# Chapter 3: Information and Communication Technology Skills – I

## Introduction

In the modern era of digitization, **Information and Communication Technology (ICT)** forms the backbone of education, communication, governance, business, and day-to-day activities. This chapter introduces students to the basics of ICT, focusing on the use of computers, the internet, and digital tools in personal and professional life. It also aims to equip learners with essential skills like using word processors, understanding operating systems, and communicating via digital means, which are foundational in the AI and IT landscape.

## 3.1 Introduction to ICT

### What is ICT?

- **ICT** stands for **Information and Communication Technology**.

- It refers to technologies that provide access to information through **telecommunications**.

- It is similar to **Information Technology (IT)**, but focuses primarily on communication technologies like:

    - The Internet
    - Wireless networks
    - Cell phones
    - Computers
    - Software
    - Other media applications

### Importance of ICT in Daily Life

- Helps in **e-learning** and **virtual classrooms**
- Used for **online banking**, **e-commerce**, and **telemedicine**
- Essential for **government services (e-Governance)**
- Aids in **communication**, such as email, video conferencing, etc.

## 3.2 Components of a Computer System

### 1. Hardware

- The **physical parts** of a computer system.
- Examples: Keyboard, Mouse, CPU, Monitor, Printer

### 2. Software

- The **set of instructions** that tells the computer what to do.

- Types:

    - **System Software** (e.g., Windows, Linux)
    - **Application Software** (e.g., MS Word, Excel)

### 3. Peripheral Devices

- Devices connected to the computer externally.
- **Input Devices**: Keyboard, Mouse, Scanner
- **Output Devices**: Monitor, Printer
- **Storage Devices**: Pen drive, Hard Disk, SSD

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## 3.3 Operating Systems

### Definition

An **Operating System (OS)** is system software that manages **hardware and software resources** and provides services for computer programs.

### Functions of an OS

- File management
- Process management
- Device management
- User interface (UI)
- Security and access control

### Popular Operating Systems

- **Windows**
- **Linux**
- **macOS**
- **Android** (for mobile devices)

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# 3.4 Word Processing Software (Microsoft Word / Google Docs)

## Basics of Word Processor

- Used for **creating, editing, formatting, and printing documents**.

- Useful for creating:

    - Letters
    - Reports
    - Resumes
    - Articles

## Basic Features

- **Text Formatting**: Bold, Italics, Underline, Font Size, Font Type
- **Paragraph Formatting**: Alignment, Line spacing, Indentation
- **Bullets and Numbering**
- **Insert**: Tables, Pictures, Hyperlinks
- **Spell Check and Grammar**
- **Saving and Printing**

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# 3.5 Communication Technology

## Types of Communication

- **Verbal Communication** (Phone calls, Video calls)
- **Written Communication** (Emails, Text messages)
- **Visual Communication** (Graphs, Images, Videos)

## Digital Communication Tools

- **Email**: Sending formal and informal messages
- **Instant Messaging Apps**: WhatsApp, Telegram
- **Video Conferencing**: Zoom, Google Meet
- **Social Media**: Facebook, Twitter, LinkedIn

## Benefits of ICT in Communication

- **Faster communication**
- **Global reach**
- **Cost-effective**
- **Multi-platform availability**

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## 3.6 Safety and Security of ICT Tools

### Digital Safety Tips

- Use **strong passwords**
- Do **not share personal information**
- Be aware of **cyberbullying and phishing**
- Use **antivirus software**
- **Log out** from public/shared computers

### Cyber Hygiene

- Keeping systems updated
- Avoiding clicking on suspicious links
- Backing up data regularly

## 3.7 Role of ICT in Education and Workplace

### In Education

- Online learning platforms (e.g., Google Classroom, Khan Academy)
- Digital assignments and quizzes
- Interactive learning through videos and simulations

### In Workplace

- Remote working through cloud services
- Team collaboration tools (Slack, Trello)
- Online documentation and data management

## Summary

The world today is run by **Information and Communication Technology**, and its knowledge is essential for everyone. From understanding basic hardware and software to operating systems, word processing, and digital communication tools, this chapter equips learners with crucial **ICT skills**. It also emphasizes **safe and secure digital practices**, promoting responsible and effective use of technology. Mastering these skills lays a strong foundation for advanced learning in AI and technology-related fields.