**Google** is an American [multinational](https://en.wikipedia.org/wiki/Multinational_corporation) [technology company](https://en.wikipedia.org/wiki/Technology_company) specializing in [Internet](https://en.wikipedia.org/wiki/Internet)-related services and products. These include [online advertising](https://en.wikipedia.org/wiki/Online_advertising) technologies, [search](https://en.wikipedia.org/wiki/Web_search_engine), [cloud computing](https://en.wikipedia.org/wiki/Cloud_computing), [software](https://en.wikipedia.org/wiki/Software), and [hardware](https://en.wikipedia.org/wiki/Computer_hardware).

Google was founded in 1996 by [Larry Page](https://en.wikipedia.org/wiki/Larry_Page) and [Sergey Brin](https://en.wikipedia.org/wiki/Sergey_Brin) while they were [Ph.D.](https://en.wikipedia.org/wiki/Doctor_of_Philosophy) students at [Stanford University](https://en.wikipedia.org/wiki/Stanford_University), in California. Together, they own about 14 percent of its shares and control 56 percent of the stockholder voting power through [supervoting stock](https://en.wikipedia.org/wiki/Supervoting_stock" \o "Supervoting stock). They incorporated Google as a privately held company on September 4, 1998. An [initial public offering](https://en.wikipedia.org/wiki/Initial_public_offering) (IPO) took place on August 19, 2004, and Google moved to its new headquarters in [Mountain View, California](https://en.wikipedia.org/wiki/Mountain_View,_California), nicknamed the [Googleplex](https://en.wikipedia.org/wiki/Googleplex" \o "Googleplex). In August 2015, Google announced plans to reorganize its various interests as a [conglomerate](https://en.wikipedia.org/wiki/Conglomerate_(company)) called [Alphabet Inc.](https://en.wikipedia.org/wiki/Alphabet_Inc.) Google, Alphabet's leading subsidiary, will continue to be the umbrella company for Alphabet's Internet interests. Upon completion of the restructure, [Sundar Pichai](https://en.wikipedia.org/wiki/Sundar_Pichai" \o "Sundar Pichai) became [CEO](https://en.wikipedia.org/wiki/Chief_executive_officer) of Google, replacing [Larry Page](https://en.wikipedia.org/wiki/Larry_Page), who became CEO of Alphabet.

Rapid growth since incorporation has triggered a chain of products, [acquisitions](https://en.wikipedia.org/wiki/Mergers_and_acquisitions), and partnerships beyond [Google's core search engine](https://en.wikipedia.org/wiki/Google_Search) ([Google Search](https://en.wikipedia.org/wiki/Google_Search)). It offers services designed for work and productivity ([Google Docs, Sheets and Slides](https://en.wikipedia.org/wiki/Google_Docs,_Sheets_and_Slides)), [email](https://en.wikipedia.org/wiki/Webmail) ([Gmail](https://en.wikipedia.org/wiki/Gmail)/[Inbox](https://en.wikipedia.org/wiki/Inbox_by_Gmail)), scheduling and time management ([Google Calendar](https://en.wikipedia.org/wiki/Google_Calendar)), [cloud storage](https://en.wikipedia.org/wiki/File_hosting_service) ([Google Drive](https://en.wikipedia.org/wiki/Google_Drive)), [social networking](https://en.wikipedia.org/wiki/Social_networking_service) ([Google+](https://en.wikipedia.org/wiki/Google%2B)), instant messaging and video chat ([Google Allo](https://en.wikipedia.org/wiki/Google_Allo)/[Duo](https://en.wikipedia.org/wiki/Google_Duo)/[Hangouts](https://en.wikipedia.org/wiki/Google_Hangouts)), language translation ([Google Translate](https://en.wikipedia.org/wiki/Google_Translate)), mapping and turn-by-turn navigation ([Google Maps](https://en.wikipedia.org/wiki/Google_Maps)), video sharing ([YouTube](https://en.wikipedia.org/wiki/YouTube)), notetaking ([Google Keep](https://en.wikipedia.org/wiki/Google_Keep)), and photo organizing and [editing](https://en.wikipedia.org/wiki/Image_editing) ([Google Photos](https://en.wikipedia.org/wiki/Google_Photos)). The company leads the development of the [Android](https://en.wikipedia.org/wiki/Android_(operating_system)) mobile [operating system](https://en.wikipedia.org/wiki/Operating_system), the [Google Chrome](https://en.wikipedia.org/wiki/Google_Chrome) web browser, and [Chrome OS](https://en.wikipedia.org/wiki/Chrome_OS), a lightweight operating system based on the Chrome browser. Google has moved increasingly into hardware; from 2010 to 2015, it partnered with major electronics manufacturers in the production of its [Nexus](https://en.wikipedia.org/wiki/Google_Nexus) devices, and in October 2016, it released multiple hardware products (including the [Google Pixel](https://en.wikipedia.org/wiki/Pixel_(smartphone)) smartphone, [Home](https://en.wikipedia.org/wiki/Google_Home) smart speaker, [Wifi](https://en.wikipedia.org/wiki/Google_Wifi" \o "Google Wifi) [mesh](https://en.wikipedia.org/wiki/Mesh_networking) wireless [router](https://en.wikipedia.org/wiki/Router_(computing)), and [Daydream View](https://en.wikipedia.org/wiki/Google_Daydream#Headset) [virtual reality](https://en.wikipedia.org/wiki/Virtual_reality) headset). The new hardware chief, Rick Osterloh, stated: "a lot of the innovation that we want to do now ends up requiring controlling the end-to-end user experience".

Google has also experimented with becoming an [Internet carrier](https://en.wikipedia.org/wiki/Mobile_network_operator). In February 2010, it announced [Google Fiber](https://en.wikipedia.org/wiki/Google_Fiber), a fiber-optic infrastructure that was installed in [Kansas City](https://en.wikipedia.org/wiki/Kansas_City,_Kansas); in April 2015, it launched [Project Fi](https://en.wikipedia.org/wiki/Project_Fi) in the United States, combining Wi-Fi and cellular networks from different providers; and in 2016, it announced the Google Station initiative to make public Wi-Fi around the world, which had already been deployed in [India](https://en.wikipedia.org/wiki/India).

[Alexa](https://en.wikipedia.org/wiki/Alexa_Internet), a company that monitors commercial web traffic, lists Google.com as the most visited website in the world. Several other Google services also figure in the top 100 most visited websites, including [YouTube](https://en.wikipedia.org/wiki/YouTube) and [Blogger](https://en.wikipedia.org/wiki/Blogger). Google has been the second most valuable brand in the world for 4 consecutive years. [Google has received significant criticism](https://en.wikipedia.org/wiki/Criticism_of_Google) for issues such as [privacy](https://en.wikipedia.org/wiki/Privacy_concerns_regarding_Google), [tax avoidance](https://en.wikipedia.org/wiki/Criticism_of_Google#Aggressive_tax_avoidance), [antitrust](https://en.wikipedia.org/wiki/Criticism_of_Google#Antitrust), [censorship](https://en.wikipedia.org/wiki/Censorship_by_Google), and [search neutrality](https://en.wikipedia.org/wiki/Criticism_of_Google#Page_Rank).

Google's [mission statement](https://en.wikipedia.org/wiki/Mission_statement), from the outset, was "to organize the world's information and make it universally accessible and useful", and its unofficial slogan was "[Don't be evil](https://en.wikipedia.org/wiki/Don%27t_be_evil)". In October 2015, the motto was replaced in the Alphabet corporate code of conduct by the phrase: "Do the right thing". Google's commitment to such robust idealism has been increasingly called into doubt due to a number of the firm's actions and behaviours which appear to contradict this.

**Microsoft Corporation** [/ˈmaɪkrəˌsɒft, -roʊ-, -ˌsɔːft/](https://en.wikipedia.org/wiki/Help:IPA_for_English)[[5]](https://en.wikipedia.org/wiki/Microsoft#cite_note-5)[[6]](https://en.wikipedia.org/wiki/Microsoft#cite_note-6) (commonly referred to as **Microsoft** or **MS**) is an American [multinational](https://en.wikipedia.org/wiki/Multinational_corporation) [technology company](https://en.wikipedia.org/wiki/Technology_company) headquartered in [Redmond, Washington](https://en.wikipedia.org/wiki/Redmond,_Washington), that develops, manufactures, licenses, supports and sells [computer software](https://en.wikipedia.org/wiki/Computer_software), [consumer electronics](https://en.wikipedia.org/wiki/Consumer_electronics) and [personal computers](https://en.wikipedia.org/wiki/Personal_computers) and services. Its best known software products are the [Microsoft Windows](https://en.wikipedia.org/wiki/Microsoft_Windows) line of [operating systems](https://en.wikipedia.org/wiki/Operating_systems), [Microsoft Office](https://en.wikipedia.org/wiki/Microsoft_Office) [office suite](https://en.wikipedia.org/wiki/Office_suite" \o "Office suite), and [Internet Explorer](https://en.wikipedia.org/wiki/Internet_Explorer) and [Edge](https://en.wikipedia.org/wiki/Microsoft_Edge) [web browsers](https://en.wikipedia.org/wiki/Web_browser). Its flagship hardware products are the [Xbox](https://en.wikipedia.org/wiki/Xbox) [video game consoles](https://en.wikipedia.org/wiki/Video_game_console) and the [Microsoft Surface](https://en.wikipedia.org/wiki/Microsoft_Surface) tablet lineup. As of 2016, it was the [world's largest software maker](https://en.wikipedia.org/wiki/List_of_the_largest_software_companies) by revenue,[[7]](https://en.wikipedia.org/wiki/Microsoft#cite_note-7) and one of the [world's most valuable companies](https://en.wikipedia.org/wiki/List_of_corporations_by_market_capitalization).[[8]](https://en.wikipedia.org/wiki/Microsoft#cite_note-8)

Microsoft was founded by [Paul Allen](https://en.wikipedia.org/wiki/Paul_Allen) and [Bill Gates](https://en.wikipedia.org/wiki/Bill_Gates) on April 4, 1975, to develop and sell [BASIC](https://en.wikipedia.org/wiki/BASIC) [interpreters](https://en.wikipedia.org/wiki/Interpreter_(computer_software)) for the [Altair 8800](https://en.wikipedia.org/wiki/Altair_8800). It rose to dominate the [personal computer](https://en.wikipedia.org/wiki/Personal_computer) [operating system](https://en.wikipedia.org/wiki/Operating_system) market with [MS-DOS](https://en.wikipedia.org/wiki/MS-DOS) in the mid-1980s, followed by [Microsoft Windows](https://en.wikipedia.org/wiki/Microsoft_Windows). The company's 1986 [initial public offering](https://en.wikipedia.org/wiki/Initial_public_offering) (IPO), and subsequent rise in its share price, created three billionaires and an estimated 12,000 millionaires among Microsoft employees. Since the 1990s, it has increasingly diversified from the [operating system](https://en.wikipedia.org/wiki/Operating_system) market and has [made a number of corporate acquisitions](https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Microsoft). In May 2011, Microsoft acquired [Skype Technologies](https://en.wikipedia.org/wiki/Skype_Technologies) for $8.5 billion,[[9]](https://en.wikipedia.org/wiki/Microsoft" \l "cite_note-9) and in December 2016 bought [LinkedIn](https://en.wikipedia.org/wiki/LinkedIn) for $26.2 billion.[[10]](https://en.wikipedia.org/wiki/Microsoft#cite_note-10)

As of 2015, Microsoft is market-dominant in the [IBM PC-compatible](https://en.wikipedia.org/wiki/IBM_PC-compatible) operating system market and the [office software suite](https://en.wikipedia.org/wiki/Office_software_suite) market, although it has lost the majority of the overall operating system market to [Android](https://en.wikipedia.org/wiki/Android_(operating_system)).[[11]](https://en.wikipedia.org/wiki/Microsoft#cite_note-11) The company also produces a wide range of other software for desktops and servers, and is active in areas including [Internet search](https://en.wikipedia.org/wiki/Web_search_engine) (with [Bing](https://en.wikipedia.org/wiki/Bing_(search_engine))), the [video game industry](https://en.wikipedia.org/wiki/Video_game_industry) (with the [Xbox](https://en.wikipedia.org/wiki/Xbox_(console)), [Xbox 360](https://en.wikipedia.org/wiki/Xbox_360) and [Xbox One](https://en.wikipedia.org/wiki/Xbox_One) consoles), the digital services market (through [MSN](https://en.wikipedia.org/wiki/MSN)), and mobile phones (via the operating systems of Nokia's former phones[[12]](https://en.wikipedia.org/wiki/Microsoft#cite_note-Garner-12) and [Windows Phone](https://en.wikipedia.org/wiki/Windows_Phone) OS). In June 2012, Microsoft entered the personal computer production market for the first time, with the launch of the [Microsoft Surface](https://en.wikipedia.org/wiki/Microsoft_Surface), a line of [tablet computers](https://en.wikipedia.org/wiki/Tablet_computer). With the acquisition of Nokia's devices and services division to form [Microsoft Mobile](https://en.wikipedia.org/wiki/Microsoft_Mobile), the company re-entered the smartphone hardware market, after its previous attempt, [Microsoft Kin](https://en.wikipedia.org/wiki/Microsoft_Kin), which resulted from their acquisition of [Danger Inc.](https://en.wikipedia.org/wiki/Danger_(company))[[13]](https://en.wikipedia.org/wiki/Microsoft#cite_note-InformationWeek_Kin-13)

The word "Microsoft" is a [portmanteau](https://en.wikipedia.org/wiki/Portmanteau) of "microcomputer" and "software".[[14]](https://en.wikipedia.org/wiki/Microsoft#cite_note-14)

**Apple** is an American [multinational](https://en.wikipedia.org/wiki/Multinational_corporation) [technology company](https://en.wikipedia.org/wiki/Technology_company) headquartered in [Cupertino, California](https://en.wikipedia.org/wiki/Cupertino,_California) that designs, develops, and sells [consumer electronics](https://en.wikipedia.org/wiki/Consumer_electronics), [computer software](https://en.wikipedia.org/wiki/Software), and online services. The company's [hardware](https://en.wikipedia.org/wiki/Computer_hardware) products include the [iPhone](https://en.wikipedia.org/wiki/IPhone) smartphone, the [iPad](https://en.wikipedia.org/wiki/IPad) tablet computer, the [Mac](https://en.wikipedia.org/wiki/Macintosh) personal computer, the [iPod](https://en.wikipedia.org/wiki/IPod) portable media player, the [Apple](https://en.wikipedia.org/wiki/Apple_Watch) smartwatch, and the [Apple TV](https://en.wikipedia.org/wiki/Apple_TV) digital media player. Apple's consumer software includes the [macOS](https://en.wikipedia.org/wiki/MacOS" \o "MacOS) and [iOS](https://en.wikipedia.org/wiki/IOS) operating systems, the [iTunes](https://en.wikipedia.org/wiki/ITunes) media player, the [Safari](https://en.wikipedia.org/wiki/Safari_(web_browser)) web browser, and the [iLife](https://en.wikipedia.org/wiki/ILife" \o "ILife) and [iWork](https://en.wikipedia.org/wiki/IWork) creativity and productivity suites. Its online services include the [iTunes Store](https://en.wikipedia.org/wiki/ITunes_Store), the [iOS App Store](https://en.wikipedia.org/wiki/App_Store_(iOS)) and [Mac App Store](https://en.wikipedia.org/wiki/Mac_App_Store), [Apple Music](https://en.wikipedia.org/wiki/Apple_Music), and [iCloud](https://en.wikipedia.org/wiki/ICloud).

Apple was founded by [Steve Jobs](https://en.wikipedia.org/wiki/Steve_Jobs), [Steve Wozniak](https://en.wikipedia.org/wiki/Steve_Wozniak), and [Ronald Wayne](https://en.wikipedia.org/wiki/Ronald_Wayne) in April 1976 to develop and sell personal computers.[[6]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-6) It was incorporated as **Apple Computer, Inc.** in January 1977, and was renamed as Apple Inc. in January 2007 to reflect its shifted focus toward consumer electronics. Apple ([NASDAQ](https://en.wikipedia.org/wiki/NASDAQ): [AAPL](http://www.nasdaq.com/symbol/aapl)) joined the [Dow Jones Industrial Average](https://en.wikipedia.org/wiki/Dow_Jones_Industrial_Average) in March 2015.[[7]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-7)

Apple is the [world's largest information technology company](https://en.wikipedia.org/wiki/List_of_the_largest_information_technology_companies) by revenue, the world's largest technology company by [total assets](https://en.wikipedia.org/wiki/Asset),[[8]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-8) and the [world's second-largest mobile phone manufacturer](https://en.wikipedia.org/wiki/Mobile_phone#Manufacturers), by volume, after [Samsung](https://en.wikipedia.org/wiki/Samsung).[[9]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-mobile_phone_manufacturers-9) In November 2014, Apple became the first U.S. company to be valued at over [US$](https://en.wikipedia.org/wiki/United_States_dollar)700 billion in addition to being the [largest publicly traded corporation in the world by market capitalization](https://en.wikipedia.org/wiki/List_of_public_corporations_by_market_capitalization).[[10]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-10) The company employs 115,000 full-time employees as of July 2015[[4]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-employee_num-4)and maintains 478 [retail stores](https://en.wikipedia.org/wiki/Apple_Store) in seventeen countries as of March 2016.[[1]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-storenum-1) It operates the [online Apple Store](https://en.wikipedia.org/wiki/Apple_Store_(online)) and iTunes Store, the latter of which is the world's largest music retailer. Consumers use more than one billion Apple products worldwide as of March 2016.[[11]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-11)

Apple's worldwide annual revenue totaled $233 billion for the [fiscal year](https://en.wikipedia.org/wiki/Fiscal_year) ending in September 2015.[[3]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-FY_results-3) This revenue accounts for approximately 1.25% of the total [United States GDP](https://en.wikipedia.org/wiki/United_States_GDP).[[12]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-12) The company enjoys a high level of [brand loyalty](https://en.wikipedia.org/wiki/Brand_loyalty) and, according to [Interbrand](https://en.wikipedia.org/wiki/Interbrand" \o "Interbrand)'s annual Best Global Brands report, has been the world's most valuable brand for 4 years in a row,[[13]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-Interbrand2013-13)[[14]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-Interbrand2014-14)[[15]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-Interbrand2015-15) with a valuation in 2016 of $178.1 billion.[[16]](https://en.wikipedia.org/wiki/Apple_Inc.#cite_note-Interbrand2016-16) The corporation [receives significant criticism](https://en.wikipedia.org/wiki/Criticism_of_Apple_Inc.) regarding the labor practices of its contractors and its environmental and business practices, including the origins of source materials.

**International Business Machines Corporation** (commonly referred to as **IBM**) is an American [multinational](https://en.wikipedia.org/wiki/Multinational_corporation) [technology](https://en.wikipedia.org/wiki/Technology) company headquartered in [Armonk, New York](https://en.wikipedia.org/wiki/Armonk,_New_York), [United States](https://en.wikipedia.org/wiki/United_States), with operations in over 170 countries. The company originated in 1911 as the [Computing-Tabulating-Recording Company](https://en.wikipedia.org/wiki/Computing-Tabulating-Recording_Company) (CTR) and was renamed "International Business Machines" in 1924.

IBM manufactures and markets computer [hardware](https://en.wikipedia.org/wiki/Computer_hardware), [middleware](https://en.wikipedia.org/wiki/Middleware) and [software](https://en.wikipedia.org/wiki/Computer_software), and offers [hosting](https://en.wikipedia.org/wiki/Internet_hosting_service) and [consulting services](https://en.wikipedia.org/wiki/Consultant) in areas ranging from [mainframe computers](https://en.wikipedia.org/wiki/Mainframe_computer) to [nanotechnology](https://en.wikipedia.org/wiki/Nanotechnology). IBM is also a major research organization, holding the record for most [patents](https://en.wikipedia.org/wiki/Patents) generated by a business (as of 2017) for 24 consecutive years.[[5]](https://en.wikipedia.org/wiki/IBM#cite_note-patents-5) Inventions by IBM include the [automated teller machine](https://en.wikipedia.org/wiki/Automated_teller_machine) (ATM), the [floppy disk](https://en.wikipedia.org/wiki/Floppy_disk), the [hard disk drive](https://en.wikipedia.org/wiki/Hard_disk_drive), the [magnetic stripe card](https://en.wikipedia.org/wiki/Magnetic_stripe_card), the [relational database](https://en.wikipedia.org/wiki/Relational_model), the [SQL programming language](https://en.wikipedia.org/wiki/SQL), the [UPC barcode](https://en.wikipedia.org/wiki/Universal_Product_Code), and [dynamic random-access memory](https://en.wikipedia.org/wiki/Dynamic_random-access_memory) (DRAM).

IBM has continually shifted its business mix by exiting [commoditizing](https://en.wikipedia.org/wiki/Commoditization) [markets](https://en.wikipedia.org/wiki/Market_(economics)) and focusing on higher-value, more profitable markets. This includes [spinning off](https://en.wikipedia.org/wiki/Spin_out) printer manufacturer [Lexmark](https://en.wikipedia.org/wiki/Lexmark) in 1991 and selling off its [personal computer](https://en.wikipedia.org/wiki/Personal_computer) ([ThinkPad](https://en.wikipedia.org/wiki/ThinkPad)/[ThinkCentre](https://en.wikipedia.org/wiki/ThinkCentre" \o "ThinkCentre)) and [x86](https://en.wikipedia.org/wiki/X86)-based [server](https://en.wikipedia.org/wiki/IBM_System_x) businesses to [Lenovo](https://en.wikipedia.org/wiki/Lenovo) (2005 and 2014, respectively), and acquiring companies such as [PwC Consulting](https://en.wikipedia.org/wiki/PricewaterhouseCoopers) (2002), [SPSS](https://en.wikipedia.org/wiki/SPSS) (2009), and [The Weather Company](https://en.wikipedia.org/wiki/The_Weather_Company) (2016). Also in 2014, IBM announced that it would go "[fabless](https://en.wikipedia.org/wiki/Fabless_manufacturing)", continuing to design [semiconductors](https://en.wikipedia.org/wiki/Semiconductors), but offloading manufacturing to [GlobalFoundries](https://en.wikipedia.org/wiki/GlobalFoundries" \o "GlobalFoundries).

Nicknamed **Big Blue**, IBM is one of 30 companies included in the [Dow Jones Industrial Average](https://en.wikipedia.org/wiki/Dow_Jones_Industrial_Average) and one of the world's largest employers, with (as of 2016) nearly 380,000 employees. Known as "IBMers", IBM employees have been awarded five [Nobel Prizes](https://en.wikipedia.org/wiki/Nobel_Prize), six [Turing Awards](https://en.wikipedia.org/wiki/Turing_Award), ten [National Medals of Technology](https://en.wikipedia.org/wiki/National_Medal_of_Technology) and five [National Medals of Science](https://en.wikipedia.org/wiki/National_Medal_of_Science).