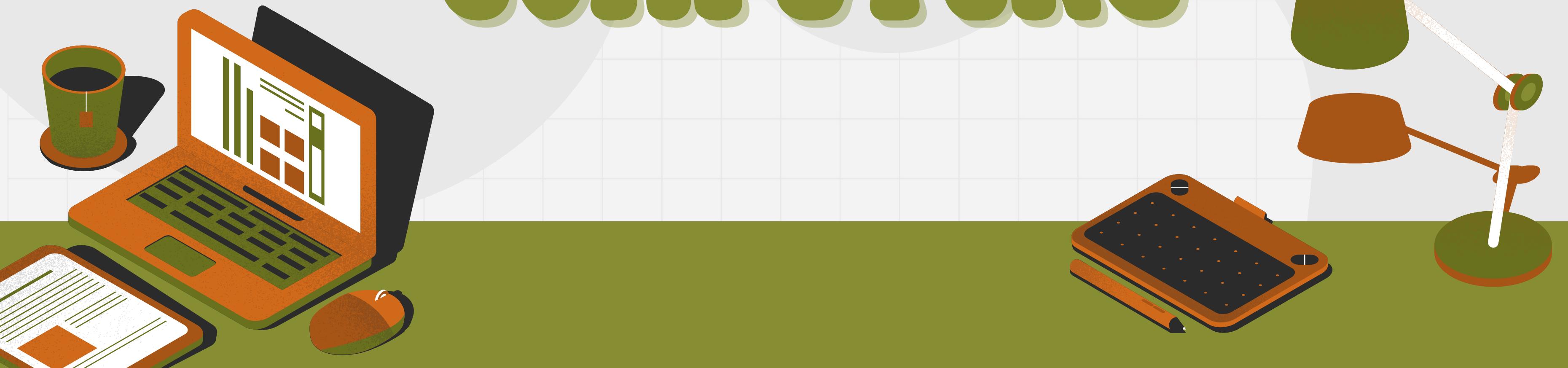
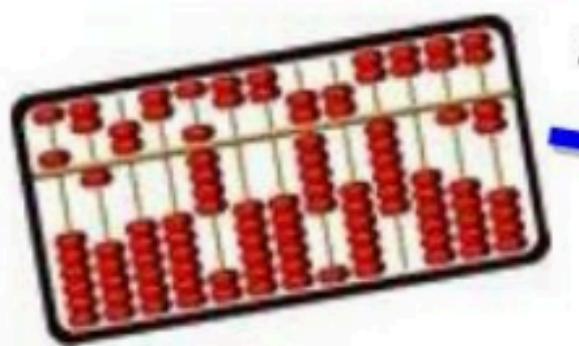


# HISTORY OF COMPUTERS



# HISTORY OF COMPUTERS



Abacus – 1100 BC



Slide rule - 1617

Mechanical calculator - 1642

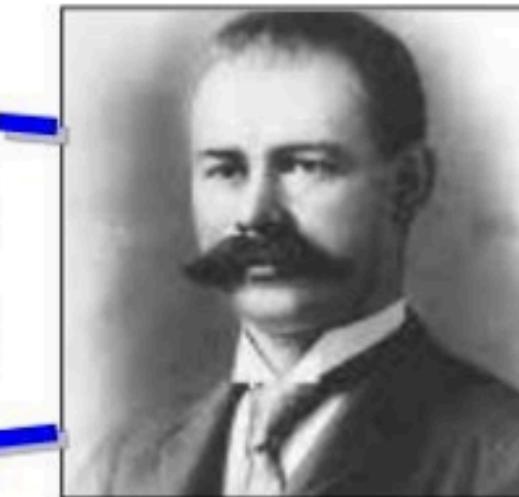
Automatic loom (punched cards)

- 1804



Babbage's computer – 1830s

Boolean logic – 1850s



Hollerith's electric tabulator - 1880

Analog computer – 1927

EDVAC – 1946

ENIAC – 1947



Transistor - 1947



Integrated circuit – late 1950s

UNIVAC – 1951

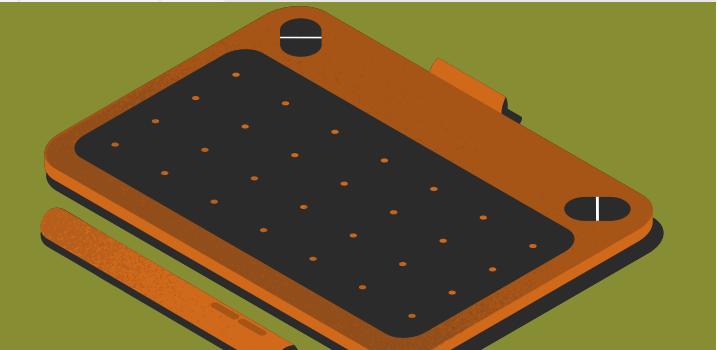
Microprocessor – 1971

Altair 8800 – 1975

Apple II – 1977

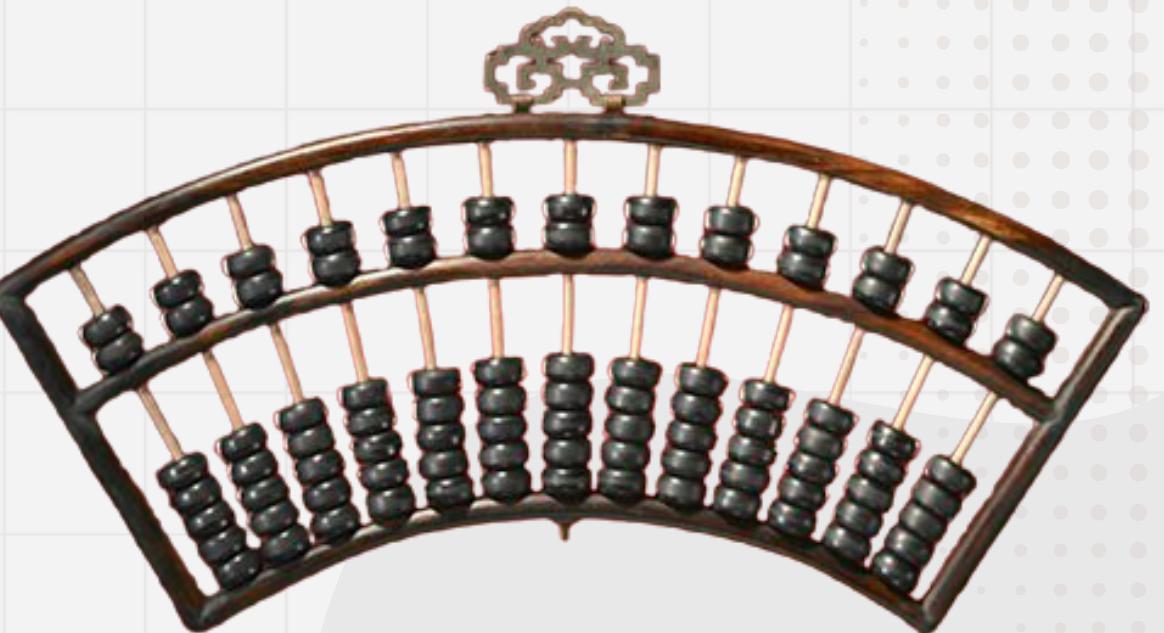
IBM PC – 1981

World Wide Web – 1990s



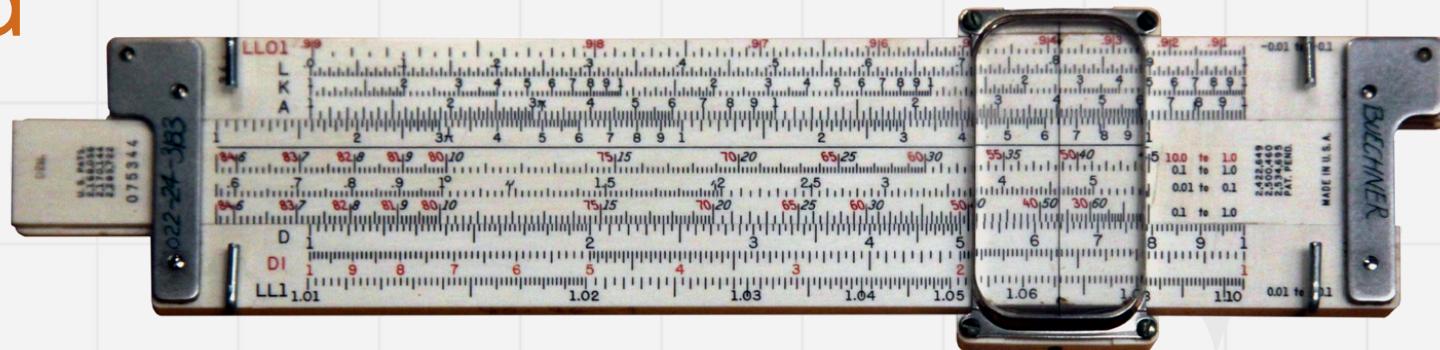
# THE ABACUS

- The first true calculating machine **is considered** to be the abacus
- It started to **be used** since 1100BC
- It is still used in some countries, for example, the Chinese Suanpan
- It typically consists of a rectangular frame with **rods** or **wires**, each containing a number of **beads** that can be slid back and forth.



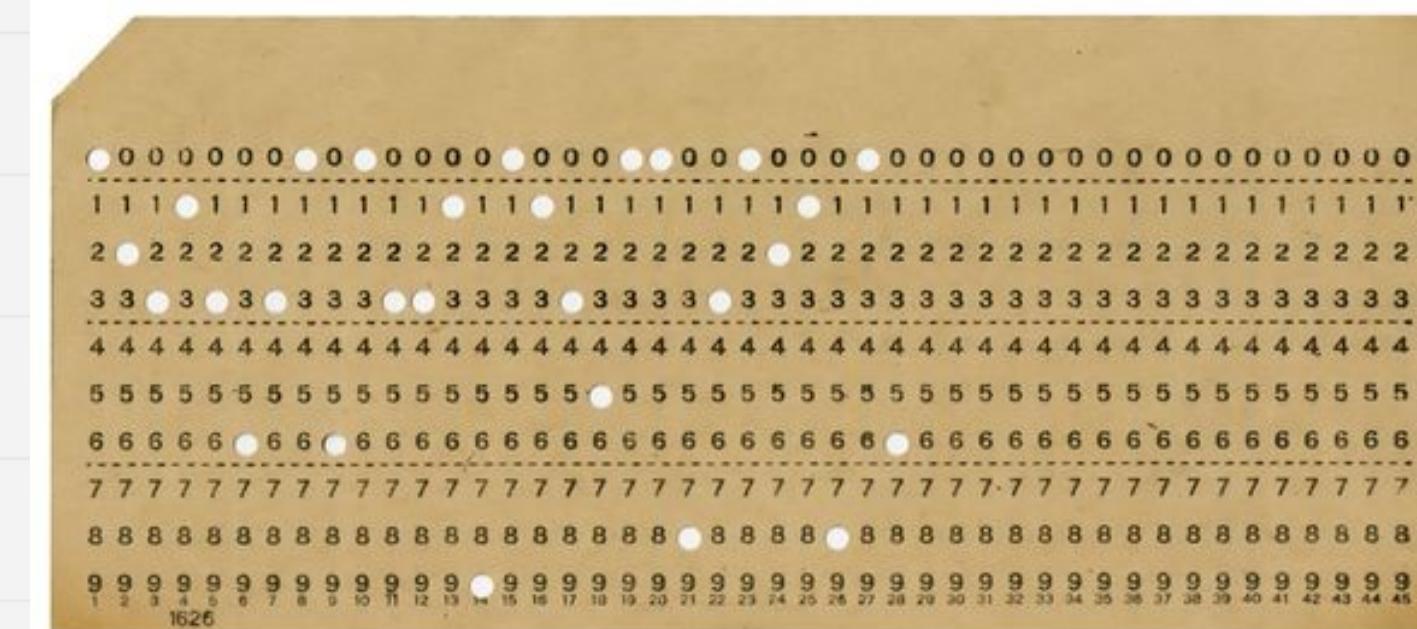
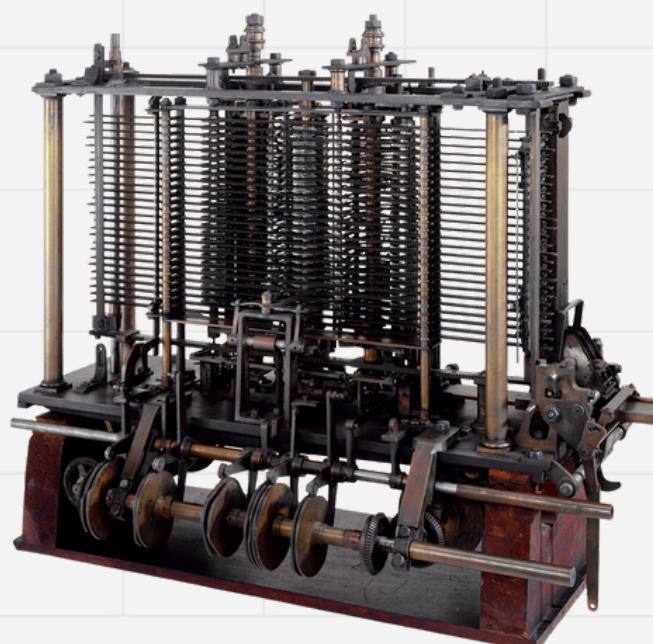
# THE SLIDE RULE

- In 1617, a Scottish mathematician created a device to do **logarithm calculations**
- Soon after 1617, it was created a device based on the 1617 invention, called the “**SLIDE RULE**”
- The SLIDE RULE remained in use until the electronic calculator **was invented**
- You line up scales on **sliding strips** to add logarithms, which is essentially how **multiplication** and **division** work on it.



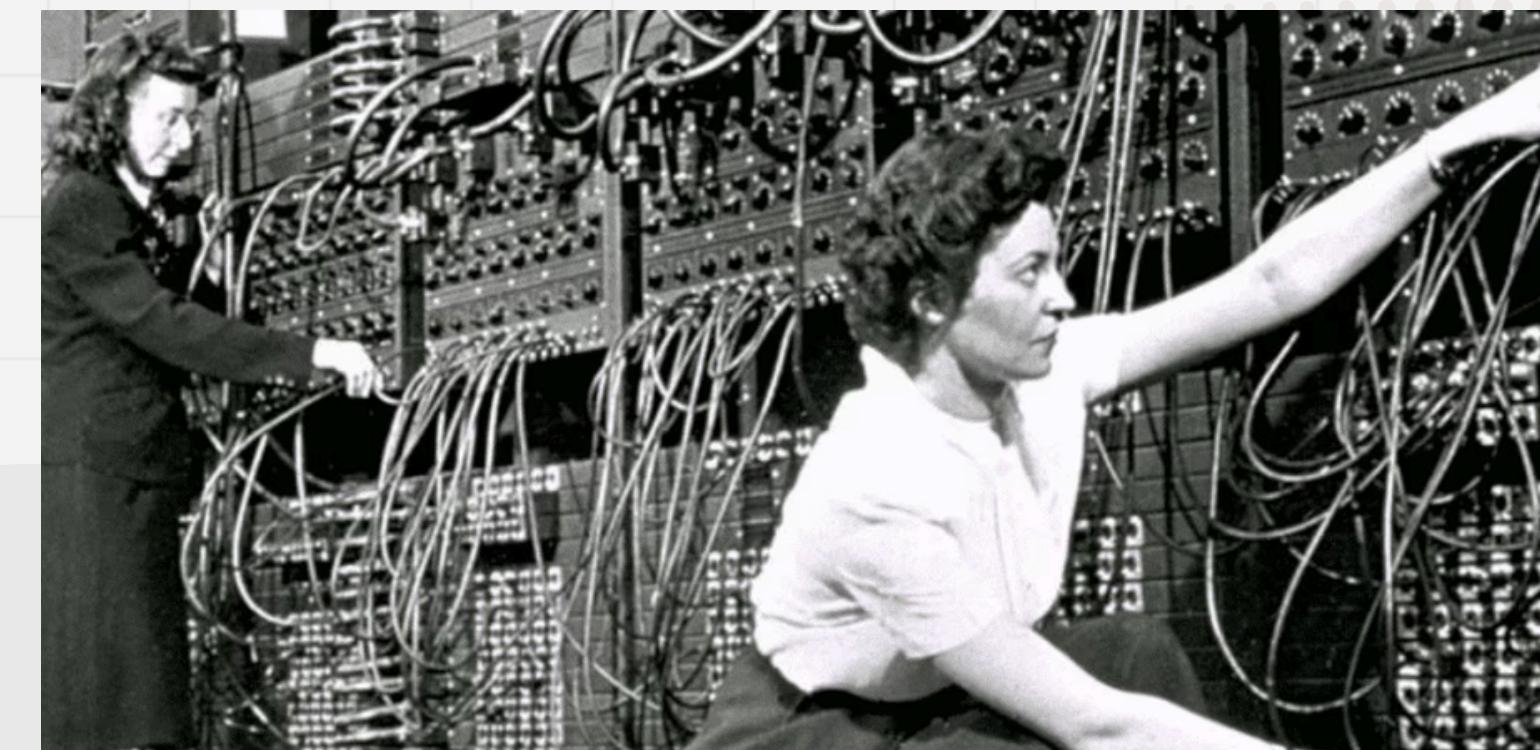
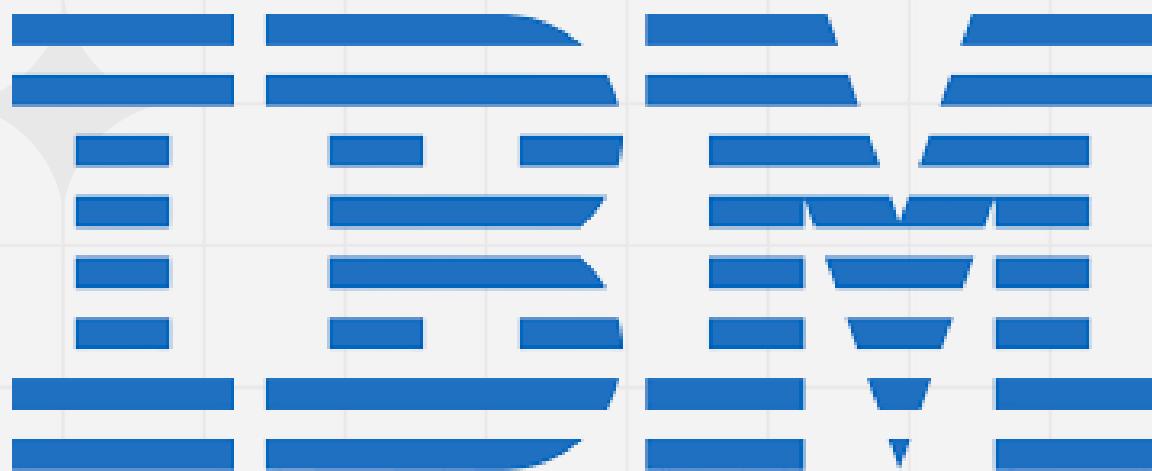
# THE FIRST COMPUTER

- In 1830, the English mathematician **Charles Babbage** designed the **ANALYTICAL ENGINE**
- It had memory – **Could store numbers and data.**
- It used punch cards – For input instructions (like early programming).
- It could make decisions – Based on conditions (basic if/then logic).
- It did calculations – Addition, subtraction, multiplication, division.
- It had a central unit – Like today's CPU, called the "mill."
- It had output – Printed results after doing calculations.



# EARLY COMPUTERS

- **MARK I (FIRST) AND ENIAC** arrived on the scene during **WWII**
- These two types of computers were used to calculate **weapon trajectories** and help to build the **atomic bombs**
- They used punched cards
- They were very expensive as they used enough electricity to light up a small town
- The **UNIVAC** was the first **mass-produced** computers.
- In 1953 **IBM** started selling computers



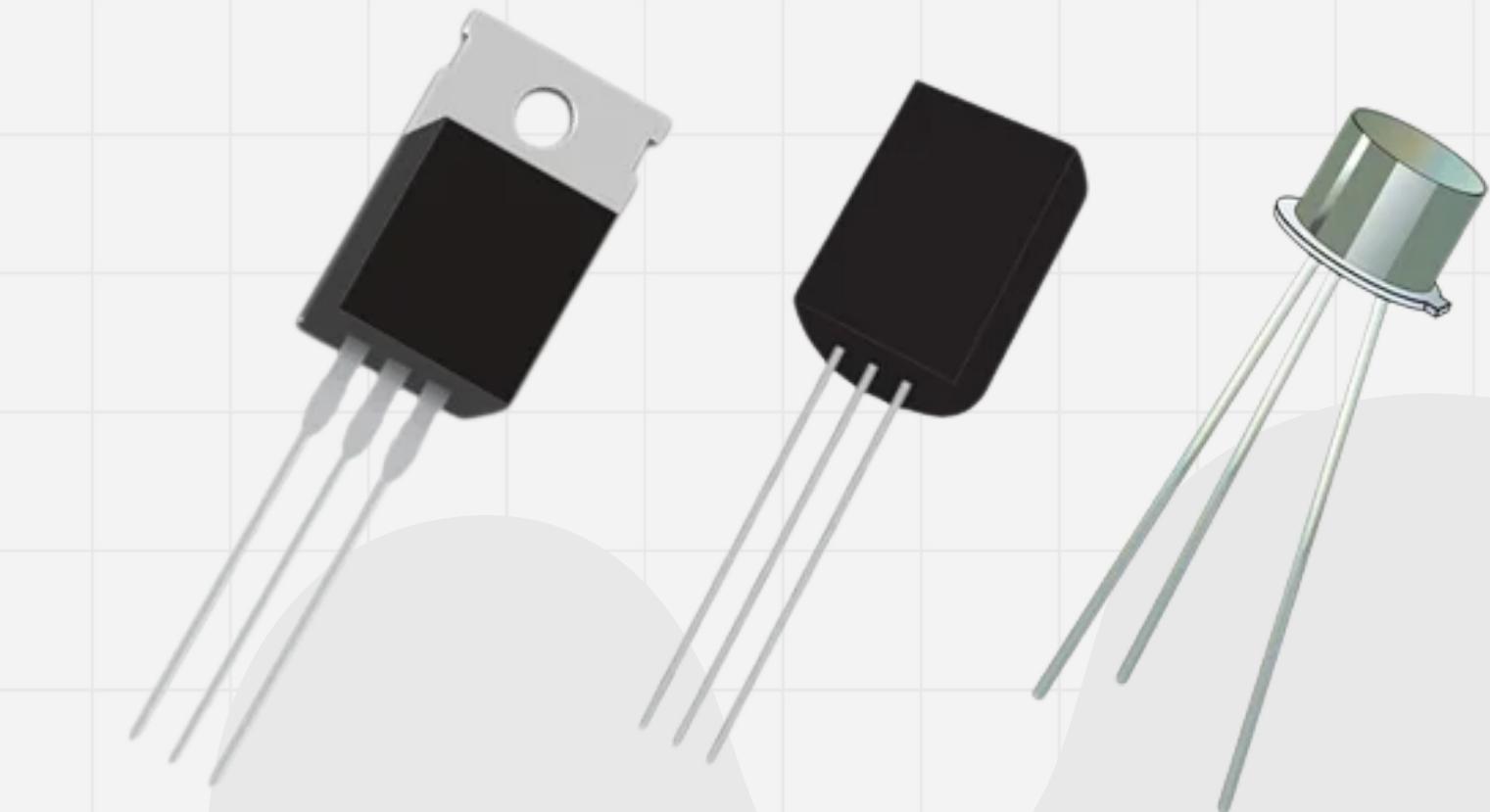
# EARLY COMPUTERS

- They were very **expensive** and **HUGE**.
- They required large rooms and a lot of electricity
- They used **VACUUM TUBES**, which were slow and hot, instead of transistors



# SECOND GENERATION COMPUTERS

- Transistors were a major invention
- In **1947**, engineers invented transistors
- Transistors replaced the vacuum tubes
- **Transistors** were much smaller, faster and more reliable than vacuum tubes
- They relied on other **electronic components** to form **circuits**



# THIRD GENERATION COMPUTERS

- In the late 1950s, engineers from **Texas** created **integrated circuits**
- The integrated circuits were made all together on a chip of silicon, instead of soldering the components after they were made
- **Integrated circuits** were known as **MICROCHIP**



# FOURTH GENERATION COMPUTERS

- Microprocessors advanced the integrated circuits
- All chips needed for the CPU were put together in one chip
- Microprocessors have made the PC possible



# THE RISE OF PERSONAL COMPUTERS

The introduction of the modern PC popularised personal computing.

# PERSONAL COMPUTERS

- In 1975 Bill Gates started writing BASIC programming language
- In 1977 Steve Wozniak and Steve Jobs were busy creating the APPLE II
- In 1981 IBM PC was created and shortly after, MICROSOFT was formed and the MS-DOS operating system was created



# BENEFITS OF COMPUTERS

- Increased productivity
- Improved communication
- Enhanced education
- Improved communication
- Access to information

## WHAT CAN YOU DO?

Would you be able to summarise the history of computers?

**Give the definition of the following concepts:**

Charles Babbage, the first computer, early computers, second generation computers, third generation computers, fourth generation computers, personal computers