scott Joplin Niccolò Paganini, c. 1819 Frédéric Chopin, 1838 John D. Rockefeller Timelines of modern history Long nineteenth century 19th century in film 19th century in games 19th-century philosophy Nineteenth-century theatre International relations (1814–1919) List of wars: 1800–1899 Victorian era France in the long nineteenth century History of Spain (1808–1874) History of Russia (1855–1892) Slavery in the United States Timeline of 19th-century Muslim history Timeline of historic inventions ^ Cleveland, William L.; Bunton, Martin (2016). A History of the Modern Middle East. doi:10.4324/9780429495502. ISBN 9780429495502. S2CID 153025861. The 19th century is frequently characterized as a period of tension between forces of continuity and change. The reformers who advocated the adoption of European institutions and technology, have often been portrayed as the progressive elements of society courageously charting the course toward an inevitably Westernized twentieth century. Conversely, the adherents of continuity, who viewed with alarm the dismantling of the Islamic order and sought to preserve tradition and retain the values and ideals that had served Ottoman and Islamic society so well for so long, are sometimes portrayed as nothing but archaic reactionaries. But we should avoid these simplistic characterizations if we are to appreciate the agonizing and dangerous process of transforming an established religious, social and political worldview.

^ "The First Telephone Call". www.americaslibrary.gov. Archived from the original on 2015-10-22. Retrieved 2015-10-25. ^ "Dec. 18, 1878: Let There Be Light — Electric Light". WIRED. 18 December 2009. Archived from the original on 21 October 2016. Retrieved 4 March 2017. ^ Encyclopædia Britannica's Great Inventions. Encyclopædia Britannica. ^ "The United States and the Industrial Revolution in the 19th Century". Americanhistory.about.com. 2012-09-18. Archived from the original on 2012-07-28. Retrieved 2012-10-31. ^ Laura Del Col, West Virginia University, The Life of the Industrial Worker in Nineteenth-Century England Archived 2008-03-13 at the Wayback Machine ^ "Modernization – Population Change". Encyclopædia Britannica. Archived from the original on April 6, 2009. ^ Liberalism in the 19th century Archived 2009-02-18 at the Wayback Machine. Encyclopædia Britannica. ^ Sailing against slavery. By Jo Loosemore Archived 2009-01-08 at the Wayback Machine. BBC. ^ The Atlantic: Can the US afford immigration? Archived 2010-07-04 at the Wayback Machine. Migration News. December 1996. ^ Perez-Brignoli, Hector (1989). A Brief History of Central America. University of California Press. ISBN 978-0520909762. ^ R. J. W. Evans and Hartmut Pogge von Strandmann, eds., The Revolutions in Europe 1848–1849 (2000) pp. v, 4 ^ "The Emancipation Proclamation". National Archives. October 6, 2015. Archived from the original on February 6, 2017. Retrieved February 15, 2017. ^ McPherson, J. M. (2014). "Emancipation Proclamation and Thirteenth Amendment", in E. Foner and J. A. Garraty (eds.), The Reader's Companion to American History. Boston, MA: Houghton Mifflin. [1] Retrieved from Archived 2018-11-06 at the Wayback Machine ^ "Transcript of the Proclamation". National Archives. October 6, 2015. ^ "13th Amendment to the U.S. Constitution: Abolition of Slavery". National Archives. January 27, 2016. Archived from the original on February 16, 2017. Retrieved February 15, 2017. ^ Aksan, Virginia (2014-01-14). Ottoman Wars, 1700–1870: An Empire Besieged. Routledge. ISBN 978-1-317-88403-3. ^ Westera, Rick. "Historical Atlas of Europe (17 February 1832): First Egyptian-Ottoman War". Omniatlas. Retrieved 2024-02-18. ^ Reilly, Thomas H. (2004). The Taiping heavenly kingdom rebellion and the blasphemy of empire (1 ed.). Seattle: University of Washington Press. ISBN 978-0295801926. ^ W. G. Beasley, The Meiji Restoration (1972), ^ a b c Kerr, Gordon (2012). A Short History of Africa: From the Origins of the Human Race to the Arab Spring. Harpenden, Herts [UK]: Pocket Essentials. pp. 85–101. ISBN 9781842434420. ^ "Killing ground: photographs of the Civil War and the changing American landscape Archived 2017-02-28 at the Wayback Machine". John Huddleston (2002). Johns Hopkins University Press. ISBN 0-8018-6773-8 ^ Engraving after 'Men of Science Living in 1807-8', John Gilbert engraved by George Zobel and William Walker, ref. NPG 1075a, National Portrait Gallery, London, accessed February 2010 ^ Smith, HM (May 1941). "Eminent men of science living in 1807-8". J. Chem. Educ. 18 (5): 203. doi:10.1021/ed018p203. ^ Snyder, Laura J. (2000-12-23). "William Whewell". Stanford University. Archived from the original on 2010-01-04. Retrieved 2008-03-03. ^ "Multidrug-Resistant Tuberculosis". Centers for Disease Control and Prevention. 2018-12-31. Archived from the original on April 21, 2009. ^ "Arc Lamps – How They Work & History". edisontechcenter.org. ^ Jonathan Daly, The Rise of Western Power – A Comparative History of Western Civilization, Bloomsbury Publishing · 2013, page 310 ^ Turan Gonen, Electric Power Distribution Engineering, CRC Press · 2015, page 1 ^ David Damrosch and David L. Pike, eds. The Longman Anthology of World Literature, Volume E: The Nineteenth Century (2nd ed. 2008) ^ M. H. Abrams et al., eds., The Norton Anthology of English Literature (9th ed. 2012) ^ Oppenheimer, Clive (2003). "Climatic, environmental and human consequences of the largest known historic eruption: Tambora volcano (Indonesia) 1815". Progress in Physical Geography. 27 (2): 230–259. Bibcode:2003PrPG...27..230O. doi:10.1191/0309133303pp379ra. S2CID 131663534. ^ a b c Vickers (2005), page xii ^ Wahyu Ernawati: "Chapter 8: The Lombok Treasure", in Colonial collections Revisited: Pieter ter Keurs (editor) Vol. 152, CNWS publications. Issue 36 of Mededelingen van het Rijksmuseum voor Volkenkunde, Leiden. CNWS Publications, 2007. ISBN 978-90-5789-152-6. 296 pages. pp. 186–203 ^ "World's oldest man ever turns 116 in Kyoto as his health is studied". The Japan Daily Press. 15 April 2013. Archived from the original on 5 June 2013. Retrieved 19 April 2013. ^ "World's oldest person turns 116 in Japan". France 24 International News. 19 April 2013. Archived from the original on 16 June 2013. Retrieved 19 April 2013. ^ "World's oldest person Jiroemon Kimura turns 116 in Japan". The Economic Times. Agence France-Presse. Retrieved 19 April 2013. ^ Matsuyama, Kanoko (27 December 2012). "Japanese 115-Year-Old Becomes Oldest Man in History". Bloomberg. Archived from the original on 29 December 2012. Retrieved 28 December 2012. ^ Politi, Daniel (22 April 2018). "The Last Known Person Born in the 19th Century Dies in Japan at 117". Slate. Archived from the original on 12 September 2023. Retrieved 4 October 2019. Langer, William. An Encyclopedia of World History (5th ed. 1973); highly detailed outline of events online free Morris, Richard B. and Graham W. Irwin, eds. Harper Encyclopedia of the Modern World: A Concise Reference History from 1760 to the Present (1970) online frr New Cambridge Modern History (13 vol 1957–79), old but thorough coverage, mostly of Europe; strong on diplomacy Bury, J. P. T. ed. The New Cambridge Modern History: Vol. 10: the Zenith of European Power, 1830–70 (1964) online Crawley, C. W., ed. The New Cambridge Modern History Volume IX War and Peace In An Age of Upheaval 1793–1830 (1965) online Darby, H. C. and H. Fullard The New Cambridge Modern History, Vol. 14: Atlas (1972) Hinsley, F.H., ed. The New Cambridge Modern History, vol. 11, Material Progress and World-Wide Problems 1870–1898 (1979) online Main article: International relations (1814–1919) Aldrich, Robert (1996). Greater France. doi:10.1007/978-1-349-24729-5. ISBN 978-0-333-56740-1. Bartlett, C. J. (1996). Peace, War and the European Powers, 1814–1914. London: Macmillan Education UK. doi:10.1007/978-1-349-24958-9. ISBN 978-0-333-62001-4. Bridge, F. R. & Roger Bullen. The Great Powers and the European States System 1814–1914, 2nd Ed. (2005) Gooch, G. P. (1923). "History of Modern Europe, 1878-1919". Journal of the British Institute of International Affairs. 2 (6): 266. doi:10.2307/3014586. JSTOR 3014586. Herring, George C. Years of Peril and Ambition: U.S. Foreign Relations, 1776–1921 (2017) Kennedy, Paul. The Rise and Fall of the Great Powers Economic Change and Military Conflict From 1500–2000 (1987), stress on economic and military factors Langer, William. European Alliances and Alignments 1870–1890 (1950); advanced history online Langer, William. The Diplomacy of Imperialism 1890–1902 (1950); advanced history online Mowat, R. B. A history of European diplomacy, 1815–1914 (1922) online free Osterhammel, Jürgen (2014). The Transformation of the World: A Global History of the Nineteenth Century (PDF). doi:10.1515/9781400849949. ISBN 9781400849949. Porter, Andrew, ed. The Oxford History of the British Empire: Volume III: The Nineteenth Century (2001) Sontag, Raymond. European Diplomatic History: 1871–1932 (1933), basic summary; 425 pp online Taylor, A. J. P. The Struggle for Mastery in Europe 1848–1918 (1954) 638 pp; advanced history and analysis of major diplomacy; online free Taylor, A. J. P. "International Relations" in F.H. Hinsley, ed., The New Cambridge Modern History: XI: Material Progress and World-Wide Problems, 1870–98 (1962): 542–66. online Wesseling, H. L. (2015). The European Colonial Empires. doi:10.4324/9781315844503. ISBN 9781315844503. Anderson, M. S. The Ascendancy of Europe: 1815–1914 (3rd ed. 2003) Blanning, T. C. W. ed. The Nineteenth Century: Europe 1789–1914 (Short Oxford History of Europe) (2000) 320 pp Bruun, Geoffrey. Europe and the French Imperium, 1799–1814 (1938) online. Cameron, Rondo. France and the Economic Development of Europe, 1800–1914: Conquests of Peace and Seeds of War (1961), awide-ranging economic and business history. Evans, Richard J. The Pursuit of Power: Europe 1815–1914 (2016), 934 pp Gildea, Robert. Barricades and Borders: Europe 1800–1914 (3rd ed. 2003) 544 pp, online 2nd ed, 1996 Grab, Alexander (2003). Napoleon and the Transformation of Europe. London: Macmillan Education UK. doi:10.1007/978-1-4039-3757-5. ISBN 978-0-333-68275-3. Mason, David S. A Concise History of Modern Europe: Liberty, Equality, Solidarity (2011), since 1700 Merriman, John, and J. M. Winter, eds. Europe 1789 to 1914: Encyclopedia of the Age of Industry and Empire (5 vol. 2006) Steinberg, Jonathan. Bismarck: A Life (2011) Salmi, Hannu. 19th Century Europe: A Cultural History (2008). Ajayi, J. F. Ade, ed. UNESCO General History of Africa, Vol. VI, Abridged Edition: Africa in the Nineteenth Century until the 1880s (1998) Akyeampong, Emmanuel; Bates, Robert H; Nunn, Nathan; Robinson, James A, eds. (2014). Africa's Development in Historical Perspective. doi:10.1017/CBO9781139644594. ISBN 9781139644594. Chamberlain, M. E. The Scramble for Africa (3rd ed. 2010) Collins, Robert O. and James M. Burns, eds. A History of Sub-Saharan Africa. Davidson, Basil Africa In History, Themes and Outlines. (2nd ed. 1991). Holcombe, Charles (2017). A History of East Asia. doi:10.1017/9781316340356. ISBN 9781107118737. S2CID 140138294. Ludden, David. India and South Asia: A Short History (2013). McEvedy, Colin. The Penguin Atlas of African History (2nd ed. 1996). excerpt Mansfield, Peter, and Nicolas Pelham, A History of the Middle East (4th ed, 2013). Murphey, Rhoads (2016). A History of Asia. doi:10.4324/9781315509495. ISBN 9781315509495. Pakenham, Thomas. The Scramble for Africa: 1876 to 1912 (1992) Bakewell, Peter, A History of Latin America (Blackwell, 1997) Beezley, William, and Michael Meyer, eds. The Oxford History of Mexico (2010) Bethell, Leslie, ed. (1984). The Cambridge History of Latin America. doi:10.1017/CHOL9780521232234. ISBN 9781139055161. Black, Conrad. Rise to Greatness: The History of Canada From the Vikings to the Present (2014) Burns, E. Bradford, Latin America: A Concise Interpretive History, paperback, Prentice Hall 2001, 7th edition Howe, Daniel Walker. What Hath God Wrought: The Transformation of America, 1815–1848 (2009), Pulitzer Prize Kirkland, Edward C. A History Of American Economic Life (3rd ed. 1960) online Lynch, John, ed. Latin American revolutions, 1808–1826: old and new world origins (University of Oklahoma Press, 1994) McPherson, James M. Battle Cry of Freedom The CIvil War Era (1988) Pulitzer Prize for US history Parry, J. H. A Short History of the West Indies (1987) Paxson, Frederic Logan. History of the American frontier, 1763–1893 (1924) online, Pulitzer Prize White, Richard. The Republic for Which It Stands: The United States during Reconstruction and the Gilded Age, 1865–1896 (2017) de Bary, Wm. Theodore, ed. Sources of East Asian Tradition, Vol. 2: The Modern Period (2008), 1192 pp Kertesz, G. A. ed Documents in the Political History of the European Continent 1815–1939 (1968), 507 pp; several hundred short documents Media related to 19th century at Wikimedia Commons Wikiquote has quotations related to 19th century. Here you find some Home Assistant template examples. With these templates you can create new custom sensors based on other sensor values to use on the dashboard or in automations. This new sensor can have a textual output or a boolean value true/false. Table of Contents Home Assistant What is the difference between a binary and normal sensor? A normal sensor can have any output, text, number or a boolean also and a binary sensor can only have a boolean value as output. It can only have the state true or false. This sensor can be used in automations to check if a condition matches. How to add a template There are two ways to add a template to your Home Assistant: Via configuration.yaml One way to add a new template is by adding the code to the configuration.yaml file. In 2022, the configuration for template entities changed. Where previously the configuration was placed under the sensor: or binary_sensor: section a new template section was introduced. Using the modern template format has a couple of advantages. You can use a trigger and action (like in automations) which gives more control over when the entity should be updated, and it allows to set a state_class so the state of the entity will also be stored in Long Term Statistics. It also allows to create button, image, number and select entities which is not possible using the legacy platform. For more information, also see the Home Assistant documentation. The legacy format is still documented all the way at the bottom. All the examples below start with the template: key. Be sure to define this only once in your configuration.yaml. All template entities should be created under the same template: key. Via the frontend The other way is via the frontend, you can create a new template via the Settings menu item, then go to Devices and Services and select Helpers. This button directly opens the Helpers page in your Home Assistant: Select the bottom-right button + CREATE HELPER, select Template then one of the two options Template a sensor or Template a binary sensor. Copy the value_template part from the below examples and add it in the visual editor under State template*. In this example animation, a (binary) template is created to check if the current month is August. The template helpers are more user-friendly to create, but lack some of the options the YAML configuration does, like templating the icon of the sensor, and working with triggers. It also doesn't have the option to provide a template for availablity of the entity. How to debug a template Via the Home Assistant frontend you can create and test a Template. Go to the Developer tools menu item, then go to Template tab. Or use this button to open the Helpers in your Home Assistant: Now you're here: In the Template editor the code can be placed and edit, and on the right you see direct the output. Home Assistant uses Jinja as a template engine to combine static text with variables. Where to get help Use the below examples, search the internet, use the Home Assistant Community forum, the HA Facebook groups, Reddit or ChatGPT to help you to create your own new templates. The Home Assistant website contains also a lot of examples! ChatGPT is really useful and fast with helping you to create a new template and improve it to fine-tune it. Template examples Here are all kinds of different template examples. Note that every entity has a unique_id. This does not define the entity_id, the entity_id is defined by the name (so name: "Lights On" will generate sensor.lights_on). By providing a unique_id you will be able to change name, icon, entity_id and based on the type of entity also the device_class in the frontend. It also ensures you don't get suffixes like _2 after changing your configuration and reloading the template entities. Is it a specific day in the year? A boolean sensor to test if it is a specific month, season, day (like Christmas or April Fools' Day etc.)? This will create binary_sensor entities which will be on when the template returns true and otherwise they will be off You can optionally refine the entities even more by providing a template for the icon # Sourcecode by vdbrink.github.io # configuration.yaml template: - binary_sensor: - name: "Is January" unique_id: is_january state: > {{ now().month == 1 }} - name: "Is Monday" unique_id: is_monday state: > {{ now().isoweekday() == 1 }} - name: "Is April Fools Day" unique_id: is_april_fools state: > {{ now().month == 4 and now().day == 1 }} - name: "Is Christmas" unique_id: is_christmas state: > {{ now().month == 12 and now().day == 25 }} - name: "Is around Christmas" unique_id: is_around_christmas state: > {{ (now().month == 12 and now().day > 10) or (now().month == 1 and now().day < 11) }} - name: "Is new years eve" unique_id: is_new_years_eve state: > {{ now().month == 12 and now().day == 31 }} Count the number of lights on Count the number of lights with the status on. By checking if the entity_id attribute exists on the light entities it will exclude the light groups created in Home Assistant. Otherwise, it would count both the group, and the members as light, which will give a higher number than expected. The icon is changed dynamically based on the state of the sensor itself, and self references the state using this.state. # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "# lights on" unique_id: count_lights_on icon: "{{ 'mdi:lightbulb' if this.state | int(0) > 0 else 'mdi:lightbulb-off' }}" unit_of_measurement: "lights" state: > {{ states.light | rejectattr('attributes.entity_id', 'defined') | selectattr('state', 'eq', 'on') | list | count }} Calculate temperature differences Calculate the temperature difference between an inside room temperature and the outside temperature, and round by two decimals. This sensor introduces an availability template, which will ensure the template sensor will only be available when both source sensors are working properly. If not, the template sensor will show as unavailable. # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Temperature diff office and outside" unique_id: template_diff_office_and_outside icon: mdi:thermometer unit_of_measurement: "°C" state: > {% set temp1 = states('sensor.espscd40_co2_temperature') | float %} {% set temp2 = states('sensor.tempest_outside_temperature') | float %} {{ (temp1 - temp2) | round(2, 'ceil') }} availabilty: "{{ 'sensor.espscd40_co2_temperature' | has_value and 'sensor.tempest_outside_temperature' | has_value }}" Get all devices by name that have the state unavailable in a sorted list. As states are limited to 255 characters, the list is stored in an attribute, the state of the entity will be a count of the unavailable devices. The device is considered unavailable when ALL entities belonging to that device are unavailable, as it could happen that only one entity is unavailable for specific reasons. The icon is changed dynamically and will show the number of devices as well (9+ in case it's over 9). # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Unavailable devices" unique_id: count_unavailable_devices state: " {{ this.attributes.get('devices', []) | count }}" icon: > {% set count = this.attributes.get('devices', []) | count %} {{ 'mdi:numeric-9-plus-circle' if count > 9 else ('mdi:numeric-' ~ count ~ '-circle') }} attributes: devices: > {% set devices = states | map(attribute='entity_id') | map('device_id') | select() | unique %} {% set ns = namespace(unavailable=[]) %} {% for d in devices %} {% set u = device_entities(d) | select('has_value') | list | count %} {% if device_entities(d) | count > 0 and u == 0 %} {% set ns.unavailable = ns.unavailable + [device_attr(d, 'name_by_user') or device_attr(d, 'name')] %} {% endif %} {% endfor %} {{ ns.unavailable }} Low battery Get all devices by name that have the battery level with less than 10% in a sorted list. It is not possible to simply filter on the state, as all states in Home Assistant are a string, and if you compare the string "6" with the string "10" you get unwanted results ("6" < "10" returns false). Therefore, it is needed to convert the strings to a number first. As we also still want to access the other properties, this requires a for-loop. To access the data created in the for loop outside the for loop, a namespace has to be used. Just like in the previous example, the names are listed in an attribute, because otherwise the character limit of 255 characters for an entity state can become an issue. # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Low Battery Devices" unique_id: count_low_batt_devices state: " {{ this.attributes.get('devices', []) | count }}" icon: > {% set count = this.attributes.get('devices', []) | count %} {{ 'mdi:numeric-9-plus-circle' if count > 9 else ('mdi:numeric-' ~ count ~ '-circle') }} attributes: devices: > {% set threshold = 10 %} {% set batt_sensors = states.sensor | selectattr('attributes.device_class', 'defined') | selectattr('attributes.device_class', 'eq', 'battery') | list %} {% set ns = namespace(batt_low=[]) %} {% for s in batt_sensors if s.state | float(101) {{ is_state("binary_sensor.motion1_occupancy", "on") or is_state("binary_sensor.motion2_occupancy", "on") or is_state("binary_sensor.motion3_occupancy", "on") }} device_class: occupancy delay_off: "00:01:00" Day of the week translation By default, the day of the week is in English. With this template, it translates the day to a non-English language (like here to Dutch). # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Day of week" unique_id: day_of_week_sensor icon: mdi:calendar state: > {{ ["maandag", "dinsdag", "woensdag", "donderdag", "vrijdag", "zaterdag", "zondag"][now().weekday()] }} Day countdown This day countdown can be used to show the days until a special day, like a wedding, birth of a child, birthday, Christmas, or in this example, the Home Assistant Community Day! First, you need to create two helpers: One to define the date itself, this can be done with a Date and/or time helper; The other one to calculate the difference between THE date and today, this can be done with a template a sensor helper. Check here (also on this page) how to create these two helpers via the frontend. The first sensor is a Date and/or time helper. Give it a name, in this case Community Day. Select for the input type a Date. Once the helper input_datetime.community_day is created, click on it and set the correct date. Now this helper is ready. Now we need to create another sensor, from the type template a sensor to calculate the days until the defined date. The value of the State template must be: # Sourcecode by vdbrink.github.io {% set com_date = strptime(states('input_datetime.community_day'), '%Y-%m-%d') %} {{ (com_date.date() - now().date()).days }} And in the Unit of measurement field you can fill in days as unit. The other fields are not required. Now you have created the two required sensors! Now we can create a presentation with this data. Community day countdown To present the number of days before the Home Assistant Community day, I used a Picture Entity card, so I could use a corresponding background image. This is what I added to my own dashboard: The corresponding code: # Sourcecode by vdbrink.github.io type: picture-entity entity: sensor.community_day_countdown show_state: true show_name: false image: >- Alternative presentation I also created a slightly different presentation for the countdown with a some CSS modifications to the Picture Entity Card. No transparent background, black text color and, bigger font. For the Picture Entity card with the help of the card_mod integration. You can install it via this button # Sourcecode by vdbrink.github.io type: picture-entity entity: sensor.community_day_countdown show_state: true show_name: false image: >- card_mod: style: | ha-card { .footer { background: none; color: black; font-weight: 800; } } You can also use this higher alternative image: Trash bin day countdown Count the days before the paper bin will be picked up. # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Paper Waste Pickup Countdown" unique_id: paper_waste_pickup_countdown icon: mdi:delete-empty state: > {% set pickup_date = strptime(state_attr('sensor.cyclus_papier','Sort_date'), '%Y%m%d') %} {{ (pickup_date.date() - now().date()).days }} unit_of_measurement: days availability: "{{ strptime(state_attr('sensor.cyclus_papier','Sort_date', none), '%Y%m%d') is not none }}" The sensor sensor.cyclus_papier has an attribute Sort_date which holds the date for the bin pickup day in the format "YYYYMMDD". Based on today's date the diff in days is calculated. (The sensor value is not always accurate, that's why I use the attribute value.) Minutes since mail is delivered Minutes since the snail mail is delivered. # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Mail Delivered" unique_id: sensor_mail_delivered state: > {% set mailbox_datetime = states.binary_sensor.contact2_contact.last_changed %} {{ (now() - mailbox_datetime).total_seconds() // 60 }} icon: mdi:mailbox unit_of_measurement: minutes Based on the outside temperature defined what to wear when you go outside. # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Wear outside" unique_id: sensor_wear_outside icon: mdi:tshirt-crew state: >- {% set temp = states('sensor.tempest_temperature_feels_like_rounded') | float %} {% if temp 5 }}" availability: "{{ 'sensor.motion_illuminance_lux' | has_value }}" Moon image based on state The default moon component in Home Assistant gives the moon phase as a text value. With an image corresponding to each phase, you can show the moon phase as an image. Download here the moon images. # Sourcecode by vdbrink.github.io # configuration.yaml # the template for the moon phase pictures using the original moon component template: - sensor: - name: "Moon phase" unique_id: sensor_moon_phase state: "{{ states('sensor.moon') }}" entity_picture: /local/moon_phases/{{ this.state }}.png DIY Sink leak status I created a custom leak sensor based on a contact sensor. The used sensor stores the value if it detects a leak in an attribute value contact. This attribute is now used to create a boolean value. # Sourcecode by vdbrink.github.io # configuration.yaml template: - sensor: - name: "Leak Sink" unique_id: sensor_leak_sink icon: mdi:water state: > {{ state_attr('binary_sensor.water_contact', 'contact') | lower }} DIY Chair occupancy status I created a custom chair occupancy sensor based on a contact sensor. If you sit on it the contact sensor return off. The normal value of the contact sensor needs to be inverted. That's what happened here. # Sourcecode by vdbrink.github.io # configuration.yaml template: - binary_sensor: - name: "Chair" unique_id: binary_sensor_chair state: > {{ is_state('binary_sensor.contact1_contact', 'off') }} device_class: presence That's it; I hope you can use some of these templates in your own setup. Let me know which cool templates you use! > See also my Smart home Best Buy Tips: ^^ Top | Homepage | Best Buy Tips | Automation Ideas Home Assistant uses the YAML syntax for configuration. While most integrations can be configured through the UI, some integrations require you to edit your configuration.yaml file to specify its settings. YAML Style Guide This page gives a high-level introduction to the YAML syntax used in Home Assistant. For a more detailed description and more examples, refer to the YAML Style Guide for Home Assistant developers. A first example The following YAML example entry assumes that you would like to set up the notify integration with the pushbullet platform. notify: platform: pushbullet api_key: "o.1234abcd" name: pushbullet An integration provides the core logic for some functionality (like notify provides sending notifications). A platform makes the connection to a specific software or hardware platform (like pushbullet works with the service from pushbullet.com). The basics of YAML syntax are block collections and mappings containing key-value pairs. Each item in a collection starts with a - while mappings have the format key: value. This is somewhat similar to a Hash table or more specifically a dictionary in Python. These can be nested as well. Beware that if you specify duplicate keys, the last value for a key is used. Indentation in YAML In YAML, indentation is important for specifying relationships. Indented lines are nested inside lines that are one level higher. In the above example, platform: pushbullet is a property of (nested inside) the notify integration. Getting the right indentation can be tricky if you're not using an editor with a fixed-width font. Tabs are not allowed to be used for indentation. The convention is to use 2 spaces for each level of indentation. Comments Strings of text following a # are comments. They are ignored by the system. Comments explain in plain language what a particular code block is supposed to do. For future-you or someone else looking at the file. Example with comment and nesting The next example shows an input_select integration that uses a block collection for the values of options. The other properties (like name:) are specified using mappings. Note that the second line just has threat: with no value on the same line. Here, threat is the name of the input_select. The values for it are everything nested below it. input_select: threat: name: "Threat level" # A collection is used for options options: - 0 - 1 - 2 - 3 initial: 0 Example of nested mapping The following example shows nesting a collection of mappings in a mapping. In Home Assistant, this would create two sensors that each use the MQTT platform but have different values for their state_topic (one of the properties used for MQTT sensors). sensor: - platform: mqtt state_topic: "sensor/topic" - platform: mqtt state_topic: "sensor2/topic" Including values Environment variables On Home Assistant CoreHome Assistant Core is the Python program at the heart of Home Assistant. It is part of all installation types. It can be installed standalone (without Home Assistant Supervisor) as a container using Docker (this is typically referred to as the Home Assistant Container installation method). For development, Core can also be run using a Virtual Environment (previously referred as the Home Assistant Core installation method. For production setup, the Home Assistant Core installation method is deprecated. installations, you can include values from your system's environment variables with !env_var. Note that this will only work for Home Assistant CoreHome Assistant Core is the Python program at the heart of Home Assistant. It is part of all installation types. It can be installed standalone (without Home Assistant Supervisor) as a container using Docker (this is typically referred to as the Home Assistant Container installation method). For development, Core can also be run using a Virtual Environment (previously referred as the Home Assistant Core installation method. For production setup, the Home Assistant Core installation method is deprecated. installations, in a scenario where it is possible to specify these. Regular Home Assistant users are recommended to use !include statements instead. example: password: !env_var PASSWORD Default value If an environment variable is not set, you can fall back to a default value. example: password: !env_var PASSWORD default_password Including entire files To improve readability, you can source out certain domains from your main configuration file with the !include-syntax. light: !include lights.yaml More information about this feature can also be found at splitting configuration. Common issues found character '\t' If you see the following message: found character '\t' that cannot start any token This means that you've mistakenly entered a tab character, instead of spaces. Upper and lower case Home Assistant is case sensitive, a state of 'on' is not the same as 'On' or 'ON'. Similarly an entity of group.Doors is not the same as group.doors. If you're having trouble, check the case that Home Assistant is reporting in the dev-state menu, under Developer tools. Booleans YAML treats Y, true, Yes, ON all as true and n, FALSE, No, off as false. This means that if you want to set the state of an entity to on you must quote it as 'on' otherwise it will be translated as setting the state to true. The same applies to off. Not quoting the value may generate an error such as: not a valid value for dictionary value @ data Validating YAML syntax With all these indents and rules, it is easy to make a mistake. The best way to check if your YAML syntax is correct (validate) depends on the editor you use. We can't list them all here. Suggest an edit to this page, or provide/view feedback for this page. Home Assistant integrates with over a thousand different devices and services. Once started, Home Assistant will automatically scan your network for known devices and allow you to easily set them up. EXPLORE INTEGRATIONS Once you have integrated all your devices at home, you can unleash Home Assistant's advanced automation engine to make your home work for you. Turn on the light when the sun sets or when coming home Alert you when you leave your garage door open. EXPLORE AUTOMATIONS Home Assistant dashboards allow you to display information about your smart home. Dashboards are customizable and provide a powerful way to manage your home from your mobile or desktop. Easily create and customize your dashboards with drag-and-drop. Different card types to visualize your data and control your smart home devices. EXPLORE DASHBOARDS Assist allows you to control Home Assistant using natural language. It is built on top of an open voice foundation and powered by knowledge provided by our community. Customize your voice assistant and experiment with AI conversations. Use Assist everywhere on your mobile phone, tablets, smartwatches, and even old-school telephones. EXPLORE ASSIST Home Assistant is not just limited to Home Assistant. Easily install other applications that will help you manage your home. Run AdGuard, a DNS-based ad blocker Run third party automation engines like NodeRed Turn Home Assistant into a Spotify Connect target EXPLORE ADD-ONS Home Assistant keeps your data local, no need for a cloud. Home Assistant communicates with your devices locally, and will fallback to pulling in data from the cloud if there is no other option. No data is stored in the cloud, and everything is processed locally. Use the official Home Assistant apps, a convenient companion to quickly control your devices and be notified when things happen in your home, even on your wrist using the Apple Watch. The apps can also be used to send your location home to use presence detection as part of your automations. Data is sent directly to your home, no access by third-parties. DOWNLOAD APPS Home Assistant allows you to get on top of your energy use with its home energy management feature. Gain new insights, optimize your solar panel production, plan energy usage and save money. LEARN MORE Take over all the screens. Home Assistant Cast makes every TV a display for dashboards. LEARN MORE Use NFC to bring music to your life or automate the mundane. LEARN MORE Trusted by home automation experts and more than a million households. Hello I recently added some code to my config.yaml file and I get this error message: "duplicated mapping key (137:1)" On line 22 I have an existing line of "sensor: !include wunderground.yaml" On line 137 I have added "sensor:" plus some code underneath it (LG Appliance integration). Should I be adding all the LG Appliance integration to a separate lg.yaml file and then reference that file in the config.yaml? That would allow me to get rid of line 137. If so, what is the line of code I need to add in config.yaml to reference the newly created lg.yaml file? Is this a critical error and how can I correct it? Also any sensors in the "wunderground.yaml" file aren't working. Thanks in advance for any help that can be provided. Copying your yaml might help more than your textual explanation …donot forget to format it between ``` Don't forget that HA starts counting lines from zero (in spite of what file editor says) - have you got the right ones? The problem is you can't have two "sensor:" definitions. You can put the new LG sensor stuff in a package file that starts with "sensor:" there (you need to reference packages in your config). Or you can change the second "sensor:" to something like "sensor lg:" and I believe it should work. 1 Like wrong: sensor: - platform: template name: sensor1 ~~ sensor: - platform: template name: sensor2 ~~ right: sensor: - platform: template name: sensor1 ~~ - platform: template name: sensor2 ~~ Now, if you use something like this: sensor: !include wunderground.yaml it would already count as a 'sensor' section, and you cannot add another. 2 options here: rename wunderground.yaml to sensors.yaml and change sensor: !include wunderground.yaml to sensor: !include sensors.yaml and add you new sensor to sensors.yaml file add a sensors folder, and move wunderground.yaml to it change sensor: !include wunderground.yaml to sensor: !include_dir_merge_list sensors/ and add a new file mynewsensor.yaml to the folder You can check @Tinkerer's config on Github and use it as an examlpe Oh, I just realized you have a third option: Copy everything from wunderground.yaml into the configuration.yaml under a section called sensor: Add your own sensor under the sensor: section Delete wunderground.yaml and sensor: !include wunderground.yaml 1 Like @aceindy that's the old way putting it all in configuration.yaml. as well the old method for template sensors. This is how I do mine with individual yamls for different sensors to keep the file structure clean. configuration.yaml sensor: !include_dir_list sensors/ Example car_count.yaml platform: statistics name: 'Car Count' entity_id: sensor.front_left_lp_all_count state_characteristic: count max_age: days: 30 Same can be done for template sensors configuration.yaml template: !include_dir_list templates/ Except the file format for templates is slightly different sensor: - name: Derp state: >- {{ Template dood }} Deckoz2302: that's the old way putting it all in configuration.yaml that is why i forgot Deckoz2302: as well the old method for template sensors. I don't think there is a old nor new way; I think it comes down to how one prefers it; I'd rather have my sensors in one file (or folder), then having some sensors (f.e. platform: systemmonitor, snmp) in one file and some other sensors in a template file; doesn't make sense to me, i like to keep things sorted by device And please, use proper indentation in your example (and refrain from using screenshot's too) 1 Like Deckoz2302: that's the old way putting it all in configuration.yaml there is no "old way" or "new way" when adding things into configuration.yaml. I don't think there is anything referenced in the docs that would tell someone to not put everything directly into configuration.yaml. packages and !includes have been around pretty much since I started using HA 6 years ago. So those are nothing new. It all comes down to how the user wants to organize their code. aceindy: And please, use proper indentation in your example (and refrain from using screenshot's too) The indentation is correct for the files. So, try again. I literally typed it exactly how it is in those files and my yamls run through Lint… Indentation lol Screen shots are a double, of what I typed. As a visual aid to someone who obviously isn't familiar with this. I'll use screen shots to convey the point as I feel. finity: there is no "old way" or "new way" when adding things into configuration.yaml You contradict yourself Migrating from legacy templates Configuration It sounds to me like you are still trying to mix up the two configs. the old way: sensor: - platform: template binary_sensors: some_template_sensor: friendly_name: …… value_template: "{{the template}}" some_other_template_sensor: friendly_name: …… value_template: "{{ the other template }}" the new way: template: - binary_sensor: - name: some template sensor state: "{{ the template }}" - name: some other template … There is an old template style and. New template style, as I said, and as you have said. aceindy posted the old template style… If you all want to add everything to configuration.yaml and have an monster document you can't find anything in. Be my guests. But why continue using the old template sensor style Deckoz2302: There is an old template style and. New template style, as I said, and as you have said. I didn't say anything about templates in that reply. YOU said: Deckoz2302: that's the old way putting it all in configuration.yaml. as well the old method for template sensors. And in your quoted line YOU even differentiated between "putting it all into configuration.yaml" and "old method for template sensors". I was responding to the first part of that as I quoted you in your post above in my reply. Of course I already acknowledged that there was a new and old template config. I was only talking about adding things to configuration.yaml. As I noted. Deckoz2302: But why continue using the old template sensor style Because there are things you can do with the old style that you can't easily do with the new style. You have to jump thru hoops to change the friendly name without changing the entity_id for one. Almost all of my template sensors still use the old style and they work perfectly fine. And yes, before you say it, there are things you can do with the new style that you can't with the old style too (state_class being one). I typically don't find the need to use that info in my config very often if at all. So I continue to use the old style. To each their own. My configuration.yaml, as well as all of my yamls are under 100 lines each. Named with directory structure to easily find, edit, or remove. It seems silly to continue to suggest someone put everything into configuration.yaml when they start out, as their system is going to grow to something unwieldy eventually. If I put all my code into configuration.yaml it would be over 10000 lines long. How would you ever find anything. yaml was designed to be modular with includes, little snippets, to make code management easy. A long configuration file isn't doing anyone any favors for readability, as well the documentation doesn't even touch on expanding out from default_config: finity: You have to jump thru hoops to change the friendly name without changing the entity_id for one. Or you just start off with what you want by using unique_id which sets the entity_Id and name becomes the display name. unique_id: whats_one_extra_parameter_to_type name: 'Blowing fake smoke' state: blahblahblah One extra parameter isn't jumping through hoops. 1 Like Deckoz2302: It seems silly to continue to suggest someone put everything into configuration.yaml I don't think I ever suggested that someone should do that. I'm pretty sure all my suggestions were in my first reply here. And in that reply my first suggestion was to put it in a package. I put almost everything in packages and !includes in my config myself too. But not everything. There are some things that it just makes more sense to put them in configuration.yaml. I was just saying that putting everything in configuration.yaml is still completely valid and not an "old way". It's just different. Deckoz2302: Or you just start off with what you want by using unique_id which sets the entity_Id I still thought the entity_id was set from the "name:" and that if you wanted to change the display name you needed to change it through customization. unless that's changed. It could be true tho since I don't really follow the configs for the "modern format" (which is what the docs officially call the old way). but the docs don't say anything about the unique_id becoming the entity_id. It just says this: unique_id string (optional) An ID that uniquely identifies this entity. Will be combined with the unique ID of the configuration block if available. This allows changing the name, icon and entity_id from the web interface. and from the way I read it, it can't be the entity_id since it says it "allows changing the name, icon and entity_id from the web interface." unless of course that's just poorly worded which I concede could be true. But either or any way the legacy format for template sensors is still valid if someone wants to use it. and adding everything to configuration.yaml is also still valid (and not an "old way" unlike the way you were saying it is) if someone wants to do that too. Hello Thank you for all your input. I have created a new folder "sensors" and added the wunderground.yaml and the lg.yaml files to it. I then change the "sensor: !include wunderground.yaml" to "sensor: !include_dir_merge_list sensors". Once that was done I went to "Developer Tools" on the side panel, in the "Check and Restart" box I selected "Check Configuration" and then pressed "RESTART". All is working now. Thanks. 1 Like Hello, I have installed this integration and it seems to be working fine. However some sensors are not being showed and are actually not useful. (see picture) Can anyone help me resolve this? Thank you. A while back (before I was using Home Assistant) I built a COB light controller board. The idea was to have lights under the eaves all round the outside of our house (bungalow). They look like this: In this picture there are three lights, but around the rest of the house there are about 15 in total on 4 different circuits. I won't go into the detail here other than to say that there is a controller board up in the loft that uses a Wemos D1 mini which serves up a REST interface to turn the lights on and off. I did a presentation for the London Raspberry Pi group. The link to my GitHub page is here: COBHouseLights github repo The Doc folder contains the presentation (.pptx) which describes how it all works. I added current monitoring that also switches all the lights off in the unlikely event that a short occurs in the wiring or lights (the whole thing is powered by a 12V 5A transformer). I created a VueJS front end that was hosted on a Raspberry Pi using Nginx. The web page looked like this (there's actually two pages, this is one of them): Because I am using Swagger (OpenAPI) you can access the API via a web page, which looks like this: That all worked well, and I could have carried on adding features like turning the lights on and off automatically. But then… I started using Home Assistant. Needless to say if I was starting again I would use

either ESPHome or Tasmota for the controller board. But I'm glad I have done it this way because I now have an example of how to interface between Home Assistant and a REST interface (which means being able to interface to almost anything). The rest of this article is how I acheived that. This is how the lights will appear in Home Assistant: The other devices (tablelamp, cornerlamp and sidelight) are commercial smart plugs and light that I reflashed with Tasmota (they came with Tuya firmware). If you click on any of the lights you get a properties screen like this: This allows you to change the brighness of the COB lights. My config.yaml file looks like this (some bits removed for brevity) default_config: recorder: db_url: !secret recorder_db_url config: sensor: !include sensors.yaml automation: !include automations.yaml script: !include scripts.yaml rest_command: !include rest_command.yaml rest: !include rest.yaml light: !include light.yaml The bits of this file that are relevant to our REST devices are sensors.yaml, rest_command.yaml, rest.yaml and light.yaml. The overall concept is that we will have sensors that tell us the current state of the lights (on, off, brightness etc.) and commands (in rest_command.yaml) that change the state of the lights (again, on, off and brightness). Let's start with the sensors. This is what is in the rest.yaml file: - authentication: basic resource: !secret cob_leds_get_url username: apikey password: !secret coblights_password sensor: - name: Cob Light 1 value_template: "{{ value_json[0].on }}" json_attributes_path: "$[0]" json_attributes: - brightness - name: Cob Light 2 value_template: "{{ value_json[1].on }}" json_attributes_path: "$[1]" json_attributes: - brightness - name: Cob Light 3 value_template: "{{ value_json[2].on }}" json_attributes_path: "$[2]" json_attributes: - brightness - name: Cob Light 4 value_template: "{{ value_json[3].on }}" json_attributes_path: "$[3]" json_attributes: - brightness We'll come to the secrets file later, but for now all we need to know is that it contains URLs and passwords (because having that information here would be a bad idea). Each sensor has one value and one attribute. These can be accessed as follows: {{ states('sensor.cob_light_1') }} {{ state_attr('sensor.cob_light_1', 'brightness') }} There is also a sensor in sensor.yaml. This is for the COB lights current and this is how it is defined: - platform: rest name: "COB Lights Current" value_template: "{{value_json.current}}" unit_of_measurement: mA scan_interval: 60 resource: !secret cob_leds_status_url username: apikey password: !secret coblights_password authentication: basic json_attributes: - samples - millis - busvoltage - maxcurrent - lastMessage In this case we take one of the json attributes (current) and use this for the value. The other json values are presented as attributes. The value and attributes can be accessed in the same way as before. The next part of the REST devices is the controls. These are defined in rest_command.yaml as follows: cob_light_set: url: !secret cob_led_set_url method: put payload: > { {{ '' }} {%- if on is defined -%} "on": {{ on|lower }},{{ ' ' }} {%- endif -%} {%- if brightness is defined -%} "brightness": {{ brightness }},{{ ' ' }} {%- endif -%} } username: "apikey" password: !secret coblights_password content_type: 'application/json; charset=utf-8' This is slightly more complicated than the sensors because we have a single service that takes three parameters - led, on and brightness. The led is mandatory, the on and brightness parameters are optional (in case you are wondering where the led parameter is, it is in the secrets.yaml file). So let's see what is in the secrets.yaml file now: coblights_password: mypasswordhere cob_leds_get_url: cob_led_set_url: { led }} cob_leds_status_url: Obviously there will be other secrets in here too, but this is the ones that are relevent to our REST API. Only one of these is a real secret, the others are URLs, but it is a good idea to have them here because then we are keeping implementation details out of the configuration files. Notice that the cob_led_set_url has a parameter in it. If you refer back to sensors.yaml you should be able to see how this allows us to call the relevant API service and control a specific group of COB lights (1, 2, 3 or 4). It would be nice to do a similar thing for the sensors (rather than having four very similar defintions), but unfortunately sensors cannot be parameterized. The final part of our REST devices is the actual definition of the devices. This is done in the lights.yaml file: - platform: template lights: cob_light_1: friendly_name: "COB Lights (Side)" value_template: "{{ states('sensor.cob_light_1') }}" level_template: "{{ state_attr('sensor.cob_light_1', 'brightness') / 4 }}" turn_off: - service: rest_command.cob_light_set data: { "led": 1, "on": false } - service: homeassistant.update_entity entity_id: sensor.cob_light_1 turn_on: - service: rest_command.cob_light_set data: { "led": 1, "on": true, "brightness": 132 } - service: homeassistant.update_entity entity_id: sensor.cob_light_1 set_level: - service: rest_command.cob_light_set data: { "led": 1, "on": "{{ 'true' if brightness > 0 else 'false' }}", "brightness": "{{ brightness * 4 }}" } - service: homeassistant.update_entity entity_id: sensor.cob_light_1 cob_light_2: friendly_name: "COB Lights (Bins)" value_template: "{{ states('sensor.cob_light_2') }}" level_template: "{{ state_attr('sensor.cob_light_2', 'brightness') / 4 }}" turn_off: - service: rest_command.cob_light_set data: { "led": 2, "on": false } - service: homeassistant.update_entity entity_id: sensor.cob_light_2 turn_on: - service: rest_command.cob_light_set data: { "led": 2, "on": true, "brightness": 132 } - service: homeassistant.update_entity entity_id: sensor.cob_light_2 set_level: - service: rest_command.cob_light_set data: { "led": 2, "on": "{{ 'true' if brightness > 0 else 'false' }}", "brightness": "{{ brightness * 4 }}" } - service: homeassistant.update_entity entity_id: sensor.cob_light_2 cob_light_3: friendly_name: "COB Lights (Front)" value_template: "{{ states('sensor.cob_light_3') }}" level_template: "{{ state_attr('sensor.cob_light_3', 'brightness') / 4 }}" turn_off: - service: rest_command.cob_light_set data: { "led": 3, "on": false } - service: homeassistant.update_entity entity_id: sensor.cob_light_3 turn_on: - service: rest_command.cob_light_set data: { "led": 3, "on": true, "brightness": 132 } - service: homeassistant.update_entity entity_id: sensor.cob_light_3 set_level: - service: rest_command.cob_light_set data: { "led": 3, "on": "{{ 'true' if brightness > 0 else 'false' }}", "brightness": "{{ brightness * 4 }}" } - service: homeassistant.update_entity entity_id: sensor.cob_light_3 cob_light_4: friendly_name: "COB Lights (Back)" value_template: "{{ states('sensor.cob_light_4') }}" level_template: "{{ state_attr('sensor.cob_light_4', 'brightness') / 4 }}" turn_off: - service: rest_command.cob_light_set data: { "led": 4, "on": false } - service: homeassistant.update_entity entity_id: sensor.cob_light_4 turn_on: - service: rest_command.cob_light_set data: { "led": 4, "on": true, "brightness": 132 } - service: homeassistant.update_entity entity_id: sensor.cob_light_4 set_level: - service: rest_command.cob_light_set data: { "led": 4, "on": "{{ 'true' if brightness > 0 else 'false' }}", "brightness": "{{ brightness * 4 }}" } - service: homeassistant.update_entity entity_id: sensor.cob_light_4 As with the sensors, we can't parameterize these, unfortunately. Each light has two get values and three set values. We can get the on/off state and the brightness. We can set the lights on, set them off, or set the brightness. Notice that we multiply or divide the brightness by 4. That is because Home Assistant treats the brightness as between 0 and 255, whereas our REST API needs values between 0 and 1023 (the Home Assistant UI displays the brightness as 1 to 100 just to add a bit more confusion!). We now have some new devices which we can add to any dashboard. They will appear as follows: As I said originally, it is far easier to use Tasmota or ESPHome, but this approach theoretically allows you to turn any REST API into a Home Assistant device, even ones where you only have access to the API not the source code. Words: 668 - (4 min read) Home Assistant's Template Sensors allow you to create custom sensors using data from existing entities and templates. This guide will walk you through the process of creating Template Sensors using YAML. Table of Contents Prerequisites Understanding Template Sensors Creating Template Sensors Basic Structure Adding to configuration.yaml Examples of Template Sensors Combining Two Sensors Calculating a Value Formatting Time or Date Testing and Validating Configuration Restarting Home Assistant Advanced Use Cases Troubleshooting Prerequisites A working installation of Home Assistant. Access to the Home Assistant configuration files, particularly configuration.yaml. Basic knowledge of YAML and Jinja2 templating syntax. Understanding Template Sensors Template Sensors in Home Assistant are virtual sensors. They are not physical devices but are computed based on templates, often combining data from multiple entities or transforming raw data into a more meaningful format. Creating Template Sensors Basic Structure A Template Sensor is defined in the configuration.yaml file under the template: key. Below is the basic structure: template: - sensor: - name: "Template Sensor Name" unique_id: "unique_id_for_this_sensor" state: "{{ states('sensor.existing_sensor') }}" attributes: custom_attribute: "{{ states('sensor.another_sensor') }}" unit_of_measurement: "°C" state_class: "measurement" Adding to configuration.yaml Open your configuration.yaml file. Add the template: key if it doesn’t exist. Add your Template Sensor configuration under the template: section. Examples of Template Sensors Combining Two Sensors template: - sensor: - name: "Total Power Consumption" unique_id: "total_power_consumption" state: "{{ states('sensor.power_meter_1') | float + states('sensor.power_meter_2') | float }}" unit_of_measurement: "W" Calculating a Value template: - sensor: - name: "Room Temperature in Fahrenheit" unique_id: "room_temp_fahrenheit" state: "{{ (states('sensor.room_temp_celsius') | float * 9/5) + 32 }}" unit_of_measurement: "°F" template: - sensor: - name: "Current Time" unique_id: "current_time" state: "{{ now().strftime('%H:%M:%S') }}" Testing and Validating Configuration After adding your Template Sensor: Run a configuration check in Home Assistant: Go to Settings > System > Check Configuration. Fix any errors that appear. If no errors are found, restart Home Assistant to apply the changes. Restarting Home Assistant Go to Settings > System > Restart. Wait for Home Assistant to restart and then check if the new Template Sensor appears under Developer Tools > States. Advanced Use Cases Adding Multiple Attributes You can add custom attributes to your Template Sensors: template: - sensor: - name: "Weather Overview" unique_id: "weather_overview" state: "{{ states('sensor.weather_condition') }}" attributes: temperature: "{{ states('sensor.outdoor_temp') }}" humidity: "{{ states('sensor.outdoor_humidity') }}" wind_speed: "{{ states('sensor.wind_speed') }}" Using Conditions in Templates Use Jinja2 conditionals to create dynamic sensor values: template: - sensor: - name: "Weather Status" unique_id: "weather_status" state: > {% if states('sensor.temperature') | float > 30 %} Hot {% elif states('sensor.temperature') | float > 20 %} Warm {% else %} Cold {% endif %} Troubleshooting Error in Configuration Check: Verify the indentation and syntax in your configuration.yaml. Sensor Not Updating: Check the state or availability of the referenced entities. Template Syntax Errors: Test your template in Developer Tools > Templates in the Home Assistant interface. Sensor Not Showing in UI: Ensure the unique_id is unique and correctly configured. That’s it! You now have the knowledge to create and customize Template Sensors in Home Assistant. Use this feature to expand the functionality of your smart home system! Building automation for a home "Domotic" redirects here; not to be confused with Demotic. "Smart house" redirects here. For the film, see Smart House. Part of a series onAutomation Automation in general Banking Building Home Highway system Laboratory Library Broadcast Mix Pool cleaner Pop music Reasoning Semi-automation Telephone Attendant Switchboard Teller machine Vehicular Vending machine Robotics and robots Domestic Vacuum cleaner Roomba Lawn mower Guided vehicle Industrial Paint ODD Impact of automation Manumation OOL Bias Self-driving cars Technological unemployment Jobless recovery Post-work society Threat Trade shows and awards ASP-DAC DAC DATE IEEE Robotics and Automation Award ICCAD vte Room control unit CITIB-AMX control panel Nest Learning Thermostat showing weather's impact on energy usage Ring video doorbell with Wi-Fi camera August Home smart lock Home automation or domotics[1] is building automation for a home. A home automation system will monitor and/or control home attributes such as lighting, climate, entertainment systems, and appliances. It may also include home security such as access control and alarm systems. The phrase smart home refers to home automation devices that have internet access. Home automation, a broader category, includes any device that can be monitored or controlled via wireless radio signals, not just those having internet access. When connected with the Internet, home sensors and activation devices are an important constituent of the Internet of Things ("IoT").[2] A home automation system typically connects controlled devices to a central smart home hub (sometimes called a "gateway"). The user interface for control of the system uses either wall-mounted terminals, tablet or desktop computers, a mobile phone application, or a Web interface that may also be accessible off-site through the Internet. Early home automation began with labor-saving machines. Self-contained electric or gas powered home appliances became viable in the 1900s with the introduction of electric power distribution[3] and led to the introduction of washing machines (1904), water heaters (1889), refrigerators (1913), sewing machines, dishwashers, and clothes dryers. In 1975, the first general purpose home automation network technology, X10, was developed. It is a communication protocol for electronic devices. It primarily uses electric power transmission wiring for signalling and control, where the signals involve brief radio frequency bursts of digital data, and remains the most widely available.[4] By 2012, in the United States, according to ABI Research, 1.5 million home automation systems were installed.[5] Per research firm Statista[6] more than 45 million smart home devices will be installed in U.S. homes by the end of the year 2018.[7] From 2018 to 2023, the number of U.S. homes equipped with smart devices grew at 10.2% per year to reach 63.43 million by 2023.[8] The word "domotics" is a contraction of the Latin word for a home (domus) and the word robotics.[1] The word "smart" in "smart home" refers to the system being aware of the state of its devices, which is done through the information and communication technologies (ICT) protocol and the Internet of Things (IoT).[9] Home automation is prevalent in a variety of different realms, including: Heating, ventilation and air conditioning (HVAC): it is possible to have remote control of all home energy monitors over the internet incorporating a simple and friendly user interface.[10][11] Lighting control system: a "smart" network that incorporates communication between various lighting system inputs and outputs, using one or more central computing devices. Occupancy-aware control system: it is possible to sense the occupancy of the home using smart meters[12] and environmental sensors like CO2 sensors,[13] which can be integrated into the building automation system to trigger automatic responses for energy efficiency and building comfort applications. Appliance control and integration with the smart grid and a smart meter, taking advantage, for instance, of high solar panel output in the middle of the day to run washing machines.[14][15] Home robots and security: a household security system integrated with a home automation system can provide additional services such as remote surveillance of security cameras over the Internet, or access control and central locking of all perimeter doors and windows.[16] Leak detection, smoke and CO detectors[17][18] Laundry-folding machine, self-making bed Indoor positioning systems (IPS). Home automation for the elderly and disabled. Pet and baby care, for example tracking the pets and babies' movements and controlling pet access rights.[19] Air quality control (inside and outside). For example, Air Quality Egg is used by people at home to monitor the air quality and pollution level in the city and create a map of the pollution.[20] Smart kitchen, with refrigerator inventory, premade cooking programs, cooking surveillance, etc. Voice control devices like Amazon Alexa or Google Nest used to control home appliances or systems. Internet enabled cat feederIn 2011, Microsoft Research found that home automation could involve a high cost of ownership, inflexibility of interconnected devices, and poor manageability.[21] When designing and creating a home automation system, engineers take into account several factors including scalability, how well the devices can be monitored and controlled, ease of installation and use for the consumer, affordability, speed, security, and ability to diagnose issues.[22] Findings from iControl showed that consumers prioritize ease-of-use over technical innovation, and although consumers recognize that new connected devices have an unparalleled cool factor, they are not quite ready to use them in their own homes yet.[23] Historically, systems have been sold as complete systems where the consumer relies on one vendor for the entire system including the hardware, the communications protocol, the central hub, and the user interface. However, there are now open hardware and open source software systems which can be used instead of or with proprietary hardware.[21] Many of these systems interface with consumer electronics such as the Arduino or Raspberry Pi, which are easily accessible online and in most electronics stores.[24] In addition, home automation devices are increasingly interfaced with mobile phones through Bluetooth, allowing for increased affordability and customizability for the user.[9] Home automation suffers from platform fragmentation and lack of technical standards[25][26][27][28][29][30] a situation where the variety of home automation devices, in terms of both hardware variations and differences in the software running on them, makes the task of developing applications that work consistently between different inconsistent technology ecosystems hard.[31] Customers may hesitate to bet their IoT future on proprietary software or hardware devices that use proprietary protocols that may fade or become difficult to customize and interconnect.[32] The nature of home automation devices can also be a problem for security, data security and data privacy, since patches to bugs found in the core operating system often do not reach users of older and lower-price devices.[33][34] One set of researchers say that the failure of vendors to support older devices with patches and updates leaves more than 87% of active devices vulnerable.[35][36] Concerns have been raised by tenants renting from landlords who decide to upgrade units with smart home technology.[37] These concerns include weak wireless connections that render the door or appliance unusable or impractical; the security of door passcodes kept by the landlord; and the potential invasion of privacy that comes with connecting smart home technologies to home networks.[38] Researchers have also conducted user studies to determine what the barriers are for consumers when integrating home automation devices or systems into their daily lifestyle. One of the main takeaways was regarding ease of use, as consumers tend to steer towards "plug and play" solutions over more complicated setups.[39] One study found that there were large gaps in the mental-models generated by users regarding how the devices actually work.[39] Specifically, the findings showed that there was a lot of misunderstanding related to where the data collected by smart devices was stored and how it was used.[39] For example, in a smart light setup, one participant thought that her iPad communicated directly with the light, telling it to either turn-off or on.[39] In reality, the iPad sends a signal to the cloud system that the company uses (in this case, the Hue Bridge) which then signals directly to the device.[39] Overall, this field is still evolving and the nature of each device is constantly changing. While technologists work to create more secure, streamlined, and standardized security protocols, consumers also need to learn more about how these devices work and what the implications of putting them in their homes can be. The growth of this field is currently limited not only by technology but also by a user's ability to trust a device and integrate it successfully into his/her daily life. Utilizing home automation could lead to more efficient and intelligent energy-saving techniques.[40] By integrating information and communication technologies (ICT) with renewable energy systems such as solar power or wind power, homes can autonomously make decisions about whether to store energy or expend it for a given appliance,[40] leading to overall positive environmental impacts and lower electricity bills for the consumers using the system. To do this, researchers propose using data from sensors regarding consumer activity within the home to anticipate consumer needs and balance that with energy consumption.[41] Furthermore, home automation has a large potential regarding family safety and security. According to a 2015 survey done by iControl, the primary drivers of the demand for smart and connected devices are first "personal and family security", and second "excitement about energy savings".[42] Home automation includes a variety of smart security systems and surveillance setups. This allows consumers to monitor their homes while away, and to give trusted family members access to that information in case anything bad happens. While there are many competing vendors, there are increasing efforts towards open source systems. However, there are issues with the current state of home automation including a lack of standardized security measures and deprecation of older devices without backwards compatibility. Home automation has high potential for sharing data between family members or trusted individuals for personal security purposes and could lead to energy saving measures with a positive environmental impact in the future. The home automation market was worth US$64 billion in 2022 and is projected to grow to over $163 billion in 2028.[citation needed] Domestic patch panel, unstructured Well and booster pump automation Housing portal Home automation companies List of home automation software Index of home automation articles Home network List of network buses Mobile manipulator and Mobile robot Smart device and smart speaker Web of Things ^ a b Hill, Jim (12 September 2015). "The smart home: a glossary guide for the perplexed". T3. Retrieved 27 March 2017. ^ Chakraborty, Arindom; Islam, Monirul; Shahriyar, Fahim; Islam, Sharnali; Zaman, Hasan U.; Hasan, Mehedi (2023). "Smart Home System: A Comprehensive Review". Journal of Electrical and Computer Engineering. 2023: 1–30. doi:10.1155/2023/7616683. ^ Home Automation & Wiring (1 ed.). New York: McGraw-Hill/TAB Electronics. 1999-03-31. ISBN 978-0-07-024674-4. ^ Rye, Dave (October 1999). "My Life at X10". AV and Automation Industry eMagazine. Archived from the original on September 30, 2014. Retrieved October 8, 2014. ^ "1.5 Million Home Automation Systems Installed in the US This Year". ABI Research. November 19, 2012. Retrieved 2016-11-22. ^ "Smart Home - United States | Statista Market Forecast". Statista. Retrieved 2019-11-07. ^ Caccavale, Michael (September 24, 2018). "The Impact Of The Digital Revolution On The Smart Home Industry". Forbes. Retrieved 2019-11-07. ^ "Number of users of the smart home segment smart appliances in the United States from 2019 to 2028". Statista. Feb 24, 2025. Retrieved 2025-04-11. ^ a b Mandula, K.; Parupalli, R.; Murty, C. A. S.; Magesh, E.; Lunagariya, R. (December 2015). "Mobile based home automation using Internet of Things(IoT)". 2015 International Conference on Control, Instrumentation, Communication and Computational Technologies (ICCICCT). pp. 340–343. doi:10.1109/ICCICCT.2015.7475301. ISBN 978-1-4673-9825-1. S2CID 14737576. ^ Preville, Cherie (26 Aug 2013). "Control Your Castle: The Latest in HVAC Home Automation". ACHRNews. Retrieved 15 Jun 2015. ^ Asadullah, Muhammad (22 Dec 2016). "An Overview of Home Automation Systems". Conference Paper. IEEE. pp. 27–31. doi:10.1109/ICRAI.2016.7791223. ISBN 978-1-5090-4059-9. ^ Jin, M.; Jia, R.; Spanos, C. (2017-01-01). "Virtual Occupancy Sensing: Using Smart Meters to Indicate Your Presence". IEEE Transactions on Mobile Computing. PP (99): 3264–3277. arXiv:1407.4395. doi:10.1109/TMC.2017.2684806. ISSN 1536-1233. S2CID 1997078. ^ Jin, M.; Bekiaris-Liberis, N.; Weekly, K.; Spanos, C. J.; Bayen, A. M. (2016-01-01). "Occupancy Detection via Environmental Sensing". IEEE Transactions on Automation Science and Engineering. PP (99): 443–455. doi:10.1109/TASE.2016.2619720. ISSN 1545-5955. S2CID 4600376. ^ Berger, Lars T.; Schwager, Andreas; Pagani, Pascal; Schneider, Daniel M. (February 2014). Smart Grid Applications, Communications, and Security. Devices, Circuits, and Systems. CRC Press. ISBN 978-1-4665-5752-9. ^ "Tips: Smart Appliances | Department of Energy". energy.gov. Archived from the original on 2015-09-29. Retrieved 2016-04-20. ^ Griffiths, Melanie (June 2016). "Smart Home Security". Homebuilding & Renovating. Retrieved 27 February 2012. ^ "Nest Protect | Smoke and CO Alarms - Consumer Reports News". www.consumerreports.org. Retrieved 2016-04-20. ^ "Nest Protect | Smoke and CO Alarms - Consumer Reports News". Retrieved 2016-11-22. ^ "Sure Flap - Smart Cat Flap Coming Soon! - News - Smart Home Geeks". Smart Home Geeks. 2017-04-06. Retrieved 2017-08-11. ^ Kamel Boulos, Maged N; Al-Shorbaji, Najeeb M (2014). "On the Internet of Things, smart cities and the WHO Healthy Cities". International Journal of Health Geographics. 13 (1): 10. doi:10.1186/1476-072x-13-10. PMC 3987056. PMID 24669838. ^ a b Brush, A. J.; Lee, Bongshin; Mahajan, Ratul; Agarwal, Sharad; Saroiu, Stefan; Dixon, Colin (2011-05-01). "Home Automation in the Wild: Challenges and Opportunities". Microsoft Research. ^ Sriskanthan, N.; Tan, F.; Karande, A. (August 2002). "Bluetooth based home automation system". Microprocessors and Microsystems. 26 (6): 281–289. doi:10.1016/S0141-9331(02)00039-X. ^ "2015 State of the Smart Home Report" (PDF). iControl Networks. Archived from the original (PDF) on 29 June 2021. Retrieved 5 November 2020. ^ Rout, Kshirod Kumar; Mallick, Samuchita; Mishra, Sivkuinar (July 2018). "Design and Implementation of an Internet of Things based Prototype for Smart Home Automation System". 2018 International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering (ICRIEECE). Bhubaneswar, India: IEEE. pp. 67–72. doi:10.1109/ICRIEECE44171.2018.9008410. ISBN 978-1-5386-5995-3. S2CID 211688876. ^ "IoT experts fret over fragmentation". Mobile World Live. 2016-02-25. Retrieved 2016-11-22. ^ "Fragmentation is the enemy of the Internet of Things". Qualcomm. 2016-02-19. Retrieved 2016-11-22. ^ "Internet of Things: Opportunities and challenges for semiconductor companies". McKinsey & Company. Retrieved 2016-11-22. ^ "IOT Brings Fragmentation in Platform" (PDF). Archived from the original (PDF) on 2016-10-07. Retrieved 2018-03-19. ^ "Countering Fragmentation with the Web of Things" (PDF). ^ Steve Kovach (July 30, 2013). "Android Fragmentation Report". Business Insider. Retrieved October 19, 2013. ^ Brown, Eric (September 13, 2016). "Who Needs the Internet of Things?". Linux.com. Retrieved 2016-11-22. ^ "21 Open Source Projects for IoT". Linux.com. 20 September 2016. Retrieved 2016-11-22. ^ Franceschi-Bicchierai, Lorenzo (July 29, 2015). "Goodbye, Android". Motherboard. Vice. Retrieved August 2, 2015. ^ Kingsley-Hughes, Adrian (June 9, 2014). "The Android 'toxic hellstew' survival guide". ZDnet. Retrieved August 2, 2015. ^ Tung, Liam (2015-10-13). "Android security a 'market for lemons' that leaves 87 percent vulnerable". ZDNet. Retrieved 2015-10-14. ^ Thomas, Daniel R.; Beresford, Alastair R.; Rice, Andrew (2015). Proceedings of the 5th Annual ACM CCS Workshop on Security and Privacy in Smartphones and Mobile Devices - SPSM '15 (PDF). Computer Laboratory, University of Cambridge. pp. 87–98. doi:10.1145/2808117.2808118. ISBN 978-1-4503-3819-6. S2CID 14832327. Retrieved 2015-10-14. ^ Ng, Alfred (March 7, 2019). "Your landlord turns your apartment into a smart home. Now what?". CNET. Retrieved 2020-10-02. ^ Rehman, Aqeel-ur; Rehman, Sadiq Ur; Khan, Iqbal Uddin; Moiz, Malaika (December 2016). "Security and Privacy Issues in IoT". International Journal of Communication Networks and Information Security. 8 (3): 147–157. ^ a b c d e Kaaz, Kim J.; Hoffer, Alex; Saeidi, Mahsa; Sarma, Anita; Bobba, Rakesh B. (October 2017). "Understanding user perceptions of privacy, and configuration challenges in home automation". 2017 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). Raleigh, NC: IEEE. pp. 297–301. doi:10.1109/VLHCC.2017.8103482. ISBN 978-1-5386-0443-4. S2CID 36313196. ^ a b Risteska Stojkoska, Biljana L.; Trivodaliev, Kire V. (January 2017). "A review of Internet of Things for smart home: Challenges and solutions". Journal of Cleaner Production. 140: 1454–1464. Bibcode:2017JCPro.140.1454R. doi:10.1016/j.jclepro.2016.10.006. S2CID 53696817. ^ Heierman, E.O.; Cook, D.J. (2003). "Improving home automation by discovering regularly occurring device usage patterns". Third IEEE International Conference on Data Mining. Melbourne, FL, USA: IEEE Comput. Soc. pp. 537–540. doi:10.1109/ICDM.2003.1250971. ISBN 978-0-7695-1978-4. S2CID 10329347. ^ Kaaz, Kim J.; Hoffer, Alex; Saeidi, Mahsa; Sarma, Anita; Bobba, Rakesh B. (October 2017). "Understanding user perceptions of privacy, and configuration challenges in home automation". 2017 IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). Raleigh, NC: IEEE. pp. 297–301. doi:10.1109/VLHCC.2017.8103482. ISBN 978-1-5386-0443-4. S2CID 36313196. Media related to Home automation at Wikimedia Commons Retrieved from "