

DELHI PUBLIC SCHOOL, JAMMU
FOUNDATION WORKSHEET
SESSION 2021-2022

Topic : Evolution of Computers

Class :IV

Subject : Computer

Introduction

Before learning about evolution of computers, first let us know the definition of a computer. The term computer is derived from the word 'compute' which means calculate but it is not meant for calculation only. It is a versatile device which means it can handle different applications at the same time.

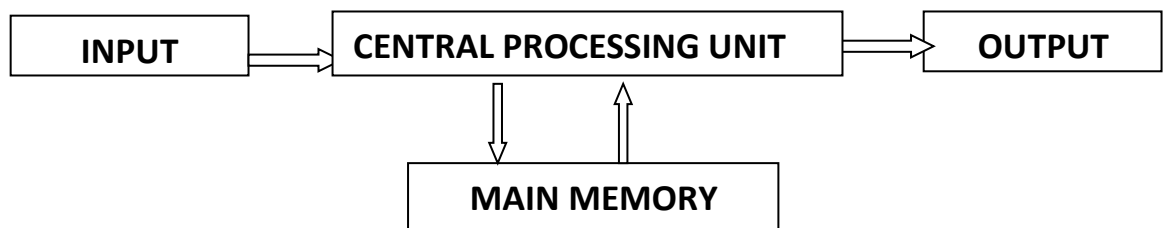
Computer

- Computer is an amazing machine that can do different types of work.
- The word Computer is derive from 'compute', which means to calculate.
- A computer is a group of electronic devices which is used to process data.
- Computer is a machine that works with the data and instructions given by the user. It works on IPO cycle.
- A Computer is one of the greatest inventions of mankind. It works at a very high speed .
- Charles Babbage is known as the 'Father of Computer'.

A computer performs the following functions:

- Input –Accepts data through Keyboard and Mouse
- Processing-Process data through CPU
- Output-Produces result/output through Monitor
- Storage-Stores result through Hard disk

Memory is the storage brain of computer which holds the data during processing.



Applications of Computers

Now a days computer are being used in nearly every field of life. For example:-

- Banks
- Education
- Hospitals
- Entertainment
- Schools/Colleges

History of computer

Do you know how computer came into existence? Actually the computers we used today are different from earlier devices which are used for only calculations. Let's discuss about the history of computers step by step.

CALCULATING DEVICES

1. Abacus

Many centuries ago when man started to count the numbers, he thought of a device which can trace the numbers and thus came the existence of ABACUS. It was the first counting device which was developed in China more than 3000 years ago. This device basically consists of a rectangular wooden frame and beads. The frame contains horizontal rods and the beads which have holes are passed through the rods. Counting was done by moving the beads from one end of the frame to the other. Actually the frame is divided into two parts named as Heaven and Earth. Heaven has 2 beads while Earth has 5 beads. It is used for addition, subtraction, multiplication and division.

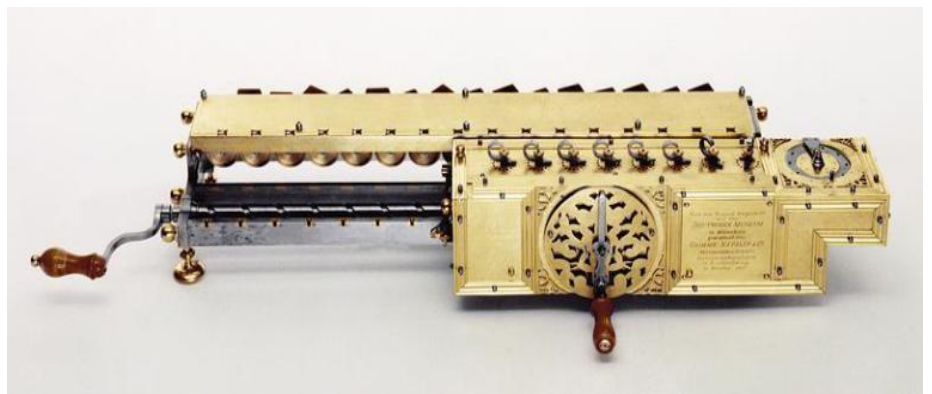
2. Pascaline Adding Machine

It is the first mechanical calculator invented by famous French mathematician Blaise Pascal at the age of 19 years. It was invented in the year 1642. It used gears, wheels and dials. It was the first device with an ability to perform additions and subtractions on whole numbers. Numbers were displayed rotating the wheels.



3. Leibniz Calculator

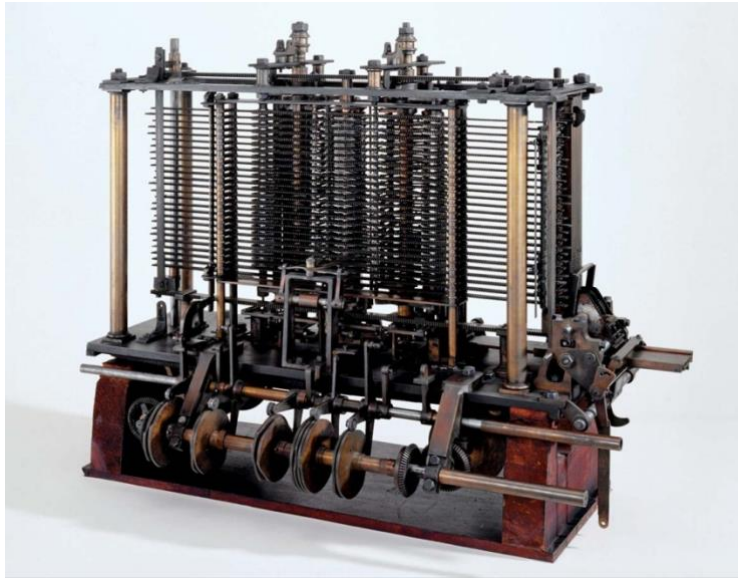
In 1672, a mathematician, Gottfried Wilhelm Leibniz invented the digital mechanical calculator called 'Step Reckoner'. It was the first calculator which could perform various calculation based on multiplication and division as well. It is also used for finding square roots.



4. Charles Babbage's Analytical Engine

Charles Babbage, is known as the 'Father of the Computers'. In 1822 a mathematician, Charles Babbage developed a steam driven calculating machine, that was the size of a room, which he called the Difference Engine. But even after working on this project for 10 years, this machine never became a reality.

In 1833, he invented a machine called the Analytical Engine, the first ever working model of a mechanical computer, a fully program controlled machine.



5. Lady Ada Lovelace

Lady Ada Lovelace was a famous English mathematician and is well known for her work on Analytical Engine. She is the first computer programmer who suggested binary data instead of decimal number system



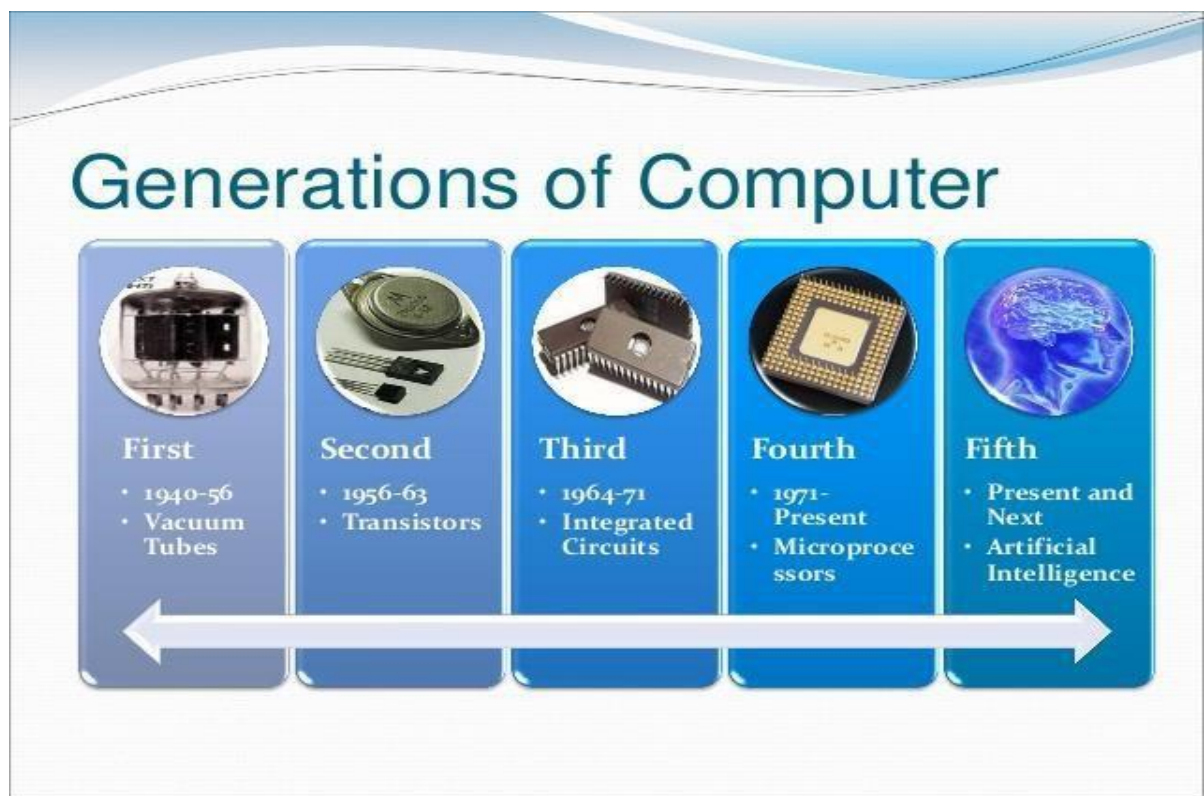
6. Dr. Herman Hollerith

Herman Hollerith, an army engineer, built a machine called the **Tabulating Machine** in 1890. The machine read and stored data from punched cards.

After the success of this machine, Hollerith formed a **Computing Tabulating Recording Company** to sell his machine. Later in 1924, his company became a part of **International Business Machines Corporation**, today popularly known as IBM.



Generations Of Computers



Features of First Generation Computer

- *Huge in size
- *Very expensive
- * Made up of vacuum tubes
- * Machine language is used.

Features of Second Generation Computer

- * Made up of transistors
- *Magnetic tapes were used to store data
- *Small in size and less expensive
- *Faster and reliable

Features of Third Generation Computer

- *These computers were made of ICs.
- *The use of the ICs reduced the size and increased the speed of the computers.
- * They are more affordable and dependable.

Features of Fourth Generation Computer

- *VLSI called microprocessor invented.
- *Small in size and could be placed on an office table
- * Hard disk to store data
- *Introduction of GUI operating system.

Features of Fifth Generation Computer

- *Will use artificial intelligence
- *Improved size, cost, speed and performance
- * New versions of GUI operating systems are developed

Test your Knowledge

Multiple Choice Questions:

1. The era of first generation computers was _____.
a. 1920-1936 b. 1940-1956 c. 1950-1958
2. Tabulating machine is developed by _____.
a. Charles Babbage b. Herman Hollerith c. Edward
3. Integrated Circuits are used in _____ generations.
a. First b. Second c. Third
4. _____ Technology was used in second generation of computers.
a. Vacuum tubes b. Transistors c. Integrated circuits
5. _____ Language was used in first generation of computers.
a. Cobol b. Machine c. RDBMS

Fill in the Blanks :

6. _____ is known as the 'Father of the Computers'
7. _____ invented the first mechanical calculator – Pasline.
8. _____ is the world's fastest super computer.
9. The first general purpose electronic computer was _____
10. Analytical engine was invented in _____

Very Short Questions:

11. Name the first mechanical computer.
12. Who is the first programmer?
13. Which technology is used in fourth generation?
14. In which year Difference engine is invented?
15. What is the full form of IBM?

Short Questions:

16. What is computer?
17. Write any three features of fourth generation computers.
18. What are the applications of computer?

Long Questions:

19. Write a short note on the device- Abacus.
20. Describe the functioning of computer.