COMP110: Principles of Computing

1: Computing History and Profession

Admin and Etiquette

Attendance

Please mark yourself as present on the attendance system!

Teams Etiquette

- Please don't post memes or spam to the chat during a session, treat it like a **professional environment**
- If you disrupt the meeting in any way, you will be removed. You will also be reported to the Course Leader and Director of the Games Academy

Teams Meeting Etiquette

- Please stay on **mute** during the Meeting
- **Raise your hand** if you have a question, then **unmute** when the lecturer calls on you to ask
- Once you have asked your question and had your question answered, please **mute** again
- If you don't feel comfortable talking in the meeting, please use the **chat**

Induction Materials

- Have you gone through all the induction materials on the COMP110 LearningSpace?
- If not, please do so ASAP after this session!
- Particularly important:
  - Module welcome video
  - Module induction video
  - Worksheet 1 brief and video

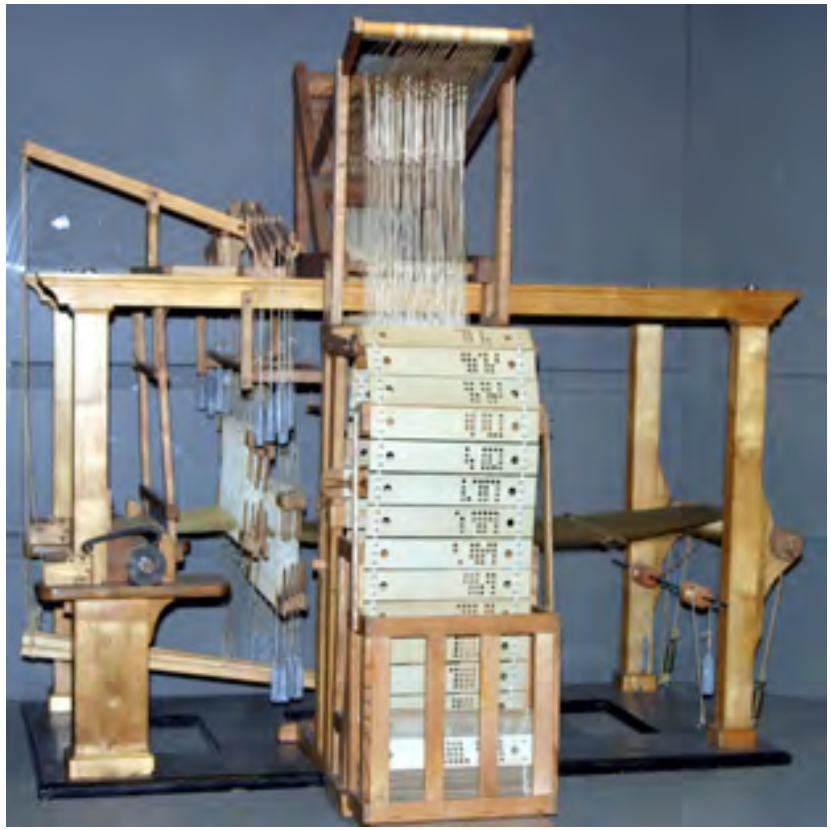
What was the first computer?

Antikythera Mechanism ($\sim$150 BC)

First mechanical computer?

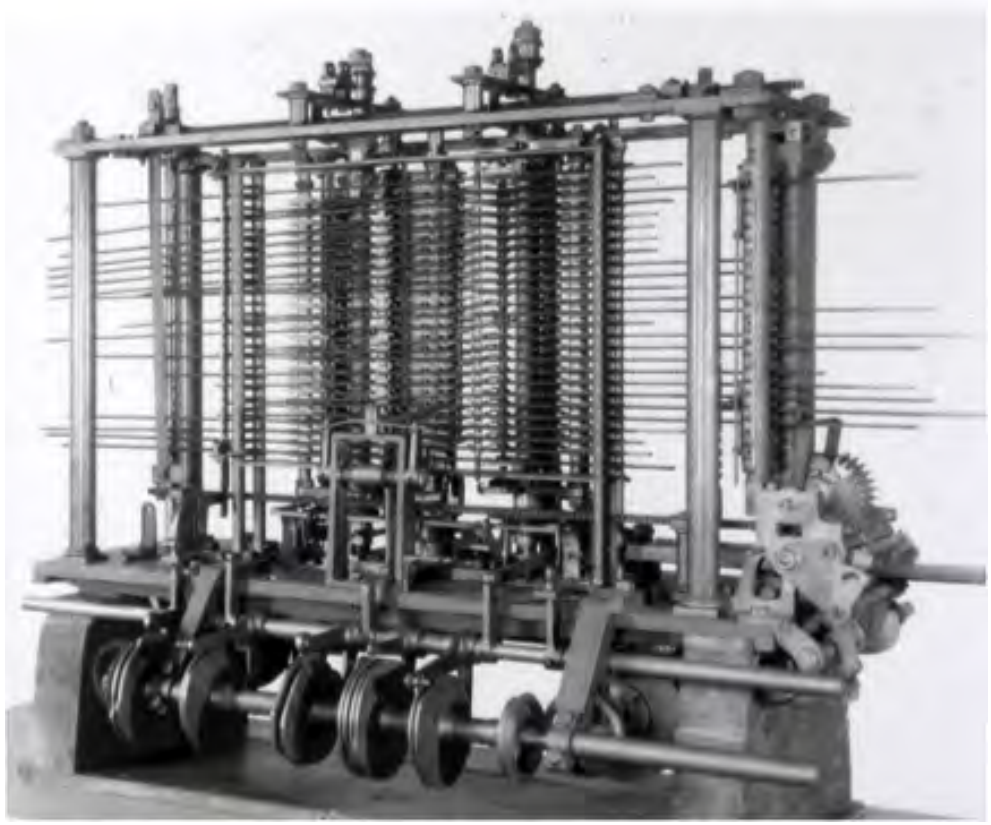
Jacquard Loom (1804)

First programmable machine in modern age



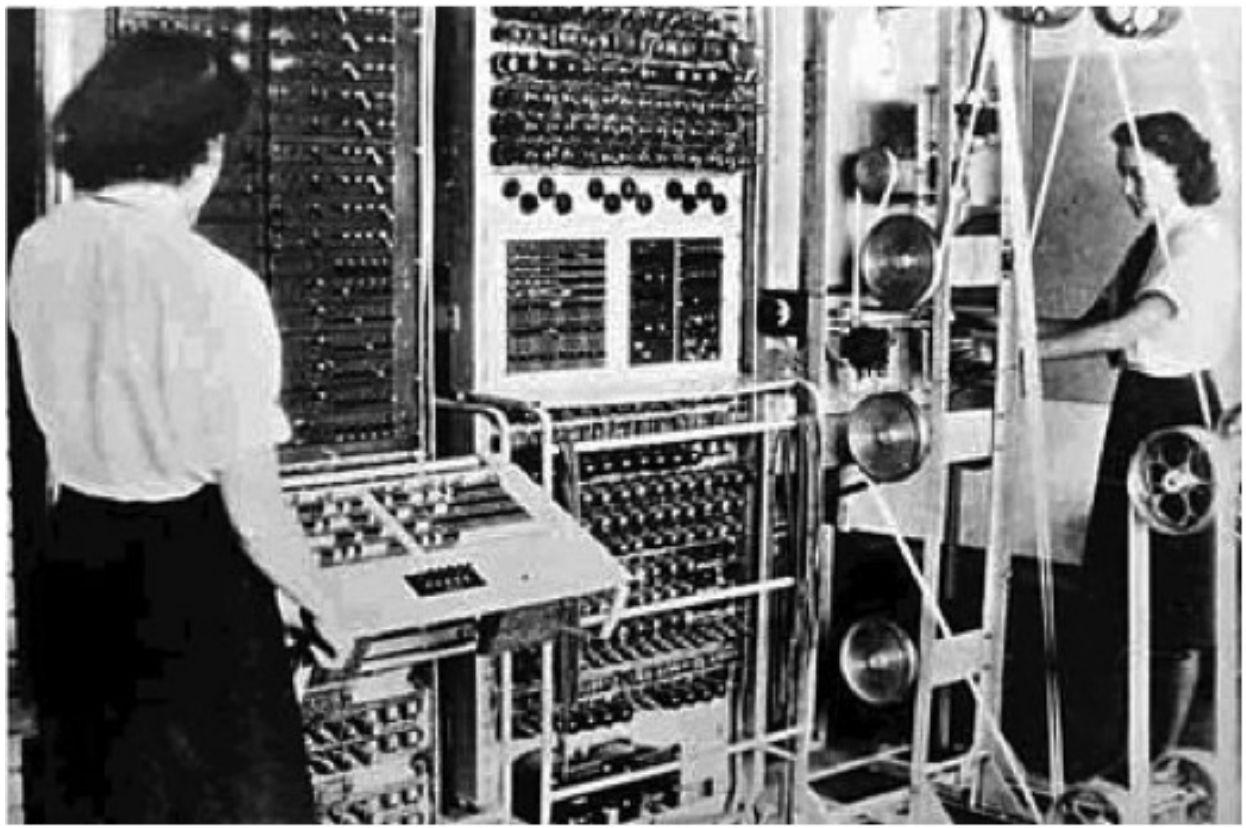
Babbage's Difference and Analytical Engines (1837)

First mechanical computer in modern age



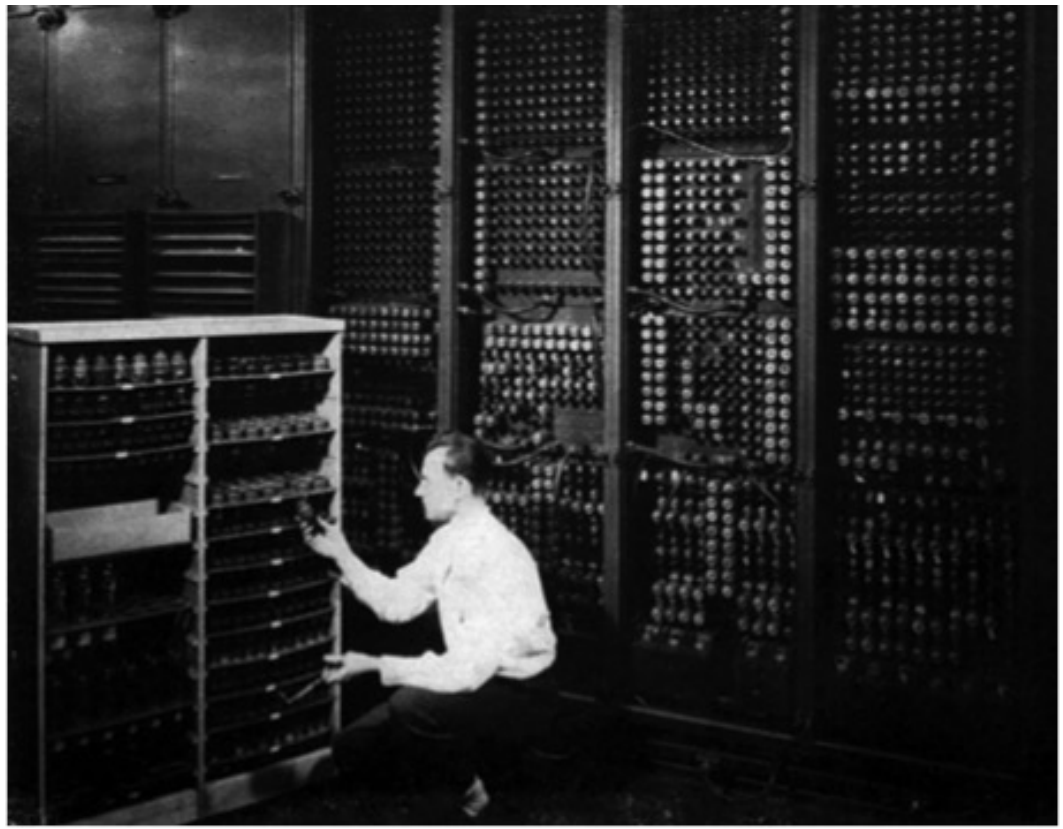
Colossus (1943)

First programmable electronic computer



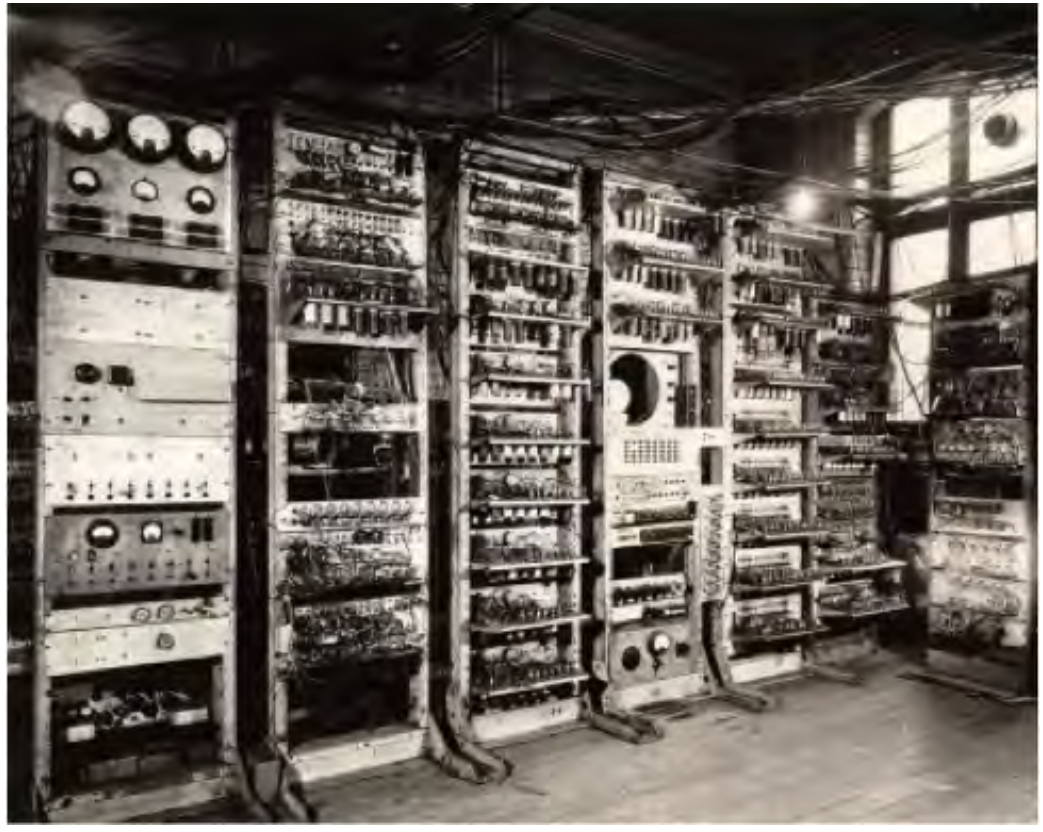
ENIAC (1946)

First general-purpose computer



Manchester Small-Scale Experimental Machine (1948)

First stored program computer

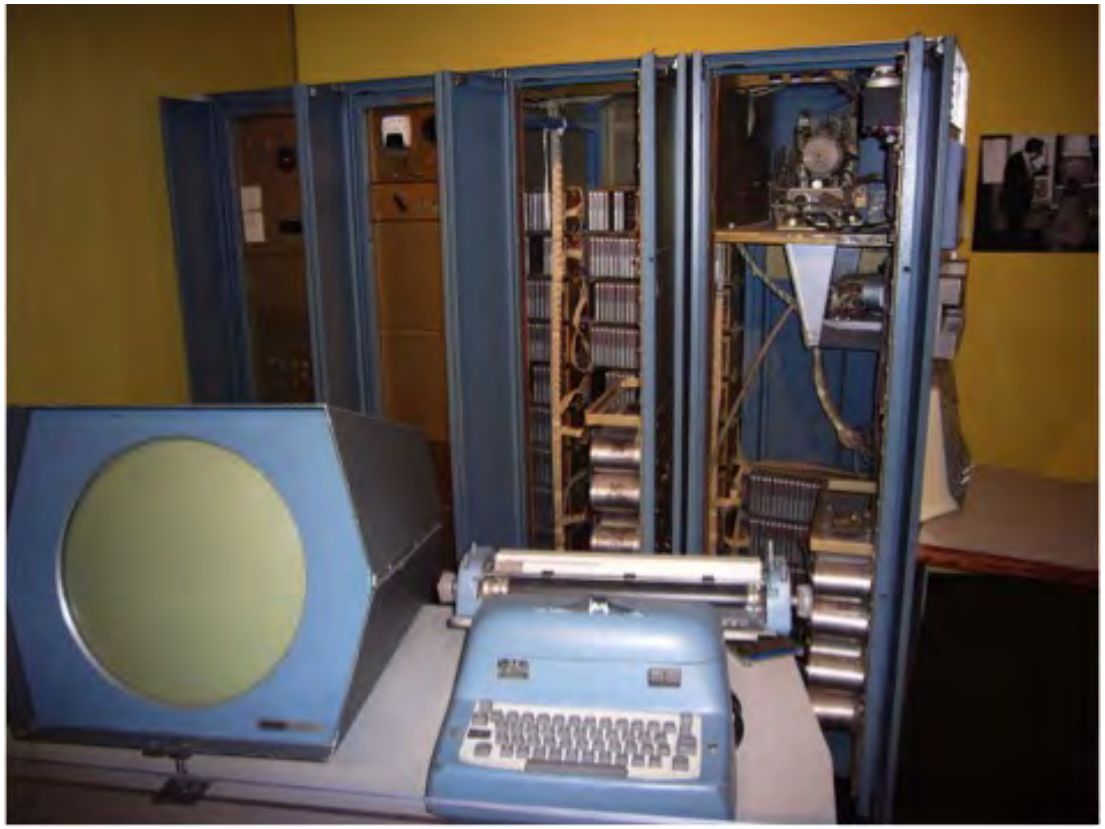


TRADIC (1949)

First transistor computer

PDP-1 (1959)

Influenced “hacker culture”



Datapoint 2200 (1970)

First microcomputer

Commodore VIC 20 (1980)

First computer to sell 1 million units

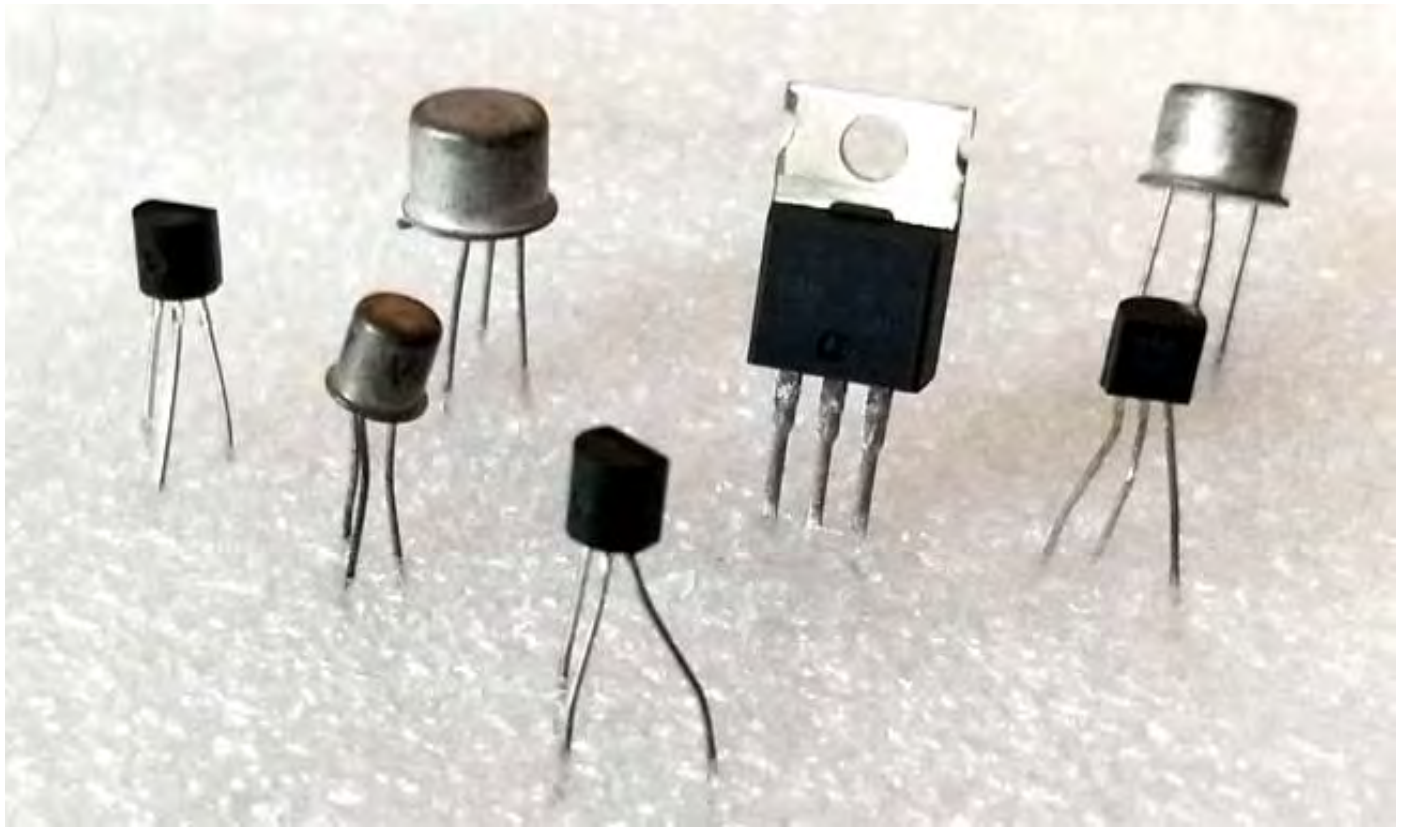
IBM Personal Computer Model 5150 (1981)

Precursor to the modern PC

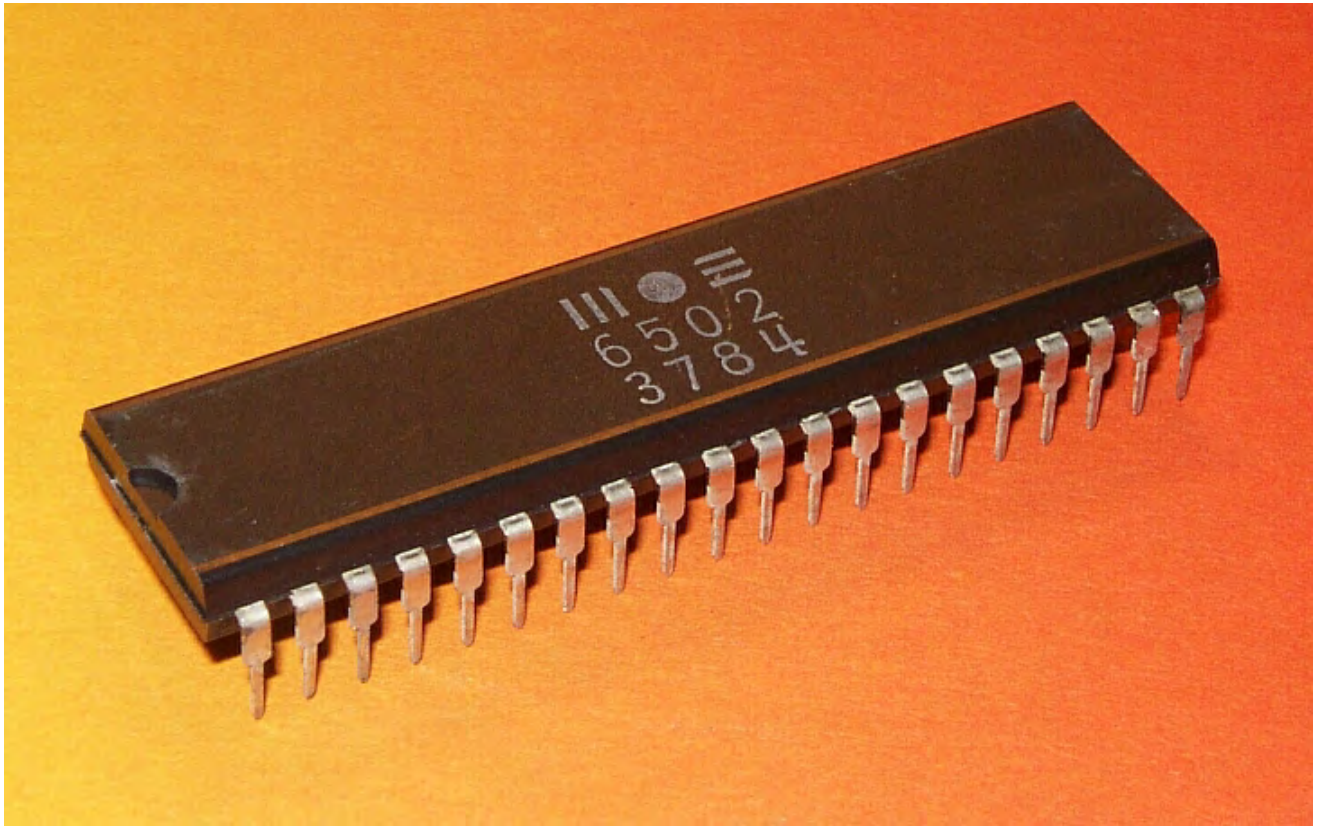
Electronic computer technologies

Vacuum tubes (valves)

Transistors



Integrated circuits (ICs)



1943	Colossus	1700 valves
1946	ENIAC	20000 valves
1949	TRADIC	800 transistors
1959	PDP-1	2700 transistors
1975	MOS 6502	3510 transistors
1979	Intel 8088	29000 transistors
1998	Intel Pentium II	7.5 million transistors
2016	Intel Core i7 Broadwell-E	3.2 billion transistors
2020	Apple A14	11.8 billion transistors
2020	Nvidia GeForce RTX 3080	28 billion transistors

What was the first computer game?

Cathode Ray Tube Amusement Device (1948)

First interactive electronic game

Chess AI on the Ferranti Mark I (1951)

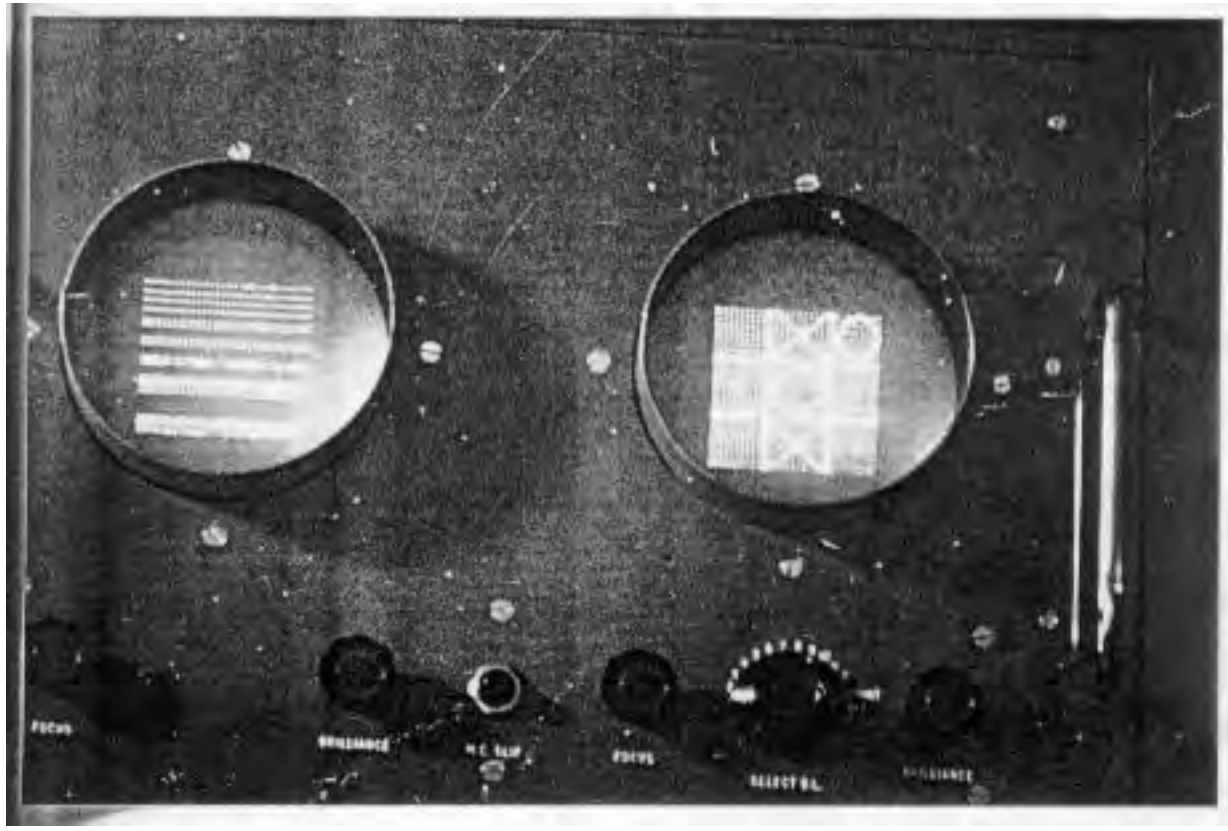
First chess program

Bertie the Brain (1950)

First computer game with a visual display

OXO (1951)

First game with visuals on a general-purpose computer



Tennis for Two (1959)

First to be created purely for entertainment

SpaceWar! (1962)

First widely available game, inspired first arcade games

Pong (1972)

First commercially successful game

What was the first games console?

The Brown Box (1967)

First prototype console

Magnavox Odyssey (1972)

First commercial console

Computing professionals

Computing professionals

- A degree in computing prepares you for a wide variety of careers
- How many can you think of?
- What **skills** might you need to be successful in these careers?
- There is a **forum discussion activity** on LearningSpace for you to take part in after this session

The future of computing

- Computing is a fast-moving field, and the world you graduate into may not look much like the world of today!
- How might the landscape of the computing profession change in the next 5–10 years?
- What careers will become more or less important, or disappear entirely?
- Will the important skills be the same or different?