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SUBJECT ; COMPUTER APPLICATION

SUBMITTED TO; SIR ZAKIR RAHIM  
 FINAL EXAMINATION  
  
**Q1; Explain Metropolitan Area Network (MAN) with a suitable example?**  
*Answer* ; Designed to ex a tend over a distric , councle or even an entire country.  
It may be a single network such as a cable television network , or it may be a means to connecting a number of LAN’s into a larger network so that resources may be shared LAN-to-LAN as well as devices to device.  
***For example;*** A company can be use MAN to connect the LAN’s in all of its offices throughout a city.   
  
**b) Define topology? Which topology would you chose to setup a local area network and why?**  
*Answer*; The way computers are connected together in a network is called a topology of a network.  
The way a network is laid out either physically or logically. The basic topologies are;  
1.BUS Topology  
2.Star Topology  
3.Ring Topology  
4.Mesh Topology  
  
Bus topology is used to set up a close local area network because; All devices are connected to a central cable, called the bus or backbone. Bus networks are relatively inexpensive and easy to install for small networks. Ether net systems use a bus topology.  
  
**Q2; Discuss different functions of operating system?**   
*Answer*; It is an integrated set of programs that controls the recourses of a computer system and provide its users with an interface that is easier to use.  
Make a computer system easier to use.  
Manage the resources of a computer system .  
***FUNCTIONS ;***

***1. Process Managemnt;*** Process management module takes care of creation and deletion of processes , scheduling of a system resources to different process requesting them, and providing mechganisms for synchronization and communication among processes.  
  
***2. Memory Management;*** Memory management module takes care of allocation and de-allocation memory space to programe in need of this resource.  
  
***3. File Management;*** Module takes care of file related activities such as orginations , storage , retrieval, naming, sharing and protection of files.  
  
***4. Device Management;*** The device management module of an operating system controls all I/O devices. It keeps track of I/O devices requests feom processes, issues commands to I/O devices and ensures correct data transmission to/from an I/O device.  
  
***5. Security;*** Security module protects the resources and information of a computer system against destruction and unauthorized access.   
  
**b) Explain the use of File Transfer Protocol and TelNet services ?**  
*Answer;* ***File Transfer Protocol (FTP):***

FTP service enables an internet user to move a file from one computer to another on the internet. A file may contain any type of digital information, text document, image, artwork, movie, sound, software etc. FTP has two basic services.

***I. Downloading;***

The process of moving a file from remote computer to one’s own computer.

***II. Uploading;***

The process of moving a file from one’s own computer to a remote computer.

In FTP service, a file transfer takes place in following manner:

1. A user executes ftp command on his/her local computer, specifying address of the remote computer.

2. An FTP process running on user’s computer establishes a connection with an FTP process running on remote computer.

3. The system then asks the user to enter his/her login name and password on the remote computer to ensure that the user possess permission to access the remote computer.

4. After successful login, the user downloads or uploads the desired file(s).

Note that a user needs access rights for a remote computer to transfer files to/from it. With this restriction, it is almost impossible to provide access rights to the large number of users on the internet to a computer that contains sharable information. The concept of anonymous FTP site solves this problem.  
  
***Telnet service*** enables an internet user to log in to another computer on the internet from his/her local computer. That is, a user can execute the telnet command on his/her local computer to start a login session on a remote computer. This action is also called “remote login”.

To start a remote login session, a user types telnet command and address of the remote computer on his/her local computer. The remote computer then authenticates the user by asking him/her to enter a login name and password. If the user specifies a correct login name and password, the remote computer logs in the user and telnet command then enters input mode. From now onwards, anything that the user types on the local computer is sent to the remote computer for processing.  
  
**Q3. Differentiate between open source software and applications software?  
Answer;** ***Open Source Software;*** Open-source software (OSS) is a type of [computer software](https://en.wikipedia.org/wiki/Computer_software) in which [source code](https://en.wikipedia.org/wiki/Source_code) is released under a [license](https://en.wikipedia.org/wiki/Open-source_license) in which the [copyright](https://en.wikipedia.org/wiki/Copyright) holder grants users the rights to use, study, change, and [distribute the software](https://en.wikipedia.org/wiki/Software_distribution) to anyone and for any purpose. Open-source [software](https://en.wikipedia.org/wiki/Software) may be developed in a [collaborative public manner](https://en.wikipedia.org/wiki/Open-source_model). Open-source software is a prominent example of [open collaboration](https://en.wikipedia.org/wiki/Open_collaboration).  
  
***Application Software***; Application software is a set of one or more programs, which solves a specific problem or does a specific task. For example, payroll processing software, photo editing software, Graphic designing software etc.  
(app for short) is a program or group of programs designed for end users. Examples of an application include a word processor, a spreadsheet, an accounting application, a web browser, an email client, a media player, a file viewer, simulators, a console game or a photo editor.  
  
**b) Write different features of system software?  
Answer;** An important feature of System Software are:

System Software is closer to the system.

Generally written in a low-level language.

The system software is difficult to design and understand.

Fast in speed.

Less interactive.

Smaller in size.

Hard to manipulate.  
  
**Q4. In your opinion, what are the different types of common media used for storage, access and transmission of information? Explain each type in detail?   
Answer;** Common media for storage, access, and transmission of information are:

Text (alphanumeric characters)

Graphics (line drawings and images)

Animation (moving images)

Audio (sound)

Video (Videographed real-life events)

Multimedia in information technology refers to use of more than one of these media for information presentation to users.   
  
***Text (alphanumeric characters)*** Alphanumeric characters are used to present information in text form. Computers are widely used for text processing.

Keyboards, OCRs, computer screens, and printers are some commonly used hardware devices for processing text media.

Text editing, text searching, hypertext, and text importing/exporting are some highly desirable features of a multimedia computer system for better presentation and use of text information.  
  
**Graphics (line drawings and images)**

Computer graphics deals with generation, representation, manipulation, and display of pictures (line drawings and images) with a computer.

Locating devices (such as a mouse, a joystick, or a stylus), digitizers, scanners, digital cameras, computer screens with graphics display capability, laser printers, and plotters are some common hardware devices for processing graphics media.

Some desirable features of a multimedia computer system are painting or drawing software, screen capture software, clip art, graphics importing, and software support for high resolution.  
  
***Audio (sound)***

Computer audio deals with synthesizing, recording, and playback of audio or sound with a computer.

Sound board, microphone, speaker, MIDI devices, sound synthesizer, sound editor and audio mixer are some commonly used hardware devices for processing audio media.

Some desirable features of a multimedia computer system are audio clips, audio file importing, software support for high quality sound, recording and playback capabilities, text-to-speech conversion software, speech-to-text conversion software, and voice recognition software.  
  
Video (Videographed real-life events)  
Computer video deals with recording and display of a sequence of images at a reasonable speed to create an impression of movement.Each individual image of such a sequence is called a frame.

Video camera, video monitor, video board, and video editor are some of the commonly used hardware devices for processing video media.

Some desirable features of a multimedia computer system with video facility are video clips and recording and playback capabilities.  
  
***Virtual reality*** is a relatively new technology using which the user can put a pair of goggles and a glove and tour a three-dimensional world that exists only in the computer, but appears realistic to the user.