**HISTORY OF COMPUTERS**

1801: Joseph Marie Jacquard, a French merchant and inventor invents a loom that uses punched wooden cards to automatically weave fabric designs. Early computers would use similar punch cards.

1821: English mathematician Charles Babbage conceives of a steam-driven calculating machine that would be able to compute tables of numbers. Funded by the British government, the project, called the "Difference Engine" fails due to the lack of technology at the time, according to the University of Minnesota.

1848: Ada Lovelace, an English mathematician and the daughter of poet Lord Byron, writes the world's first computer program. According to Anna Siffert, a professor of theoretical mathematics at the University of Münster in Germany, Lovelace writes the first program while translating a paper on Babbage's Analytical Engine from French into English. "She also provides her own comments on the text. Her annotations, simply called "notes," turn out to be three times as long as the actual transcript," Siffert wrote in an article for The Max Planck Society. "Lovelace also adds a step-by-step description for computation of Bernoulli numbers with Babbage's machine — basically an algorithm — which, in effect, makes her the world's first computer programmer." Bernoulli numbers are a sequence of rational numbers often used in computation.

1890: Herman Hollerith designs a punch-card system to help calculate the 1890 U.S. Census. The machine saves the government several years of calculations, and the U.S. taxpayer approximately $5 million. Hollerith later establishes a company that will eventually become International Business Machines Corporation (IBM).

1936: Alan Turing, a British scientist and mathematician, presents the principle of a universal machine, later called the Turing machine, in a paper called "On Computable Numbers…" according to Chris Bernhardt's book "Turing's Vision" (The MIT Press, 2017). Turing machines are capable of computing anything that is computable. The central concept of the modern computer is based on his ideas. Turing is later involved in the development of the Turing-Welchman Bombe, an electro-mechanical device designed to decipher Nazi codes during World War II, according to the UK's National Museum of Computing.

1941: German inventor and engineer Konrad Zuse completes his Z3 machine, the world's earliest digital computer, according to Gerard O'Regan's book "A Brief History of Computing" (Springer, 2021). The machine was destroyed during a bombing raid on Berlin during World War II. Zuse fled the German capital after the defeat of Nazi Germany and later released the world's first commercial digital computer, the Z4, in 1950, according to O'Regan.

1945: Two professors at the University of Pennsylvania, John Mauchly and J. Presper Eckert, design and build the Electronic Numerical Integrator and Calculator (ENIAC). The machine is the first "automatic, general-purpose, electronic, decimal, digital computer," according to Edwin D. Reilly's book "Milestones in Computer Science and Information Technology" (Greenwood Press, 2003).

1947: William Shockley, John Bardeen and Walter Brattain of Bell Laboratories invent the transistor. They discover how to make an electric switch with solid materials and without the need for a vacuum.

1953: Grace Hopper develops the first computer language, which eventually becomes known as COBOL, which stands for COmmon, Business-Oriented Language according to the National Museum of American History. Hopper is later dubbed the "First Lady of Software" in her posthumous Presidential Medal of Freedom citation.

1954: John Backus and his team of programmers at IBM publish a paper describing their newly created FORTRAN programming language, an acronym for FORmula TRANslation, according to MIT.

1958: Jack Kilby and Robert Noyce unveil the integrated circuit, known as the computer chip. Kilby is later awarded the Nobel Prize in Physics for his work.

1968: Douglas Engelbart reveals a prototype of the modern computer at the Fall Joint Computer Conference, San Francisco. His presentation, called "A Research Center for Augmenting Human Intellect" includes a live demonstration of his computer, including a mouse and a graphical user interface (GUI), according to the Doug Engelbart Institute. This marks the development of the computer from a specialized machine for academics to a technology that is more accessible to the general public.

1971: A team of IBM engineers led by Alan Shugart invents the "floppy disk," enabling data to be shared among different computers.

1973: Robert Metcalfe, a member of the research staff for Xerox, develops Ethernet for connecting multiple computers and other hardware.

1975: The two childhood friends, Bill Gates and Paul Allen, form their own software company which is the Microsoft.

1976: Steve Jobs and Steve Wozniak co-found Apple Computer on April Fool's Day. They unveil Apple I, the first computer with a single-circuit board and ROM (Read Only Memory), according to MIT.

1983: The Apple Lisa, standing for "Local Integrated Software Architecture" but also the name of Steve Jobs' daughter, according to the National Museum of American History (NMAH), is the first personal computer to feature a GUI. The machine also includes a drop-down menu and icons.

1989: Tim Berners-Lee, a British researcher at the European Organization for Nuclear Research (CERN), submits his proposal for what would become the World Wide Web. His paper details his ideas for Hyper Text Markup Language (HTML), the building blocks of the Web.

1996: Sergey Brin and Larry Page develop the Google search engine at Stanford University.

2004: The Mozilla Corporation launches Mozilla Firefox 1.0. The Web browser is one of the first major challenges to Internet Explorer, owned by Microsoft. During its first five years, Firefox exceeded a billion downloads by users, according to the Web Design Museum.

2009: Microsoft launches Windows 7 on July 22. The new operating system features the ability to pin applications to the taskbar, scatter windows away by shaking another window, easy-to-access jumplists, easier previews of tiles and more, TechRadar reported.

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