

Introduction to Information Technology

Lecture 0

IT 111
Overview

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Lecture 1: Introduction to the World of Computers

- What Is a Computer and What Does It Do?
- Pros and cons
- Programming Languages
- The Operating System
- History of Computer
- Von Neumann Architecture
- Parts of a Modern Computer
- Types of computers
- Internet and the World Wide Web

Lecture 2: Processing and Memory

- Digital Data Representation: images – Audio – Programs
- Inside the System Unit
- The Motherboard
- Bus Width, Bus Speed, and Bandwidth
- Fans, Heat Sinks
- Making Computers Faster and Better

Lecture 3 - Storage

- How Do magnetic Hard Drives Work
- How Do Solid state Hard Drives Work
- How Do Optical Disk Drives Work: CD, DVD, Blu-ray
- Flash Memory Cards
- Smart Cards

Lecture 4: Input and Output

- Ports and Connectors – USB
- How Mouse works
- Touch Screens
- Scanners, Readers, and Digital Cameras
- Biometric Readers
- Display Devices: LCD – LED
- Types of Printers

Lecture 5 - Operating Systems and Utility Programs

- Functions of an Operating System
- Processing Techniques for Increased Efficiency
- Operating Systems for Personal Computers: Windows - Mac OS – UNIX – Linux
- Operating Systems for Mobile Phones: Android - IOS – Symbian
- Utility Programs

Lecture 6 - Application Software

- Software Ownership Rights
- Microsoft Office : Word – Excel – Access – PowerPoint
- Graphics Software
- Audio Editing Software
- Video Editing and DVD Authoring Software
- Other Types of Application Software

Lecture 7 - Computer Networks

- What Is a Network?
- Mobile Phones
- GPS
- Wired vs. Wireless Networks
- Network Topologies
- Network Size and Coverage Area
- Data Transmission Characteristics
- Networking Media
- Networking Hardware

Lecture 8 - The Internet and the World Wide Web

- Internet
- How does the Internet work?
- How does the Web work?
- Browser: Chrome
- History of Internet
- Type of Connection and Internet Access
- Tips for Effective Search Strategies
- What is IoT?
- How IoT works?
- What the Internet is Doing to Our Brains

Lecture 9 - Network and Internet Security

- Unauthorized Access and Unauthorized Use
- What is Two-Factor Authentication
- Understanding Encryption
- Computer Viruses and Other Types of Malware
- Online Safety

Lecture 10: Python Programming Language

- What is Programming?
- What is Python?
- Why Python?
- Data Type



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