

# When was the first computer invented?

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There is no easy answer to this question because of all the different classifications of computers. The first mechanical computer created by Charles Babbage doesn't really resemble what most would consider a computer today. Therefore, this document has been created with a listing of each of the computer firsts starting with the Difference Engine and leading up to the types of computers we use today. Keep in mind that early inventions that helped lead up to the computer such as the abacus, calculator, and tablet machines are not accounted for in this document.

## The word "computer" was first used

The word "computer" was first recorded as being used in 1613 and was originally used to describe a human who performed calculations or computations. The definition of a computer remained the same until the end of the 19th century when people began to realize machines never get tired and can perform calculations much faster and more accurately than any team of human computers ever could.

## First mechanical computer or automatic computing engine concept

In 1822, Charles Babbage conceptualized and began developing the Difference Engine, considered to be the first automatic computing engine that was capable of computing several sets of numbers and making hard copies of the results. Unfortunately, because of funding he was never able to complete a full-scale functional version of this machine. In June of 1991, the London Science Museum completed the Difference Engine No 2 for the bicentennial year of Babbage's birth and later completed the printing mechanism in 2000.

Later, in 1837 Charles Babbage proposed the first general mechanical computer, the **Analytical Engine**. The Analytical Engine contained an Arithmetic Logic Unit (ALU), basic flow control, and integrated memory and is



the first general-purpose computer concept. Unfortunately, because of funding issues this computer was also never built while Charles Babbage's was alive. In 1910, Henry Babbage, Charles Babbage's youngest son was able to complete a portion of this machine and was able to perform basic calculations.



## First programmable computer

The **Z1**, originally created by Germany's Konrad Zuse in his parents' living room in 1936 to 1938 and is considered to be the first electro-mechanical binary programmable (modern) computer and really the first functional computer.

## First concepts of what we consider a modern computer

The Turing machine was first proposed by Alan Turing in 1936 and became the foundation for theories about computing and computers. The machine was a device that printed symbols on paper tape in a manner that emulated a person following a series of logical instructions. Without these fundamentals, we wouldn't have the computers we use today.

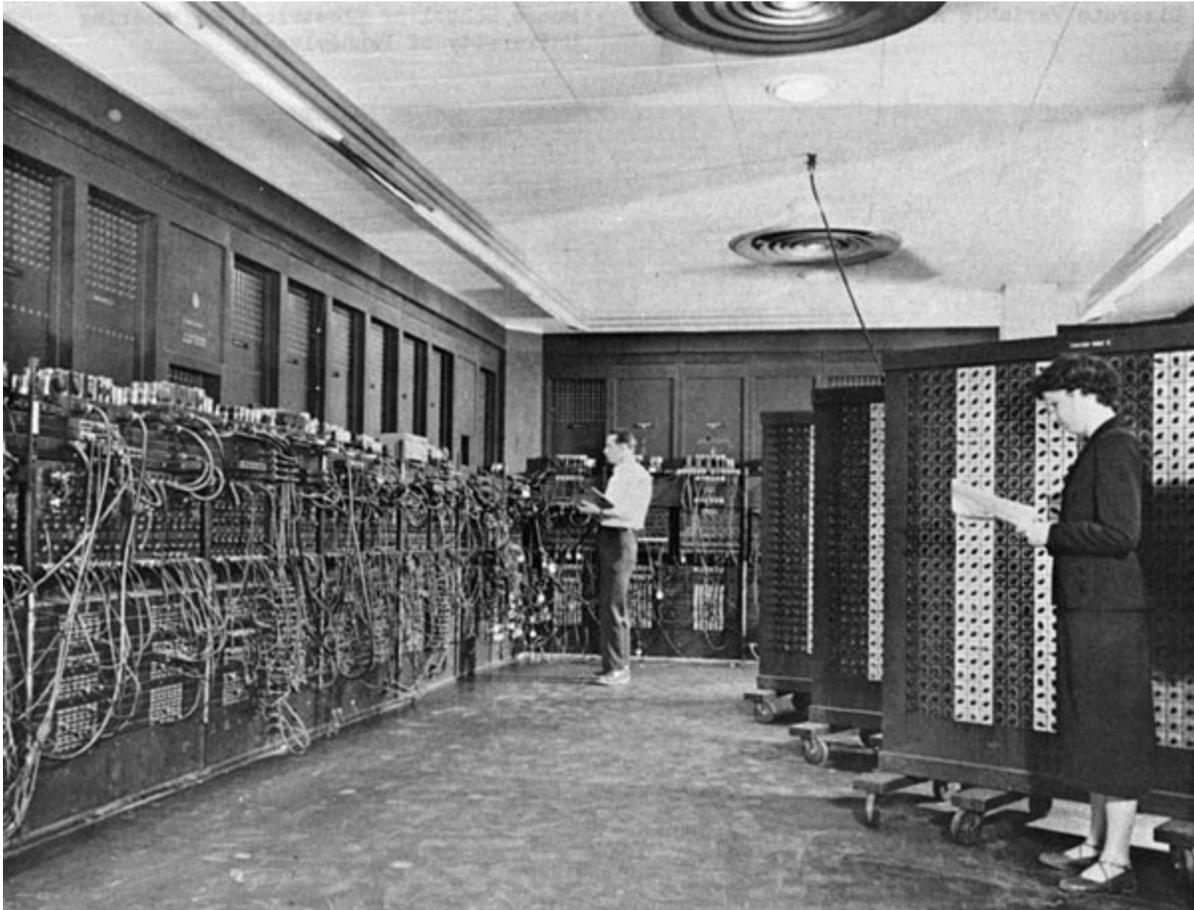
## The first electric programmable computer

The **Colossus** was the first electric programmable computer and was developed by Tommy Flowers and first demonstrated in December 1943. The Colossus was created to help the British code breakers read encrypted German messages.

## The first digital computer

Short for **Atanasoff-Berry Computer**, the **ABC** started being developed by Professor John Vincent Atanasoff and graduate student Cliff Berry in 1937 and continued to be developed until 1942 at the Iowa State College (now Iowa State University). The ABC was an electrical computer that used vacuum tubes for digital computation including binary math and Boolean logic and had no CPU. On October 19, 1973, the US Federal Judge Earl R. Larson signed his decision that the ENIAC patent by J. Presper Eckert and John Mauchly was invalid and named Atanasoff the inventor of the electronic digital computer.

The **ENIAC** was invented by J. Presper Eckert and John Mauchly at the University of Pennsylvania and began construction in 1943 and was not completed until 1946. It occupied about 1,800 square feet and used about 18,000 vacuum tubes, weighing almost 50 tons. Although the Judge ruled that the ABC computer was the first digital computer, many still consider the ENIAC to be the first digital computer because it was fully functional.



### The first stored program computer

The early British computer known as the **EDSAC** is considered to be the first stored program electronic computer. The computer performed its first calculation on May 6, 1949 and was the computer that ran the first graphical computer game, nicknamed "Baby".

### The first computer company

The first computer company was the **Electronic Controls Company** and was founded in 1949

by J. Presper Eckert and John Mauchly, the same individuals who helped create the ENIAC computer. The company was later renamed to EMCC or Eckert-Mauchly Computer Corporation and released a series of mainframe computers under the UNIVAC name.

## First stored program computer

First delivered to the United States Government in 1950, the **UNIVAC 1101** or **ERA 1101** is considered to be the first computer that was capable of storing and running a program from memory.

## First commercial computer

In 1942, Konrad Zuse begin working on the **Z4**, which later became the first commercial computer after being sold to Eduard Stiefel, a mathematician of the Swiss Federal Institute of Technology Zurich on July 12, 1950.

## The first PC (IBM compatible) computer

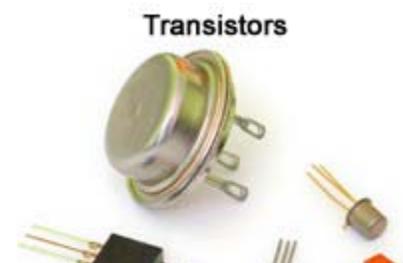
On April 7, 1953 IBM publicly introduced the **701**, its first electric computer and first mass produced computer. Later IBM introduced its first personal computer called the **IBM PC** in 1981. The computer was code named and still sometimes referred to as the **Acorn** and had a 8088 processor, 16 KB of memory, which was expandable to 256 and utilized MS-DOS.

## The first computer with RAM

MIT introduces the **Whirlwind machine** on March 8, 1955, a revolutionary computer that was the first digital computer with magnetic core RAM and real-time graphics.

## The first transistor computer

The TX-O (Transistorized Experimental computer) is the first transistorized computer to be demonstrated at the Massachusetts Institute of Technology in 1956.



## The first minicomputer

In 1960, Digital Equipment Corporation released its first of many PDP computers, the PDP-1.



## The first mass-market and desktop computer

In 1968, Hewlett Packard began marketing the first mass-marketed PC and the first desktop computer, the **HP 9100A**.

## The first workstation

Although it was never sold, the first workstation is considered to be the **Xerox Alto**, introduced in 1974. The computer was revolutionary for its time and included a fully functional computer, display, and mouse. The computer operated like many computers today utilizing windows, menus and icons as an interface to its operating system.

## The first microprocessor

Intel introduces the first microprocessor, the **Intel 4004** on November 15, 1971.

## The first personal computer

In 1975, Ed Roberts coined the term "personal computer" when he introduced the **Altair 8800**. Although the first personal computer is considered by many to be the **KENBAK-1**, which was first introduced for \$750 in 1971. The computer relied on a series of switches for inputting data and output data by turning on and off a series of lights.

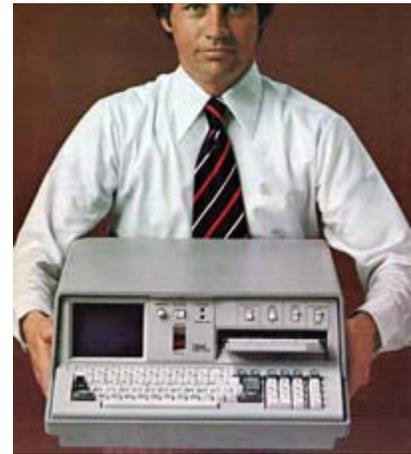
The **Micral** is considered to be the first commercial non-assembly computer. The computer used the Intel 8008 processor and sold for \$1,750 in 1973.

## The first laptop or portable computer

The **IBM 5100** is the first portable computer, which was released on September 1975. The computer weighed 55



pounds and had a five inch CRT display, tape drive, 1.9MHz PALM processor, and 64KB of RAM. In the picture is an ad of the IBM 5100 taken from a November 1975 issue of Scientific America.



The first truly portable computer or laptop is considered to be the **Osborne I**, which was released on April 1981 and developed by Adam Osborne. The Osborne I weighed 24.5 pounds, had a 5-inch display, 64 KB of memory, two 5 1/4" floppy drives, ran the CP/M 2.2 operating system, included a modem, and cost US\$179.

The IBM PC Division (PCD) later released the IBM portable in 1984, it's first portable computer that weighed in at 30 pounds. Later in 1986, IBM PCD announced it's first laptop computer, the **PC Convertible**, weighing 12 pounds. Finally, in 1994, IBM introduced the IBM ThinkPad 775CD, the first notebook with an integrated CD-ROM.

## The first Apple computer

Steve Wozniak designed the first Apple, known as the Apple I, in 1976.

## The first PC clone

The **Compaq Portable** is considered to be the first PC clone and was release in March 1983 by Compaq. The Compaq Portable was 100% compatible with IBM computers and was capable of running any software developed for IBM computers.

» See the below other major computer companies first for other IBM compatible computers

## The first multimedia computer

In 1992, Tandy Radio Shack becomes one of the first companies to release a computer based

on the MPC standard with its introduction of the M2500 XL/2 and M4020 SX computers.

## Other major computer company firsts

Below is a listing of some of the major computers companies first computers.

**Compaq** - In March 1983, Compaq released its first computer and the first 100% IBM compatible computer the "Compaq Portable."

**Dell** - In 1985, Dell introduced its first computer, the "Turbo PC."

**Hewlett Packard** - In 1966, Hewlett Packard released its first general computer, the "HP-2115."

**NEC** - In 1958, NEC builds its first computer the "NEAC 1101."

**Toshiba** - In 1954, Toshiba introduces its first computer, the "TAC" digital computer.