

GENERATION OF COMPUTER



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1. First Generation (1940-1956)

- **Technology:** Vacuum tubes
- **Characteristics:**
 - Large, bulky machines
 - Used vacuum tubes for circuitry and magnetic drums for memory
 - Consumed a lot of power and generated a lot of heat
 - Examples: ENIAC, UNIVAC, IBM 701

2. Second Generation (1956-1963)

- **Technology:** Transistors
- **Characteristics:**
 - Smaller and more reliable than first-generation computers
 - Used transistors instead of vacuum tubes, leading to increased efficiency
 - More energy-efficient and generated less heat
 - Examples: IBM 1401, CDC 1604

3. Third Generation (1964-1971)

- **Technology:** Integrated Circuits (ICs)
- **Characteristics:**
 - Used integrated circuits, which combined multiple transistors on a single chip
 - Further miniaturization and performance improvement
 - Increased speed and efficiency, allowing for the development of more sophisticated software
 - Examples: IBM System/360, PDP-8

4. Fourth Generation (1971-Present)

- **Technology:** Microprocessors
- **Characteristics:**
 - Microprocessors replaced integrated circuits, placing thousands of ICs on a single chip
 - Marked the advent of personal computers (PCs)
 - Development of graphical user interfaces (GUIs) and multimedia
 - Examples: Intel 4004, Apple Macintosh, IBM PC

5. Fifth Generation (Present and Beyond)

- **Technology:** Artificial Intelligence (AI) and Quantum Computing
- **Characteristics:**
 - Focus on AI, machine learning, and advanced computing technologies
 - Development of computers that can learn, reason, and understand natural language
 - Ongoing research into quantum computing, which promises to solve complex problems much faster than traditional computers
 - Examples: IBM Watson, Google DeepMind

