**Subject: Computer Studies** 

Class: JSS1

**Term: First Term** 

Week 2

**Topic: Historical Development of Computers** 

# Lesson Objectives

By the end of this lesson, students should be able to:

- 1. List the early counting and calculating devices.
- 2. Explain the transition from manual to mechanical and electronic computing devices.
- 3. Identify key inventors and their contributions to computer development.
- 4. Describe the evolution of modern computers.

## Lesson Content

The history of computers spans several centuries, beginning with simple counting tools and evolving into the advanced digital systems we use today.

# I. Early Counting Devices

These were the first tools used by man to count, measure, and perform basic arithmetic.

- Fingers and toes Used for basic counting.
- **Stones and pebbles** Used for tallying or tracking items.
- **Sticks** Used for marking counts or measurements.
- Cowries and grains Used for trade and record-keeping.

These devices were manual and non-mechanical.

# II. Mechanical Counting and Calculating Devices

These are simple machines used to aid in counting and calculations.

### Abacus

- Originated in China
- o Still used in some parts of the world
- o Performs basic addition, subtraction, multiplication, and division

### Slide Rule

- o Used for multiplication, division, and roots
- o Based on logarithmic scales
- o Popular before electronic calculators

## III. Electro-Mechanical Counting Devices

These devices combined mechanical movement with early electrical power.

Inventor	Invention	Contribution
John Napier	Napier's Bones	Used rods for multiplication and division
Blaise Pascal	Pascaline	A mechanical calculator for addition and subtraction
Gottfried Leibniz	Leibniz Machine	Improved Pascal's calculator to include multiplication
Joseph Jacquard	Jacquard Loom	Used punched cards to control weaving patterns (idea later used in computing)
Charles Babbage	Analytical Engine	Regarded as the "Father of the Computer", designed a programmable machine
Philip Emeagwali	Supercomputer work	Nigerian computer scientist who contributed to internet- based supercomputing

Inventor Contribution

Herman Hollerith Developed Punch Card System for data processing (used in US Census)

Developed the **Von Neumann Architecture** — the structure of most modern John von

Neumann computers

This stage marked the shift from mechanical to **electronic-based** systems.

## V. Modern Machine (Modern Computer)

Features of modern computers include:

- High speed and accuracy
- · Ability to store large amounts of data
- Perform multiple tasks simultaneously
- Use of programming languages and software
- Examples: Desktop computers, laptops, smartphones, tablets

# Summary Table

Era	Devices	Notable Figures
Early Counting	Fingers, stones, sticks, cowries	-
Mechanical	Abacus, Slide Rule	-
Electro- Mechanical	Pascaline, Jacquard Loom, Analytical Engine	Pascal, Leibniz, Jacquard, Babbage
Electronic	Punch Cards, Von Neumann Model	Hollerith, Von Neumann
Modern	PCs, Smartphones, Tablets	Philip Emeagwali and others