O/L ICT

The Computer Generations

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Computer Generations

Computers have evolved through several generations, each marked by significant advancements in technology

First Generation

- Year Range : **1940s-1950s**

- Vacuum tubes used for processing

- Large size

- High power consumption

- Machine language and Assembly language

- **Notable Computers:** ENIAC, UNIVAC I.

Property of Museum of History & Industry, Seattle

Second Generation

- Year Range : **1950s-1960s**
- Transistors replaced vacuum tubes
- Smaller size
- Less heat generation
- Machine language and early High-Level Languages
- **Notable Computers:** IBM 1401, CDC 1604

Third Generation

- Year Range : **1960s-1970s**

- Integrated circuits (ICs) introduced

- Smaller size

- more powerful & faster

- High-level languages like COBOL, Fortran, and BASIC

- **Notable Computers:** IBM System/360, DEC PDP-11.

Fourth Generation

- Year Range : **1970s-1980s**

- Microprocessors emerged.

- Personal computers introduced.

- increased computing power.

- Diverse high-level languages; rise of software development.

- **Notable Computers:** IBM PC, Apple II.

Fifth Generation

- Year Range : **1980s-Present**

- Introduction of parallel processing.

- artificial intelligence.

- advanced computing architectures.

- Increased use of microprocessors, the advent of the internet, widespread use of personal computers.

- Object-Oriented Programming.
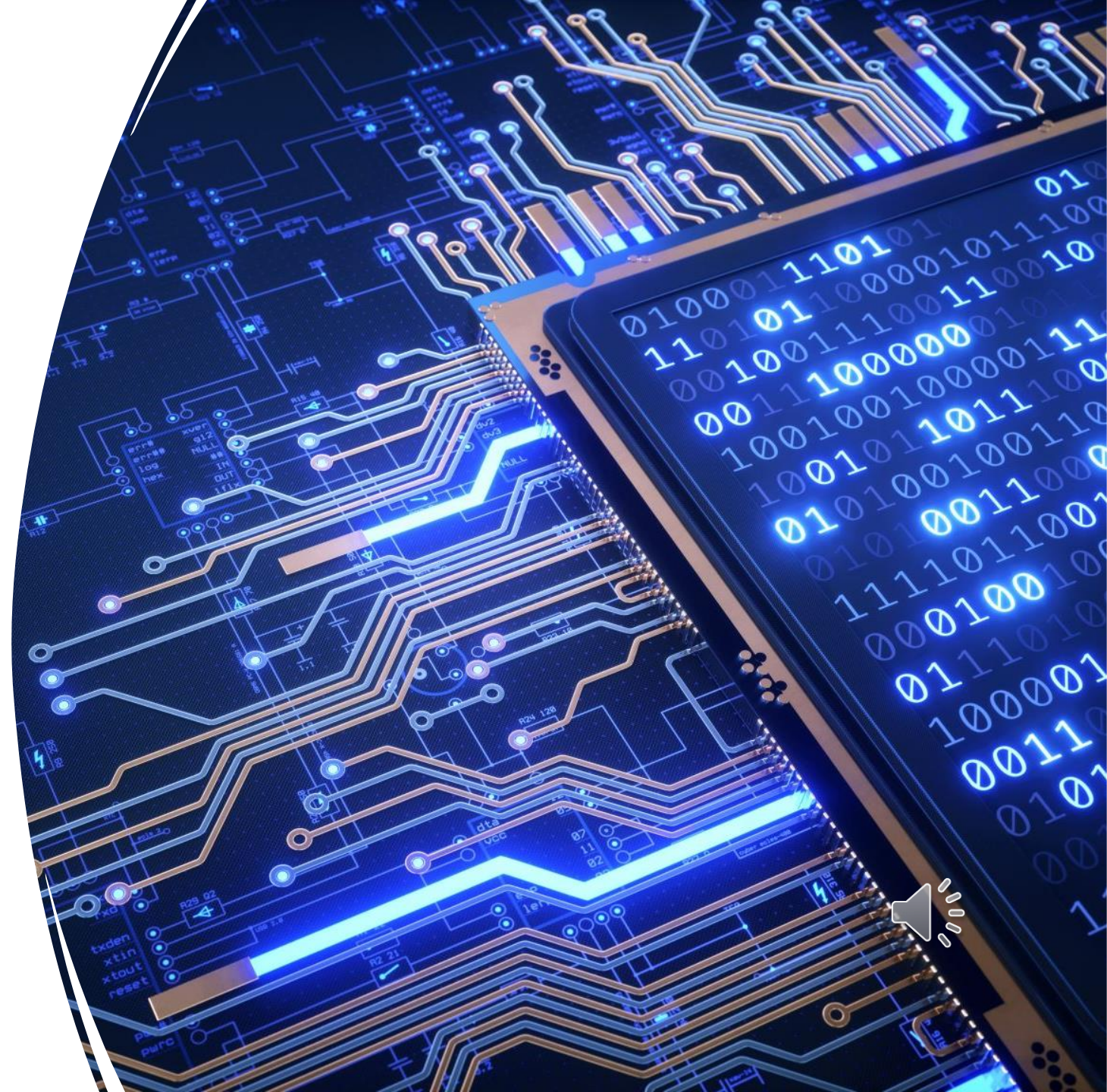
Understanding the evolution of computer generations provides insights into the rapid advancements that have shaped the technology landscape, from room-sized machines with limited capabilities to the compact, powerful devices and cutting-edge technologies we use today.
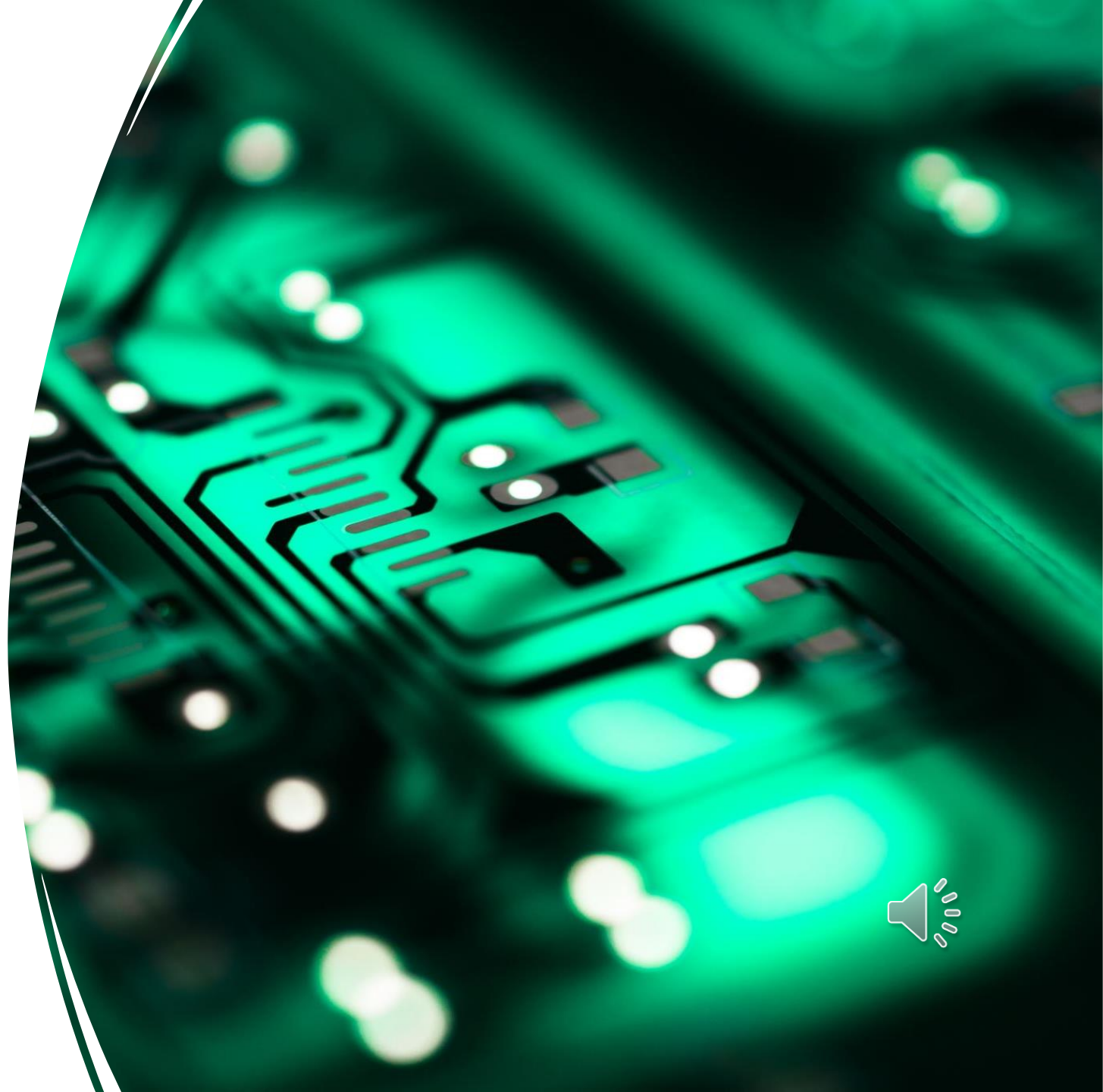
Covered Points:

- Main Generations of the Computer Evolution

- Significant Characteristics

- Main Technologies used

- Basic Programming languages introduced.

- Notable Computers

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