

# Internet, Search Engine and E-mail



## What is the Internet?

- The internet is the largest **computer network** in the world, connecting millions of computers.
- A **network** is a group of **two or more** computer systems linked together.
- A **small network** can be as simple as **two computers** linked together by a single cable
- A **large network** may connect **thousands** of computers and other devices together .
- A **wireless network** connects computers without a hub or network cables.



## Network types

- Local Area Networks (within a building).
- Metropolitan Area Networks (within buildings in same city).
- Wide Area Networks (covers countries and all world).

## Servers and Clients

- A **server** is a computer that "serves" many different computers in a network by **running specialized software** and **storing information**. For example, **web pages** are stored on servers.
- When you access a web page, your computer is acting as a **client**.



- A client runs familiar software such as **web browsers** or **email software**, and it communicates with the server to get the information it requires.
- In order for your browser to display a web page, it **requests** the data from the server where the page is stored. The server processes the request, then sends the data to your browser, where it is displayed.
- In **peer-to-peer** (P2P) networks, each computer acts as **both a server and a client**.  
Examples of P2P software include Skype and BitTorrent.



## The World Wide Web (WWW)

The **internet** is the **physical network** of computers all over the world.

- The **World Wide Web** is a **virtual network** of **web sites** connected by **hyperlinks** (or "**links**"). Web sites are stored on **servers** on the internet, so the World Wide Web is a part of the internet.
- The backbone of the World Wide Web is made of **HTML files**, which are specially-formatted documents that can contain links, as well as images and other media. It's also very common for websites to use technologies like **CSS (Cascading Style Sheets)** and **JavaScript** to do more advanced things.
- To get to a web page, you can type the **URL (Uniform Resource Locator)**

 <https://www.ncbi.nlm.nih.gov/pubmed/>



## Finding information online

**Search Engines:** *Search Engine:* there are various types of search engine such as Microsoft Edge, Mozilla Firefox, and Google Chrome...etc. Microsoft Edge is an internet browsing software manufactured by Microsoft Corp.

- **Google Scholar:** Google Scholar is a search engine that allows you to search for more academic material such as journal articles and books.
- **Intelligent Personal Assistants:** you can simply **talk** to your device's **intelligent personal assistant**. One example is **Siri**, which comes pre-installed on the **iPhone** .With Siri, you can ask a question like "**What's the weather today?**"



## Using the Internet to Communicate

Today, there are many different ways to communicate online, including **social networking, chat, VoIP**, and **blogging**.

- **Social Networking:** Social networking has become one of the main ways people keep in touch. Such as **Facebook and Twitter**.
- **VoIP: VoIP (Voice over Internet Protocol)**, allows you to have **telephone service** through your internet connection. Some services also let you do **video conferencing**, such as **Skype** and **Facebook Video Calling**.
- **Blogs:** Today, the average user has the ability to shape the web by **adding** to it. If you have knowledge or interests that you're passionate about, you can **create your own blog** and share your thoughts with the world. There are many sites like **blogger.com** and **wordpress.com** that let you create a blog for free.



## Connecting to the Internet

There are three things that you need: **internet service**, a **modem**, and a **web browser**.

1. **Internet service provider (ISP)** is an organization that provides services for accessing, using, or participating in the Internet. Internet services typically provided by ISPs include Internet access, Internet transit, domain name registration, web hosting, Usenet service, and colocation.
2. **Modem. Modem** is short for "Modulator / Demodulator." It is a hardware component that allows a computer or other device, such as a router or switch, to connect to the Internet.
- **Router:** In order for devices on the network to connect to the Internet, the **router** must be connected to a **modem**. Therefore, most routers have a specific Ethernet port that is designed to connect to the Ethernet port of a cable or DSL (A digital subscriber line) **modem**.





### 3. Web Browsers

A **web browser** is the tool that you use to access the **World Wide Web**. The browser's main job is to **display web pages**. The **World Wide Web** is a **virtual network** of **web sites** connected by **hyperlinks** (or "**links**"). Websites are stored on **servers** on the internet, so the World Wide Web is a part of the internet.

#### Internet on Mobile Devices:

- With tablet computers and mobile phones, it's possible to have full internet access, allowing you to **check your e-mail** and **browse the Web** away from home.
- Mobile data plans are often referred to as **3G**, which means it's the **third generation** of wireless standards. Many companies now provide **4G (fourth generation)** data services, which allow you to have **broadband** speeds on your mobile device.



## Home Networking

If you have multiple computers at home and want to use all of them to access the internet, you'll probably want to create a **home network**. In a home network, all of your devices connect to your **router**, which is connected to the **modem**.

Home networks aren't just for families! Even if you live alone, you may have multiple devices that can connect to a network. Many **phones, printers, mp3 players, video game consoles, and Digital Video Recorders (DVRs)** are equipped with wireless cards and often require very little setup to connect them to your home network.



## Wireless Security

A home network can be **wired** (using Ethernet cables) or **wireless** (using Wi-Fi). It may also be a **mixture** of the two, with some devices connecting with Ethernet and others connecting wirelessly. Wireless is generally more convenient; however, you'll need to think about **wireless security**.



Some important security terms that you'll need to know

**SSID:** A **service set identifier**, commonly called the SSID, is the **name** of a wireless network. You should change the default SSID to something unique that you'll remember

**Encryption password:** An encryption password is a **series of characters** that is used to control access to the network. For even greater security, some people use a **passphrase**, which is longer (and therefore more secure) than a password

**Encryption:** Encryption prevents unauthorized people from reading the data that is transmitted over your wireless network. The data is **coded** into an unreadable form, and it can only be **decoded** by a computer that has the correct **password** (or passphrase). The most common types of encryption for wireless networks are **WPA (Wi-Fi Protected Access)** and **WPA2**.



## Electronic mail or e-mail:

The electronic mail, or e-mail is a utility that allows the sending or receiving of messages to any network users around the world.

- Mailbox has five special-purpose, permanent folders that you can't remove or rename
  1. **Inbox:** Unless you tell us otherwise, all incoming messages automatically go to your Inbox folder (except suspected spam).
  2. **Drafts:** The Drafts folder holds messages that you've composed or are in the process of composing and haven't sent.
  3. **Sent:** You have the option of saving copies of the email messages you've sent in your Sent folder (this is the default when you begin using Mail).
  4. **Spam:** When you receive messages that Yahoo! Mail identifies as junk mail, it directs the messages to the Spam folder.
  5. **Trash:** When you delete messages, Yahoo! Mail moves them to the Trash folder.



An e-mail message is made up of the following parts:

**From :**Address of the person or entity who sends the message. Automatically generated by the system.

**To:** Address of the person to whom the e-mail is being sent.

**Subject::** Subject of the message.

**Date:** Date and hour of dispatch. Automatically generated by the system.

**CC:(carbon copy):** Address of the person to whom you wish to send a copy of the message.

**Attachments:** Allows to attach the message to a computer file like, for example, a report, an article, graphics, software or web page.

**Contents:** Body of the message.



## **End Session Questions:**

1. Define the network and its advantages?
2. List the types of networks and the range of coverage for each?
3. Define Microsoft Edge, how to use it and change its settings?
4. List three Search Engines and explain how to search about Medical in Iraq?
5. List three companies provide free E-mail Account? What is required to have new E-mail and what are the steps to attach files with message and send it?
6. What is the difference between Wi-Fi and Mobile data such as 3G.
7. What are the parts that made up an e-mail message ?
8. Define the following terms briefly :
  - a. gov
  - b.edu
  - c.org
  - e.iq

