



مدونة المناهج السعودية

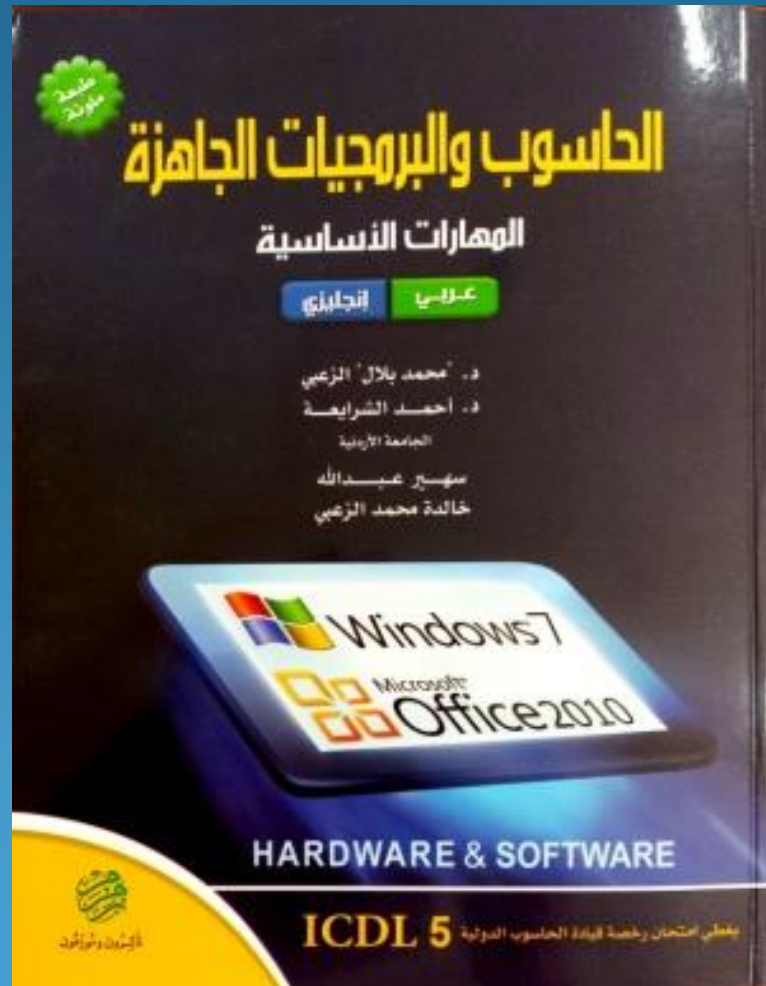
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الموقع التعليمي لجميع المراحل الدراسية

في المملكة العربية السعودية

الحاسوب والبرمجيات الجاهزة

المهارات الأساسية



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Section 1:

information & communication technology

Chapter 3: Data Transfer and Networks

lecture 4

Networks:-

Networks are a group of computers connected to each other that share resources such as printers, files, programs, and expensive equipment.

Types of Networks :

○ **Local Area Network (LAN):**

Is the number of computers that are linked together by cables in a limited area such as building or a group of nearby building .

○ **Wireless LAN (WLAN):**

Is a network that links two or more computers or devices using wireless technology such as radio waves to enable communication between devices in limited area.

○ **Wide Area Network (WAN):**

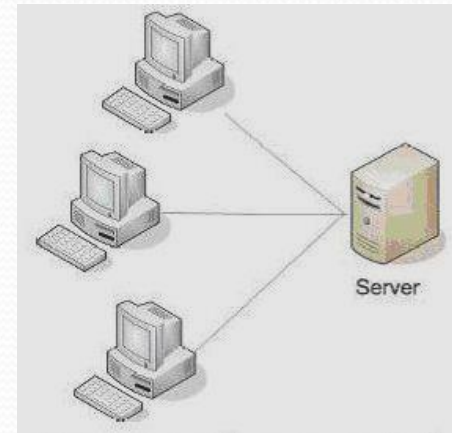
Computers and computer networks are linked together over a large areas such as cities, countries and even continents.

Many WANs use satellite communication . An example of its: **ATM Network** of a specific bank, which enables you to access your account from distant places in the world.

Client/Server Networks:

In a client/server network , there is a specific computer called a server which saves all common files and documents so that the other computers(clients)can use, access, update them at the same time. The types of servers:

- File Server
- Printer Server
- Communication Server
- Dedicated Server



Internet:

Is a network of computers and computers networks around the world that is linked means of telecommunication network.

World Wide Web (WWW):

Is a collection of web pages and related resources which are linked together across the Internet .

Intranet:

Is a private network that is contained within an enterprise .the main purpose of an intranet is to share company information and computing resources among employees.

Extranet:

Is a private network that uses Internet technology and the public telecommunication system to securely share part of business' information or operation with suppliers ..etc.

Data Transfer:

Downloading From and Uploading to a Network:

Downloading:

Is for a local system to receive data from a remote system, such as a Webserver ,an FTP server, and e-mail server or other similar systems.

Uploading:

Is the inverse operation . Uploading is sending data from a local system to a remote system ,such as a server, with the intent that the remote system should save a copy of whatever is being transferred

Transfer Rate:

Is the volume of data that can be travelled via transmission media in one second. And measured by several ways:

- Bps: Number of bits transferred per second. (The slowest)
- Kbps :Number of kilobits transferred per second.
- Mbps: Number of Megabits transferred per second. (The fastest)

Digital and Analogue Signals:

Many computer communication take place over telephone lines. However, because the telephone was originally designed for voice transmission , telephones typically send and receive Analogue Signals, which are continuous electronic waves. Computers in contrast, send and receives Digital Signals.

Modem:

Modem converts digital signals to analog signals and vice versa.

The modem enables digital computers to communicate across analogue telephone lines. This communication includes both voice and data communications.

the speed with which modems transmit data varies. This speed is called the Transfer speed, and is typically measured in bits per second (bps). The higher the speed is, the faster you can send and receive information.

Electronic Mail (E-mail):

Program that enables you to transmit and receive messages via Internet. Its Benefits are: Transfer messages very fast and sending the same message to several people.

Viruses:

A software programs which are written with the intention of causing inconvenience and disruption or damage in a computer system.

There are different types of computer viruses, including: Worms Viruses, Time bomb Virus, Boot sector viruses Pollutants files, Macro viruses and Trojan Horse Virus.