

IT solution



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1. Define computer network

- network: A group or system of connected computers and equipment—in a room, building, campus, city, across the country, or around the world—that enables electronic communication

2. Discuss network types and topology

- **Network Types :**
- A network can be classified as personal area, local area, metropolitan, or wide area network depending on the physical distance between the nodes on the network and the communications and services it provides.
- **personal area network (PAN):** A network that supports the interconnection of information technology devices close to one person.
- **local area network (LAN):** A network that connects computer systems and devices within a small area, such as an office, home, or several floors in a building.
- **metropolitan area network (MAN):** A network that connects user and their computers in a geographical area that spans a campus or city.
- **wide area network (WAN):** A network that connects large geographic regions.

- **Network topology** : is the shape or structure of a network, including the arrangement of the communication links and hardware devices on the network.

The transmission rates, distances between devices, signal types, and physical interconnection may differ between networks, but they may all have the same topology.

- **star network**: A network in which all network devices connect to one another through a single central device called the hub node
- **bus network**: A network in which all network devices are connected to a common backbone that serves as a shared communications medium.
- **mesh network**: A network that uses multiple access points to link a series of devices that speak to each other to form a network connection across a large area

3. Identify communication media

- **Communications Media**
- The communications media selected for a network depends on the amount of information to be exchanged, the speed at which data must be exchanged, the level of concern about data privacy, whether the users are stationary or mobile, and a variety of business requirements.

Transmission media can be divided into two broad categories guided (also called wired) transmission media, in which communications signals are guided along a solid medium, and wireless, in which the communications signal is broadcast over airwaves as a form of electromagnetic radiation.

4. Define web technology in business

- Using the web technology in business include ecommerce
And it provide things like online shopping which can provide your service to more people so you have no geographical limits and one of the biggest example is amazon

5. Define internet and how to access it

- **Internet**
- The world's largest computer network, consisting of thousands of interconnected networks, all freely exchanging information.
- **Accessing the Internet**
- You can connect to the Internet in numerous ways.
- Which access method you choose is determined by the size and capability of your organization or system, your budget, and the services available to you.

- **Connecting via a LAN Server** : This approach is used by businesses and organizations that manage a local area network (LAN). By connecting a server on the LAN to the Internet using a router, all users on the LAN are provided access to the Internet. Business LAN servers are typically connected to the Internet at very fast data rates, sometimes in the hundreds of Mbps.
- **Connecting via Internet Service Providers** : Thousands of organizations serve as ISPs, ranging from universities that make the Internet available to students and faculty to small Internet businesses to major communications giants such as AT&T and Comcast. To connect to the Internet through an ISP, you must have an account with the service provider (for which you usually pay) along with software (such as a browser) and devices (such as a computer or smartphone) that support a connection via TCP/IP.
- **Wireless Connection** : In addition to connecting to the Internet through wired systems such as phone lines and fiber optic cables, wireless Internet service over cellular and Wi-Fi networks has become common.

6. Discuss deferent web application

- **News**
- News Web sites from Google, Yahoo!, Digg, provide popular or interesting stories from a variety of news sources.
- In a trend some refer to as social journalism or citizen journalism, ordinary citizens are more involved in reporting the news than ever before.
- Although social journalism provides important news not available elsewhere, its sources may not be as reliable as mainstream media sources. It is also sometimes difficult to discern news from opinion.
- **Education and Training**
- Today, institutions and organizations at all levels provide online education and training, which can be accessed via PCs, tablets, and smartphones. Kahn Academy, for example, provides free online training and learning in economics, math, banking and money, biology, chemistry, history, and many other

- **search engine:** A valuable tool that enables you to find information on the Web by specifying words that are key to a topic of interest, known as keywords
- **search engine optimization (SEO):** A process for driving traffic to a Web site by using techniques that improve the site's ranking in search results.
- **Instant messaging:** The online, real-time communication between two or more people who are connected via the Internet
- **Web log (blog):** A Web site that people and businesses use to share their observations, experiences, and opinions on a wide range of topics.
- **podcast:** An audio broadcast you can listen to over the Internet
- **content streaming:** A method for transferring large media files over the Internet so that the data stream of voice and pictures plays more or less continuously as the file is being downloaded.
- Other thing include :
- Online Games and Entertainment Shopping Online Travel, Geolocation, and Navigation

7. Define intranet extranet and cloud computer

- **Intranet** : A network that enables communication, collaboration, search functions, and information sharing between the members of an organization's team using a Web browser.
- **Extranet** : A network based on Web technologies that allows selected outsiders, such as business partners and customers, to access authorized resources of a company's intranet.
- **Cloud Computing** : A computing environment where software and storage are provided as an Internet service and are accessed with a Web browser.

Reference :

- principles of information systems 13th