

Computer system

[Technology](#), [Computer](#)



Computer System Introduction & Definitions – Computer is an electronic device that is used to solve various problems according to a set of instructions given to it – A computer is a programmable machine that receives input, stores and manipulates data, and provides output in a useful format

Brief History of Computer – The first use of the word "computer" was recorded in 1613, referring to a person who carried out calculations, or computations, and word continued to be used in that sense until middle of 20th century – From end of 19th century onwards though, word began to take on its more familiar meaning, describing a machine that carries out computations – The history of computer development is often referred to in reference to different generations of computing devices – Each generation of computer is characterized by a major technological development that fundamentally changed way computers operate, resulting in increasingly smaller, cheaper, more powerful and more efficient and reliable devices

Computer Generations First Generation (1940-1956) – The first computers used vacuum tubes for circuitry and magnetic drums for memory, and were often enormous, taking up entire rooms – They were very expensive to operate and in addition to using a great deal of electricity, generated a lot of heat, which was often the cause of malfunctions – First generation computers relied on machine language, lowest-level programming language understood by computers, to perform operations, and they could only solve one problem at a time

Computer Generations First Generation (1940-1956) – Input was based on punched cards and paper tape, and output was displayed on printouts – The UNIVAC and ENIAC computers are examples of first generation computing devices – The UNIVAC was the first commercial

computer delivered to a business client, the U. S. Census Bureau in 1951

Computer Generations Second Generation (1956-1963) – Transistors

replaced vacuum tubes and ushered in the second generation of computers –

The transistor was invented in 1947 but did not see widespread use in

computers until the late 1950s – The transistor was far superior to the

vacuum tube, allowing computers to become smaller, faster, cheaper, more

energyefficient and more reliable than their first-generation predecessors –

Though the transistor still generated a great deal of heat that subjected the

computer to damage, it was a vast improvement over the vacuum tube

Computer Generations Second Generation (1956-1963) – Second-generation

computers still relied on punched cards for input and printouts for output –

Second-generation computers moved from cryptic binary machine language

to symbolic, or assembly, languages, which allowed programmers to specify

instructions in words – High-level programming languages were also being

developed at this time, such as early versions of COBOL and FORTRAN –

These were also the first computers that stored their instructions in their

memory, which moved from a magnetic drum to magnetic core technology.

Computer Generations Third Generation (1964 -1971) – The development of

the integrated circuit was the hallmark of the third generation of computers –

Transistors were miniaturized and placed on silicon chips, called

semiconductors, which drastically increased the speed and efficiency of

computers – Instead of punched cards and printouts, users interacted with

third generation computers through keyboards and monitors and interfaced

with an operating system – which allowed the device to run many different

applications at one time with a central program that monitored the memory

- Computers for the first time became accessible to a mass audience because they were smaller and cheaper than their predecessors. Computer Generations Fourth Generation (1971-Present) – The microprocessor brought fourth generation of computers, as thousands of integrated circuits were built onto a single silicon chip – What in the first generation filled an entire room could now fit in the palm of the hand. – The Intel 4004 chip, developed in 1971, located all the components of the computer from the central processing unit and memory to input/output controls on a single chip – In 1981 IBM introduced its first computer for the home user, and in 1984 Apple introduced the Macintosh Computer Generations Fourth Generation (1971-Present) – Microprocessors also moved out of the realm of desktop computers and into many areas of life as more and more everyday products began to use microprocessors. – As these small computers became more powerful, they could be linked together to form networks, which eventually led to the development of the Internet – Fourth generation computers also saw the development of GUIs, the mouse and handheld devices Computer Generations – Fifth Generation (Present and Beyond) – Fifth generation computing devices, based on artificial intelligence, are still in development, though there are some applications, such as voice recognition, that are being used today – The use of parallel processing and superconductors is helping to make artificial intelligence a reality – Quantum computation and molecular and nanotechnology will radically change the face of computers in years to come – The goal of fifth-generation computing is to develop devices that respond to natural language input and are capable of learning and self-organization Classification & Types of Computer – Supercomputer s... are

used to process very large amounts of information including processing information to predict hurricanes, satellite images and navigation, and process military war scenarios

Classification & Types of Computer – Mainframes ... are used by government and businesses to process very large amounts of information

Classification & Types of Computer – Mini - Computers... are similar to mainframes... they are used by business and government to process large amounts of information

Classification & Types of Computer – Personal Computers (PC) – – – – – are smaller and less powerful than the others. They are used in homes, schools, and small businesses. There are 3 main types of PCs

Desktop
Portable (Notebook/Laptop)
Hand -Held (Mobile devices/ cellphone, PDAs)

Classification & Types of Computer Desktop

Classification & Types of Computer Portable

Classification & Types of Computer Hand -Held

Computer Hardware – These are physical parts of computer – These are things that can be seen & touched – System unit, Mouse, Keyboard, Monitor

Computer Software – A set of computer instructions given to computer to solve problems – Stored inside computer memory – Can not be touched or seen