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DATE :19-4-21
SESSION : 2
CLASS : V
SUBJECT : COMPUTER
CHAPTER NUMBER:1
CHAPTER NAME :EVOLUTION OF COMPUTER
SUBTOPIC :EARLY IT INVENTORS, ENIAC, UNIVAC I, GENERATION OF COMPUTERS

LEARNING OBJECTIVE :

To provide knowledge about different generation of computers and their features.

300-BC ABACUS

- Abacus was the first mechanical device used for calculations. It was developed in China.
- It was made up of a wooden frame with rods, each having beads.
- The frame was divided into two parts – Heaven and Earth.
- Each rod in Heaven has 2 beds and each rod in Earth had 5 beds.
- Abacus was used for addition, subtraction, multiplication, and division.

PASCAL'S ADDING MACHINE

•Blaise Pascal, a French mathematician, invented an adding machine called Pascal's Calculator, at the age of 19, in the year 1642.

• It is used gears, wheels, and dials.

• On this machine, numbers were displayed by rotating the wheels, it was capable of •performing addition and subtraction.

• The gear principle was further employed in many mechanical calculators, Taxi metre is a •perfect example of a mechanical calculator.

LEIBNIZ CALCULATOR

•Leibniz, the famous German mathematician improved on the Pascal's machine in 1671 to make the Leibniz calculator. It was a mechanical device.

• Apart from performing addition and subtraction,From here you can type content.

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EARLY IT INVENTORS

CHARLES BABBAGE

Charles Babbage, a British mathematician, is considered as the Father of Computers.

He invented a working model of the mechanical computer called the Difference engine

in 1822 and the Analytical engine in 1833.

The Analytical Engine had five units – Input, Output, Store, Mill, and Control.

These units worked like the modern computer. All the computers that are used now a

days, are based on it.

AUGUSTA ADA LOVELACE

• Lady Augusta Ada Lovelace, was an English mathematician and writer. She is chiefly known for her work on Charles Babbage's Analytical engine.

• She is considered as the First Programmer who suggested Binary Data storage (0 and 1) instead of decimal number system.

GEORGE BOOLE

• George Boole was an English mathematician.

• He linked them with the binary number system and represented positive results by 1 and the negative ones by 0.

• This theory of Boolean Logic became the fundamental principle for the design of computer circuitry.

DR HERMAN HOLLERITH

- Herman Hollerith, an American statistician, invented the Tabulating machine.
- This machine was capable of reading data, processing it, and giving the desired output.
- The input in this machine was given through punched cards.
- These punched cards were used to record and store data or information.

JOHN VON NEUMANN

- A modern type of computer came into existence with john von Neumann's development of software, writing in binary code.
- It was John von Neumann who started the practice of storing data and instructions in binary code, in the memory. Neumann joined hands with Presper Eckert (American electrical engineer) andJohn Mauchly (American physicist) in a consulting role and built EDVAC using binary code in 1950.
- EDVAC's concept of storing different programs on punched cards led to the advancement of computers that we know today.

HOWARD AIKEN

- Howard Aiken was a primary engineer in IBM.
- He developed the first automatic sequence-controlled calculator, Mark I in 1944.
- This machine was capable executing long computations automatically.

ENIAC

Electronic Numerical Integrator and Computer (ENIAC), the first general purpose electronic digital computer was invented by John Mauchly and J. Presper Eckert in 1946.

It consisted of 18,000 vacuum tubes and was 1000 times faster than Mark I.

It could add two large numbers in 200 microseconds.

UNIVAC I

Universal Automatic Computer I (UNIVAC I) was the world's first commercially available computer, designed by J. Presper Eckert and John Mauchly in 1951.
It was the first computer to handle both numeric and text data. It was also the first computer that was equipped with magnetic tape unit. It used buffer memory.

GENERATIONS OF COMPUTERS

The evolution of the present day computer can be classified into generations of computers.

Generation/ Period	Data Input	Data Output	External Storage	Language	Examples
1st 1940 – 1956	Punched Cards and Paper Tapes	Printouts	Magnetic Tapes	Machine, Assembly	UNIVAC, ENIAC, EDVAC
2nd 1956-1963	Punched Cards and Paper tapes	Printouts	Magnetic Tapes	Fortran, Cobol, Basic, PL/1	IBM1400 and 700 series IBM 350
3rd 1964-1971	Keyboard	Monitor	Magnetic Disks	Sophisticated OS were used, Pascal, Fortran, Cobol, RPG	IBM System-360 Apple 1, Altair
4th 1972-Present	Keyboard, Mouse, Scanner etc.	Monitor, Printers, Speakers	Magnetic disks with higher capacity	Use of special software for maintaining large database RDBMS, C++ in 1985	CRAY ½ Apple II VAX 9000

LEARNING OUTCOME:

Students will get knowledge about different generation of computers .

THANKING YOU

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