History of Computer/कम्प्यूटर का इतिहास

Computer :-

Common operating machine purposely used for technological and educational research.

World's first calculating device/विश्व का पहला गड़ना यन्त्र

– Abacus/अवेकस - 2300 BC

Abundant Beards Addition calculation utility system

- **Charles Babbage/चार्ल्स बैबेज**

  Father of computer/कम्प्यूटर का जनक)

  1822 :- Ist Invention - प्रथम आविष्कार

  – Difference Engine/डिफ्रेन्स इंजन

  (A mechanical machine to do complex mathematical calenlotion)

  1837 :- Analytical Engine/एनालिटिकल इंजन

  It was designed to calculate upto 20 decimal places

- **Lady Augusta Ada lovelace/लेडी अगस्ता अड़ा लवलेस**

  1842 :-

  She convinced Babbage to use Binary concept is his Analitical Engine

  बेबेज को अपने इंजन में बाइनरी अवधारणा का उपयोग करने के लिए राजी किया।

  - She wrote different type of program

    इन्होंने विभिन्न प्रोग्राम लिखे

  - Ist computer programmer/प्रथम कम्प्यूटर प्रोग्रामर
  - (Daughter of lord Byron)

- **John-Vohn-Neumann/जॉन, वोन न्यूमैन**

  1945 :-

  He developed the concept of storing program and data in the memory of computer.

  इन्होंने मेमोरी में प्रोग्राम और डाटा स्टोर करने की अवधारणा विकसित की।

  - (Basic Architect of computer)

- **Dr. Herman Hollerith/(डॉ. हरमन होलेरिथ) – 1890**
  - He was the first person to use punch cards in tabulating machine.

    यह पंच कार्ड का प्रयोग करने वाले प्रथम व्यक्ति थे।

- **Ist Electo-Mechanical Computer**

  विश्व का पहला इलेक्ट्रो-मेकैमिकल कम्प्यूटर

Mark-1
⇩
Howard Aiken

- **Ist Electronic Computer of the world**
  विश्व का पहला इलेक्ट्रानिक कम्प्यूटर
  ENIAC :- Electronic Numerical Integrator & Computer
  Developer/आविस्कारक :-
  John-Mauchley/जॉन मौचली
  J. Presper/जे. प्रेस्पर
- **Ist super Computer of the world/विश्व का पहला सुपर कम्प्यूटर**
  — CRAY- I
  Developer/आविस्कारक
  — SEYMOUR CRAY
  Speed - **(Flops)** Floating point Operation per second
- **Ist super Computer of India/भारत का प्रथम सुपर कम्प्यूटर**
  — Param - 8000/परम-8000
  Developer/आविस्कारक
  — Professor Vijay Bhatkar
  Param - Parallel Machine
  Developed by :- [CDAC]
  Centre for development of advance computing.
- **Latest super computer of India/भारत का सबसे आधुनिक सुपर कम्प्यूटर**
  — Param Ananta
  — IIT Gandh-Nagar
- **Fastest Super computer of India/भारत का सबसे तेज सुपर कम्प्यूटर**
  — Param Siddhi/परम सिद्धी
  Speed - 6.5 Petaflops
  Ranked - 63rd/500
- **Fastest super Computer of World/विश्व का सबसे तेज सुपर कम्प्यूटर**
  — "Frontier" - U.S.A.
  Speed - 1102 Petaflops

2nd - Japan – "Fugakul/फुगाकु – 442 Petaflops
3rd - Finland – Lumi/लुमी – 309 Petoflops
4th - Zfaly – Leonardo – 174 Petoflops

Generations of Computer/कम्प्यूटर की पीढ़ियाँ

1. First Generation/प्रथम पीढ़ी (1942 - 1955) :-

Speed mini Second

(i) They used vacume tube as their Main electronic component.

Language low level

Batch processing operating system were used

(ii) They were large in size slow in processing and required large room for installation.

(iii) Magnetic Drums were used for memory had very less storage capacity (Bytes)

(iv) Power consumption was very high and produces lots of heat.

(v) They were hot so accurate and reliable.

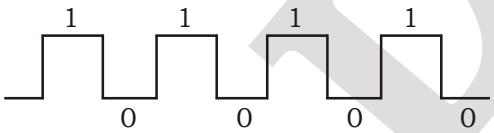
(vi) They used machine level language for programming

(vii) They were very expensive

Application - Record Keeping

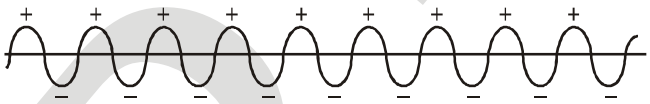
Example - Mark-1

ENIAC, EDUAC, UNIVAC FBM-70, IBM-650

- **Computer understand voltage and current:-**
- **Voltage :-** 

Digital Signal

In semiconductor these type of signals flows.

- **Current :-** 
Analog Signal

In conductor these of signal flows.

- **Characteristics of computer :-**
  (i) Speed
  (ii) Accuracy
  (iii) High storage capacity
  (iv) Versatility
  (v) Diligence
  (vi) No. I.Q

2. Second Generation (1955 - 64) :-

Transistor was introduced at the place of vacume tube

- **Developer of Transistor**
  (i) John Bardeen
  (ii) William Shockely Bellcas

- It was made of [*Germanium semiconductor*] Material rather than glass.
- Transistor was *10 Times Faster* than *Vacume tube* and consume 10 Times less Energy
- They were more reliable because they had no part like filament that could burst out.
- It uses *Magnetic Core* as a primary storage.
- Fortran & Cobol high level languages were introduced.

  Formula Translation *Common Business oriented language*
- Example - IBM-1401
- Multiprogramming Operating System
- Assembly Language Ex. IBM-1620 [CDC-3600] [IBM-1401] IBM-7094

3. Third Generation (1964 - 75) :-

- I.C. was Introduced (Integrated circuit)

  Developer of I.C. -

  (i) J.S.C. Kilby

  (ii) Robert Noyce
- Magnetic Tape was used for storage
- Smaller in size, better performance and Reliable.
- Less Prove to hardware failure.
- Time sharing and remote processing

  Real Time Operating System
- I.C. is also known as L.S.I (Large scale Integration) More than 10000 component were combined on a single chip.
- C Language was introduced in 3rd Gen.

  Developer of C = "DENIS Ritche"
- Example - IBM-360 = Pascal Basic

  Honeywell 6000 = PDP-II

4. Fourth Generation (1975 - 89) :-

- Microprocessor was introduced in 4th Generation)

  (Intel-4004)
- V.L.S.I. (Very Large Scale Integration)
- High storage capacity (H:D)
- Now P.C. were smaller and Cheaper.
- High Level programming Language were introduced (C, He)

Character, User Interface

G.U.I

- Graphical user Interface was introduced.
- Networking was introduced
- Exp. Apple-II, IBM-4341, De
- Network Distributed Operating System

5. Fifth Generation (1989 - Present) :-

- Microprocessors were known as (U.L.S.I) Ultra-large scale Integration
- Compact, Portable, High Storage Capacity.
- User friendly operating system
- More-powerful applications.
- More reliable and less prone to Hardware failure.

Developer of A.I. → *John - McCarthy*

Computer is divided into two parks -

Hardware	**Software**
• It is actual Machinery	• It is a collection of programs
• It is tangible	• It is intangible
• It is degradable	• It is not degradable