Fundamental of Computers

Chapter 1: Introduction to Computers

1. Definition and History of Computers
2. Types of Computers (Analog, Digital, Hybrid)
3. Basic Components of a Computer System (Hardware vs Software)
4. Input, Processing, Output, and Storage Devices
5. Generations of Computers

Chapter 2: Computer Hardware and Software

1. CPU, Memory (RAM/ROM), and Storage Devices (HDD, SSD)
2. Peripheral Devices: Input/Output Units
3. System Software vs Application Software
4. Operating Systems: Functions and Types (Windows, Linux, macOS)
5. Introduction to Device Drivers and Utility Programs

Chapter 3: Data, Networking, and Security

Number Systems: Binary, Decimal, Hexadecimal

1. Computer Networks: LAN, WAN, MAN
2. Internet Basics and Web Browsers
3. Email, Cloud Computing, and Online Services
4. Basic Cybersecurity: Viruses, Firewalls, and Password Protection

Chapter 4: Advanced Concepts and Applications

1. Computer Programming Basics (Concept of Algorithms and Flowcharts)
2. Introduction to Databases and DBMS
3. Artificial Intelligence and Machine Learning Overview
4. Computer Ethics and Digital Citizenship
5. Emerging Technologies: IoT, Blockchain, and Quantum Computing