

Problem Solving

Computational Thinking

approaches

- problem decomposition
- pattern recognition
- abstraction
- algorithm
- automation
- evaluation

- ① What is computational thinking?
- ② Computational thinking approaches
- ③ Information and Data
- ④ Datatypes and Encoding

Devices (computation devices)

- ① computer
- ② Abacus
- ③ Napier Bones
- ④ Pascaline
- ⑤ Gottfried Leibniz
- ⑥ Antikythera

Modern Computer

- Electronic Device
- Digital
- Stored program concept

Generation of Computer

- 1st Gen: (1940-56) Vacuum Tubes
- 2nd Gen: (1956-63) Using Transistors
- 3rd Gen: (1964-71) Using Integrated circuits
- 4th Gen: (1971-present) using microprocessors
- 5th Gen: (present-future) AI

History of Computers

- ① The Analytical Engine : Charles Babbage
- ② US census calculating : Harmon Hollerith device (1890)
- ③ Mechanical Tabulating Machine : IBM (1924)
- ④ Analog Device (1930) : Vannevar Bush Differential Analyzer
- ⑤ Electronic Numerical Integrator And Computer (ENIAC) 1946, USA
↳ first Modern computer



