

FREQUENTLY ASKED QUESTIONS ABOUT COMPUTER HISTORY

What is a computer?

The word computer comes from the Latin words *computus* (“a person who does mathematical calculations”) and *computare*, meaning “to determine by mathematical means,” and dates to at least the 1600s. At about that time, people were starting to make simple mechanical devices to help them calculate.

People can be computers, too. During the Great Depression in the 1930s, for example, hundreds of men and women were paid to calculate mathematical tables. These tables helped scientists and engineers do their work: if they needed to know the answer to a complicated mathematical problem, they could just look it up in a table, instead of having to calculate it.

As technology changed, the definition of “computer” also changed. In the 1940s, it became the term for a very specific kind of computing machine: one that was electronic, digital, and capable of keeping instructions and information in its memory—the “electronic digital stored program computer.”

Computers, as we currently know them, consist of different elements: a central processing unit (CPU) which allows the computer to perform its tasks; some form of memory to store programs and data; the ability to be programmed; “input” devices such as a keyboard, mouse, or touch screen that allow data and commands to be entered; and “output” devices such as printers and display screens that show the results after the computer has processed the data. The physical components are known as hardware, while computer code, or “software,” coordinates the hardware into doing useful work.

Who invented the computer?

So many of us use computers today that we cannot imagine life without them. But who invented the computer? The answer is more complicated than you might think.

Some of the earliest examples of computing devices are over 2000 years old, such as the Antikythera mechanism, from ancient Greece, and the Abacus, from China. We don’t know who invented these, but they were the first machines devised to perform very complex mathematical and scientific functions easily and accurately, so we consider them to be predecessors to today’s computers.

Charles Babbage might be called the father of modern computing. In the mid-1800s, he designed automatic calculating “engines” to eliminate the risk of mistakes in the mathematical tables that human computers calculated. This was a huge and expensive task, and he never actually built his engines. But his work led from mechanical arithmetic to an entirely new kind of automatic computation, and paved the way for modern computers.

In the mid-20th century, more than a dozen people contributed to the invention of what we now know as the electronic digital stored program computer—so many, in fact, that it is impossible to pinpoint a single “inventor.” All of them designed unique and remarkable machines, but with historical facts and timelines clouded by controversies and contradictions, debates about who should be given credit have raged for decades; there have even been lawsuits to try to answer the question. For a fascinating look into the issue, view our video at <http://www.computerhistory.org/revolution/birth-of-the-computer/4/91>

What was the first personal computer?

The idea of a “personal” computer, a machine that one person would use by him or herself, dates back to the 1950s. These early computers were huge—some as big as a desk or a refrigerator—but scientists and engineers loved them since they were easy to use and provided quick results. People who could not afford to buy or build computers for themselves, however, needed to share them. Even though they didn’t own their own machines, they did get to use them by themselves, making “personal” computing possible.

As time went on, more and more users in businesses, schools, research labs, and other institutions demanded more and more personal time on shared computers. This “timesharing” boom created a very profitable business: between 1964 and 1969, about 150 companies were formed to provide timesharing services.

In 1986, The Computer Museum in Boston held a contest to find a modern answer to the question of what was first. Surprisingly, the judges settled on the Kenbak-1, developed by engineer John Blankenbaker, as the first personal computer. The Kenbak-1 was designed in 1976, long before today’s tiny, powerful microprocessors; it had 256 bytes of memory and featured numerous small and medium-sized integrated circuits on a single circuit board. It was intended to be cheap and easy to program, even for beginners, and was marketed as “fun” and “educational” for families and students.

Note: While these are important milestones, the issue of who or what was “first” is rarely easy to answer. Keep in mind that with the history of technology there is rarely one single true inventor of anything.