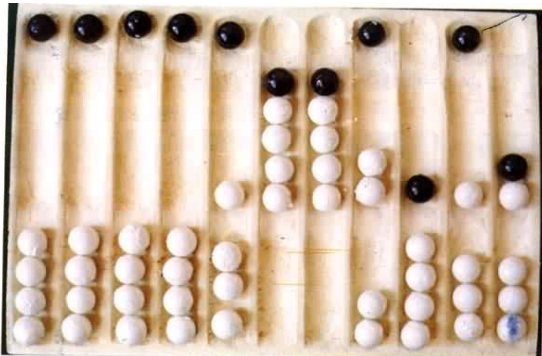# History of Computers

Tally Sticks

- A tally stick was an ancient memory aid device to record and document numbers, quantities, or even messages.
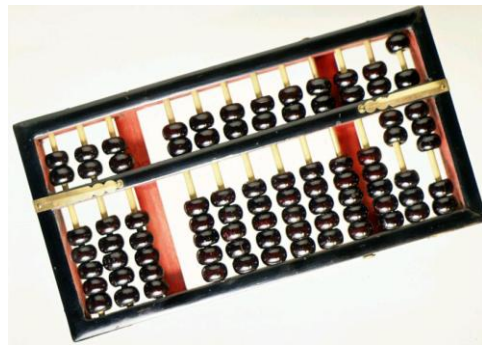

Tally Stick

Abacus

- An abacus is a mechanical device used to aid an individual in performing mathematical calculations.
- The abacus was invented in Babylonia in 2400 B.C.
- The abacus in the form we are most familiar with was first used in China in around 500 B.C.
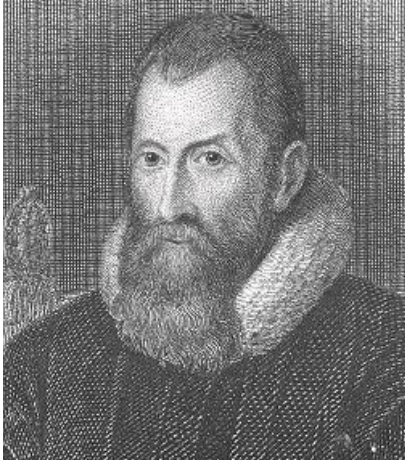- It used to perform basic arithmetic operations.

Earlier Abacus

Modern Abacus

Napier's Bones

- Invented by John Napier in 1614.
- Allowed the operator to multiply, divide and calculate square and cube roots by moving the rods around and placing them in specially constructed boards.

John Napier

Napier's Bones

Slide Rule

- Invented by William Oughtred in1622.
- Is based on Napier's ideas about logarithms.
- Used primarily for
    - multiplication
    - division
    - roots
    - logarithms
    - Trigonometry
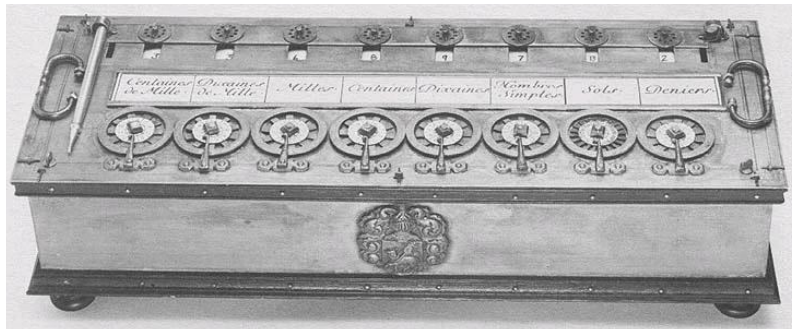- Not normally used for addition or subtraction.

William Oughtred

Slide Rule

Pascaline

- Invented by Blaise Pascal in 1642.
- It was its limitation to addition and subtraction.
- It is too expensive.

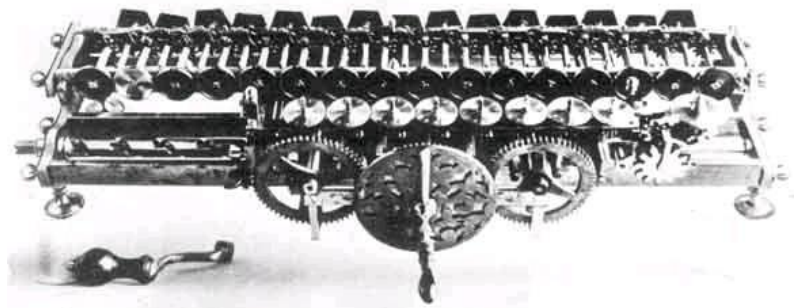Blaise Pascal   Pascaline

Stepped Reckoner

- Invented by Gottfried Wilhelm Leibniz in 1672.
- The machine that can add, subtract, multiply and divide automatically.
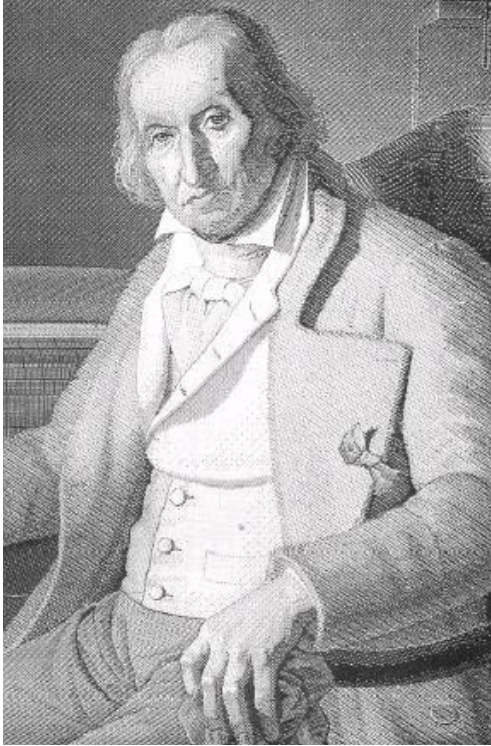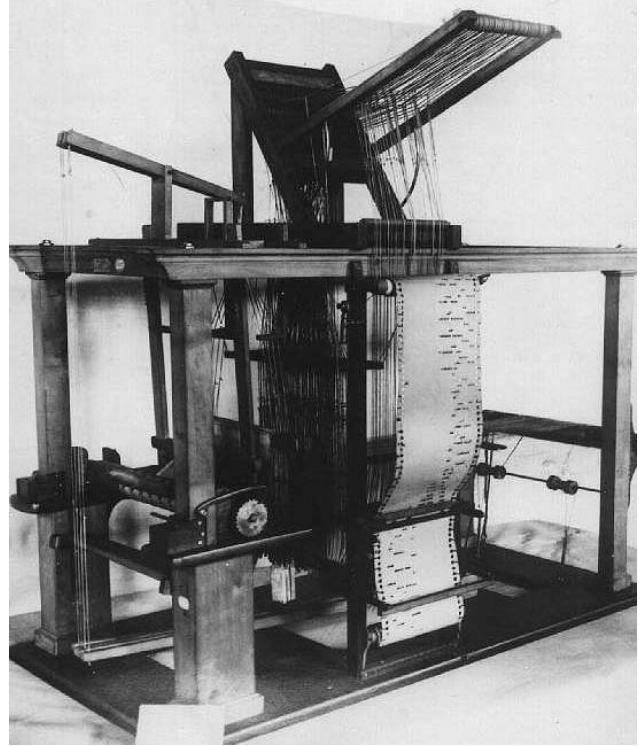

Gottfried Wilhelm Leibniz   Stepped Reckoner

Jacquard Loom

- The Jacquard loom is a mechanical loom, invented by Joseph-Marie Jacquard in 1881.
- It an automatic loom controlled by punched cards.

Joseph-Marie Jacquard

Jacquard Loom

Arithmometer

- A mechanical calculator invented by Thomas de Colmarin 1820,
- The first reliable, useful and commercially successful calculating machine.
- The machine could perform the four basic mathematic functions.
- The first mass-produced calculating machine.

Thomas de Colmarin
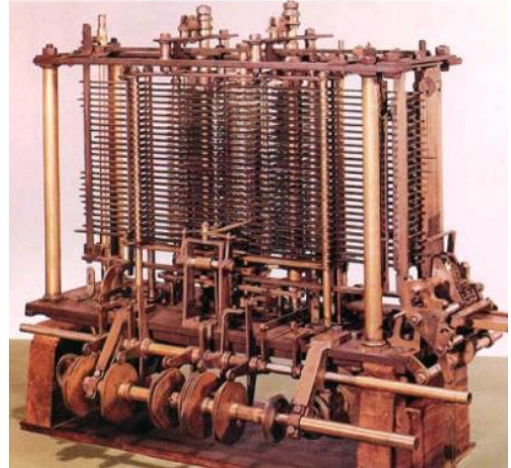

Arithmometer

Difference Engine and Analytical Engine

- It an automatic, mechanical calculator designed to tabulate polynomial functions.
- Invented by Charles Babbage in1822 and 1834
- It is the first mechanical computer.

Charles Babbage   Analytical Engine   Difference Engine

First Computer Programmer

- In 1840, Augusta Ada Byronsuggests to Babbage that he use the binary system.
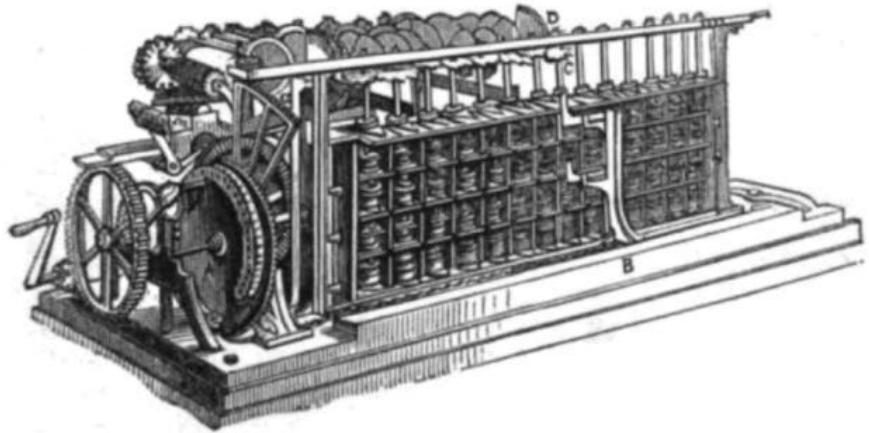- She writes programs for the Analytical Engine.

Augusta Ada Byron suggests

Scheutzian Calculation Engine

- Invented by Per Georg Scheutz in 1843.
- Based on Charles Babbage's difference engine.
- The first printing calculator.
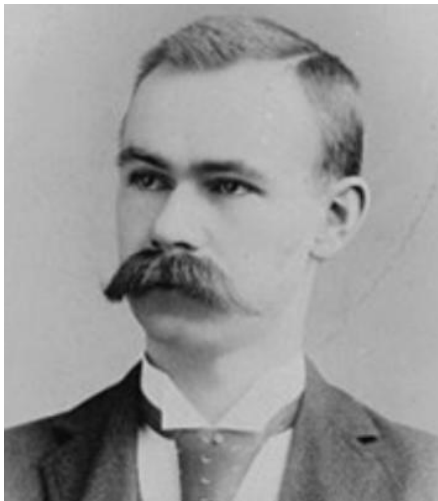

Per Georg Scheutz   Scheutzian Calculation Engine

Tabulating Machine

- Invented by Herman Hollerithin 1890.
- To assist in summarizing information and accounting.

Herman Hollerithin   Tabulating Machine

Havard Mark 1

- Also known as IBM Automatic Sequence Controlled Calculator (ASCC).
- Invented by Howard H. Aiken in 1943
- The first electro-mechanical computer.

Howard H. Aiken   Havard Mark 1

Z1

- The first programmable computer.
- Created by Konrad Zusein Germany from 1936 to 1938.
- To program the Z1 required that the user insert punch tape into a punch tape reader and all output was also generated through punch tape.

Konrad Zusein   Z1

Atanasoff-Berry Computer (ABC)

- It was the first electronic digital computing device.
- Invented by Professor John Atanasoff and graduate student Clifford Berry at Iowa State University between 1939 and 1942.

John Atanasoff

Atanasoff-Berry Computer (ABC)

ENIAC

- ENIAC stands for Electronic Numerical Integrator and Computer.
- It was the first electronic general-purpose computer.
- Completed in 1946.
- Developed by John Presper Eckertand John W. Mauchl.

UNIVAC 1

- The UNIVAC I (UNIVersal Automatic Computer 1) was the first commercial computer.
- Designed by J. Presper Eckert and John Mauchly.

EDVAC

- EDVAC stands for Electronic Discrete Variable Automatic Computer
- The First Stored Program Computer
- Designed by Von Neumann in 1952.
- It has a memory to hold both a stored program as well as data.

The First Portable Computer

- Osborne 1–the first portable computer.
- Released in 1981 by the Osborne Computer Corporation.

The First Computer Company

- The first computer company was the Electronic Controls Company.
- Founded in 1949 by J. Presper Eckert and John Mauchly.