SNS COLLEGE OF TECHNOLOGY

Coimbatore-35

DEPARTMENT OF INFORMATION TECHNOLOGY

23CST101 - PROBLEM SOLVING AND C PROGRAMMING

I YEAR I SEM

UNIT I-INTRODUCTION TO PROBLEM SOLVING TECHNIQUES

TOPIC-FUNDAMENTALS,COMPUTER HARDWARE,COMPUTER SOFTWARE

FUNDAMENTALS

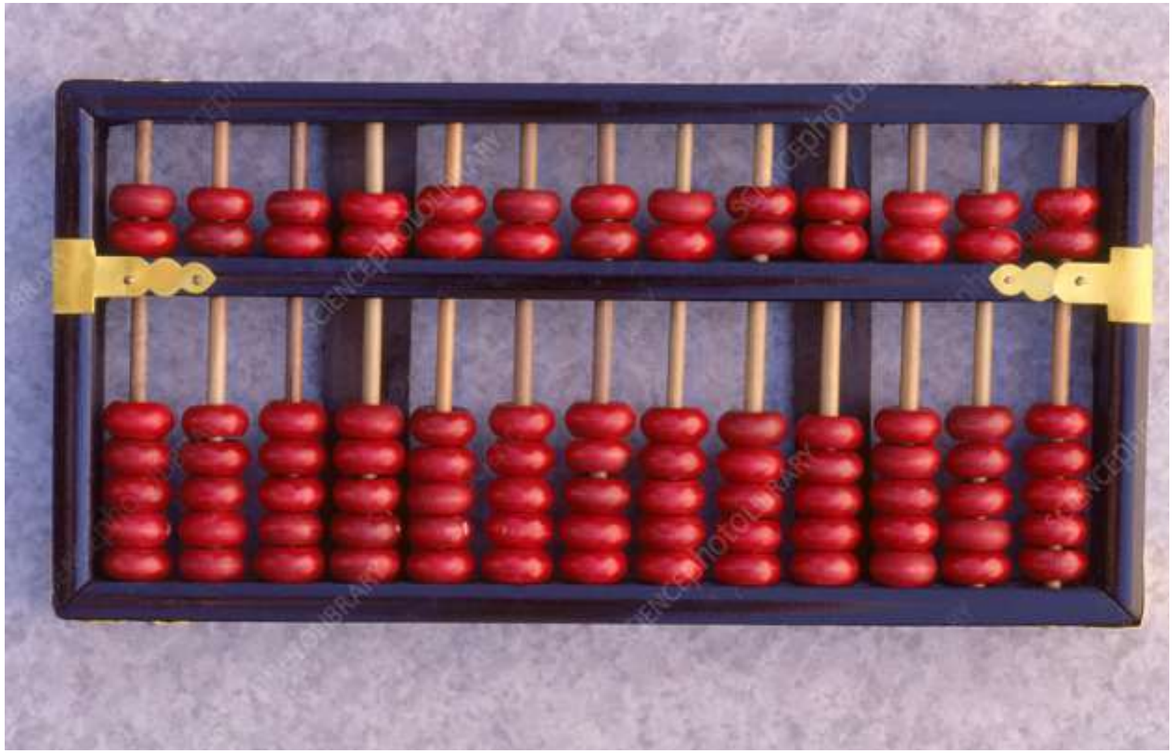
COMPUTERS- “Compute”
Electronic device -takes data process output
Cycle - “input-process-output cycle”
Electronic device-Hardware
Set of instructions-Software


Input
(Data and Instructions)
Process
(As per Instructions)
Output
(Information)

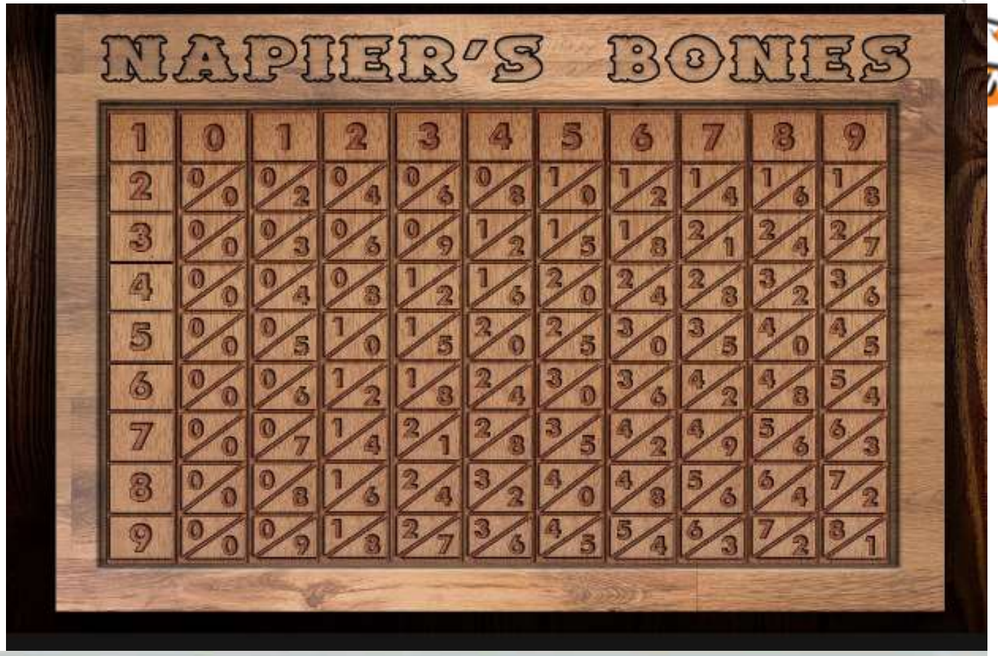
- Numerous Characteristics
- Application Areas

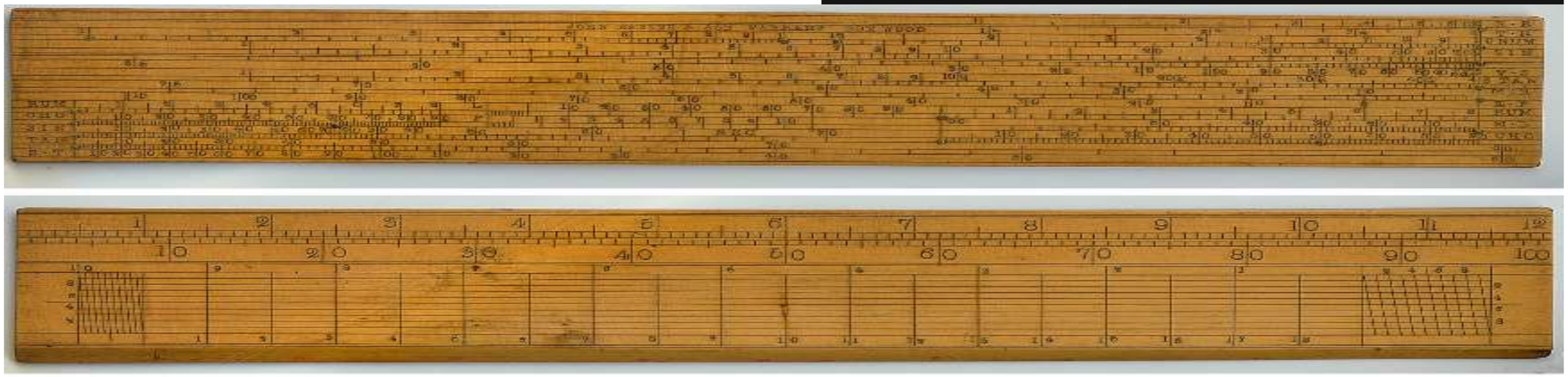
HISTORY OF COMPUTERS

- Babylonians,Chinese and Egyptians-numerical methods for survey of lands and collection of taxes-3000 BC
- Chinese-Abacus

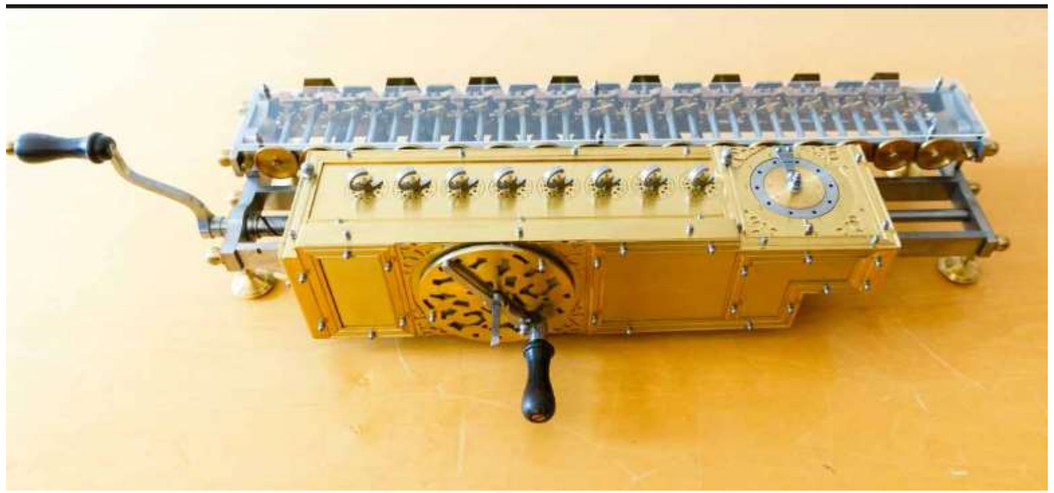


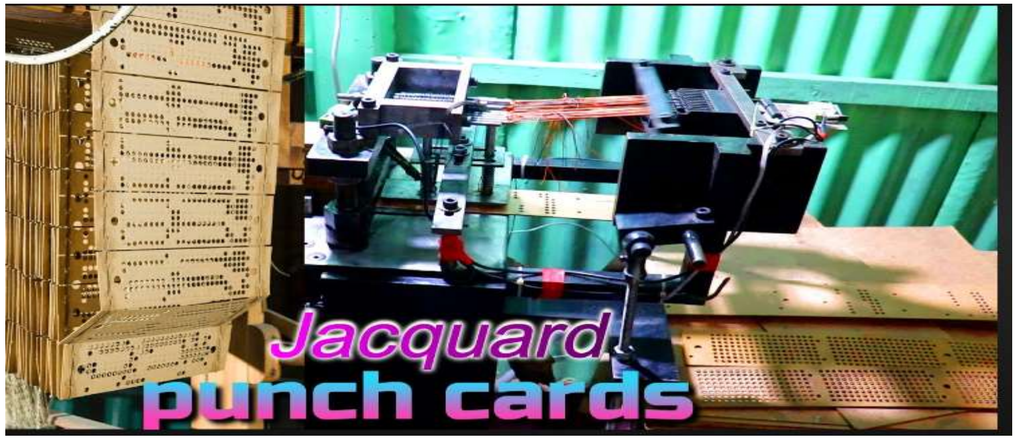
- Decimal Number-India 800 AD
- Logarithm-John Napier-1614
  - Napier Bones-Multiplication
- Edmund Gunter-1620-Slide Rule



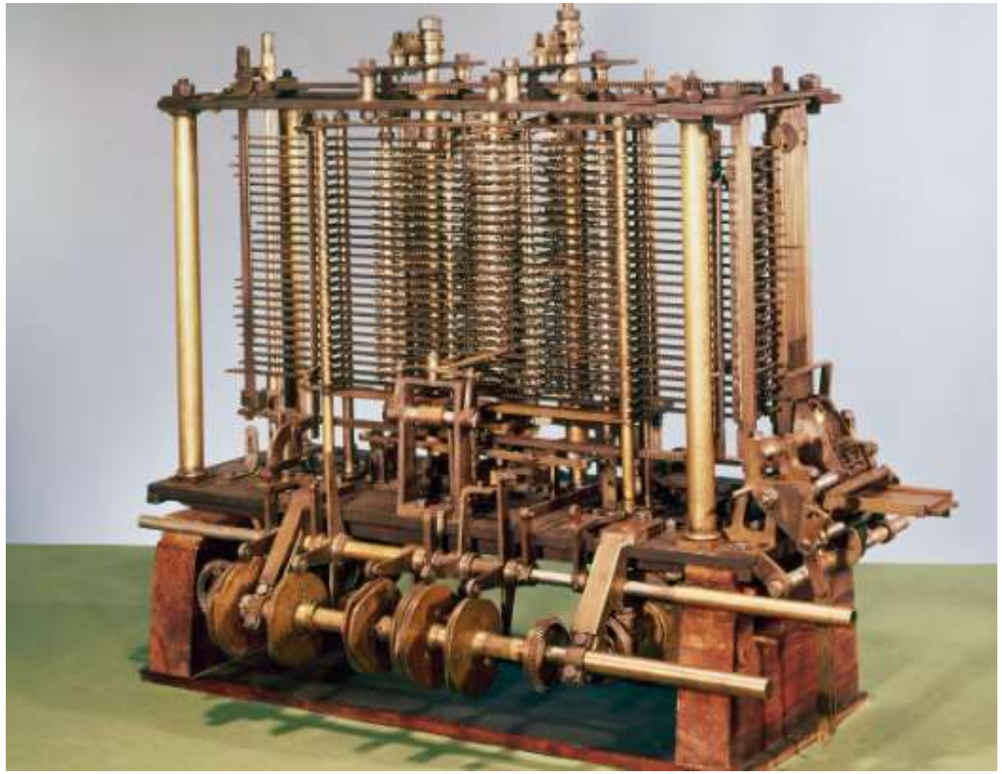


- 1632-William Oughtred improved Slide Rule
- Electronic Calculators-1960’s
- First Accounting Machine-Pascaline-Blaise Pascal-1642
- Leibnitz Calculator-Gottfried Wilhelm von Leibnitz-1671.
- Joseph Marie Jacquard-Punched Cards





- 1834-Charles Babbage -Analytical Engine-Father of Modern Computer
- Lady Ada Lovelace-First Computer Programmer
- ENIAC-Electronic Numerical Integrator and Calculator-Vaccum Tubes-Electronic digital computer



- Stored Program-John Van Neuman
- EDSAC -Electronic Delay Storage Automatic Calculator-1940’s
- EDVAC-Electronic Discrete Variable Automatic Computer-1940’s
- UNIVAC-Universal Automatic Computer-1951-Bureau of Census,USA

Generations of Computers

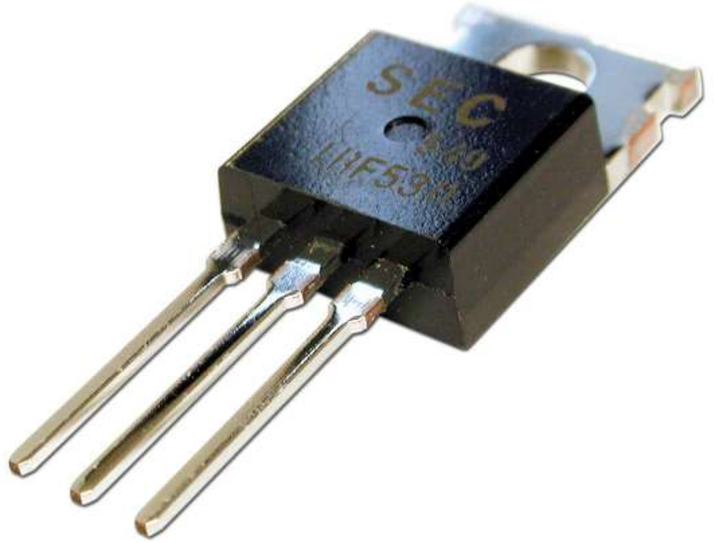
- First Generation (1940-1956)
- Second Generation(1956-1963)
- Third Generation(1964-1971)
- Fourth Generation(1971)
- Fifth Generation(1980’s)

First- Generation Computers

- Vaccum Tubes-Circuitry
- Magnetic Drum-Memory
- Glass-used filaments to generate electrons
- Used to amplify electronic signals
- milli second-Fastest
- Size-Entire room
- consume electricity,generated lot of heat
- Machine Language
- Eg.ENIAC,EDVAC,UNIVAC

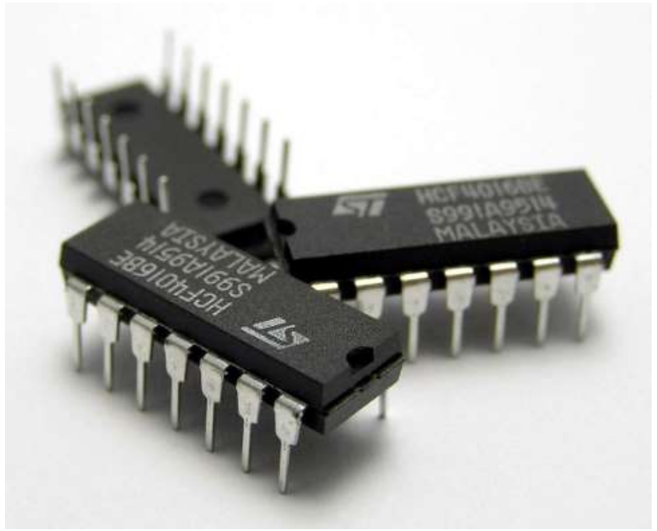
SECOND GENERATION COMPUTERS

- Transistors
- 1947-John Bardeen,William Shockley and Walter Brattain
- Assembly Language,COBOL and FORTRAN
- Stored Program Concept
- Eg. IBM 1620,PDP8,CDC1604



THIRD GENERATION COMPUTERS

- Integrated Circuits-Jack Kilby 1958
- IC SIlicon Chip
- IBM 370,PDP 11 and CDC 7600



FOURTH GENERATION COMPUTERS

- LSI and VLSI
- Microprocessor
- Semiconductor memories instead of Magnetic memor
- LAN,WAN
- MS DOS and MS Windows
- Personal Computer (PC)
- Graphical User Interface(GUI)
- Intel 4004 chip,IBM-1981,Apple-Macintosh

FIFTH GENERATION COMPUTERS

- ULSI
- CD
- Intel Pentium microprocessor

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