

## **Week 4 Tutorial**

**Students are required to do research on the following questions and need to show them to the lecturer.**

1. Which one of the following is not a Network Service?
  - a. File Service
  - b. Remote Access
  - c. Database Service
  - d. Memory Service**
2. Which of the following is the Directory Service (EDS) Standards.
  - a. X.500**
  - b. EDS.500
  - c. CMA
  - d. ISO
3. Which of the following falls under Remote Access and Administration?
  - a. Telecommuting
  - b. Terminal Emulation Services
  - c. Mobile Users
  - d. All of the above**

4. Which of the following is not a component of Mail services?

- a. MTA
- b. MTD**
- c. MDA
- d. MUA

5. Describe Remote Access and its uses.

**Remote Access** is a technology that allows users to connect to a computer or network from a distant location using the internet. It lets people access files, software, and other resources as if they were physically present in the office or organization.

**Uses of Remote Access:**

1. **Work from Home:** Employees can access their office computers and work remotely.
2. **Technical Support:** IT staff can fix computer problems from any location.
3. **File and Data Access:** Users can retrieve or upload important files anytime and anywhere.

6. Differentiate between Internet, Intranet and Extranet.

Basis	Internet	Intranet	Extranet
<b>Meaning</b>	A global network that connects millions of computers worldwide.	A private network used within an organization.	A controlled private network that allows access to authorized outsiders.
<b>Access</b>	Public – anyone can access it.	Private – only organization members can access it.	Restricted – selected external users (like partners or clients) can access it.
<b>Example</b>	Websites like Google, YouTube, and Facebook.	A company's internal portal for employees.	A supplier portal shared between a company and its vendors.

7. What do you mean by CLI and GUI. What would you prefer to use and why?

**CLI (Command Line Interface):**

It is a text-based interface where users type commands to perform tasks. Example: Command Prompt or Terminal.

**GUI (Graphical User Interface):**

It is a visual interface that uses icons, buttons, and menus to interact with the computer. Example: Windows, macOS, Android.

**Preference:**

I would prefer to use **GUI** because it is easy to use, user-friendly, and does not require memorizing commands. It is best for beginners and everyday users.

## 8. Define Directory Services and write three types of directory services.

**Directory Services** are network services that store, organize, and manage information about users, computers, and other resources on a network. They help in authentication, authorization, and resource management.

**Three types of Directory Services:**

1. **Active Directory (AD)** – Used in Windows networks to manage users and resources.
2. **Lightweight Directory Access Protocol (LDAP)** – An open standard protocol for accessing and maintaining directory information.
3. **Novell Directory Services (NDS)** – Used in Novell NetWare systems for managing network resources.

## 9. Explain three components of Mail Services.

Mail services consist of several components that work together to send, receive, and store emails. The three main components are:

1. **Mail User Agent (MUA):**  
This is the application used by users to compose, send, and read emails. Examples include Microsoft Outlook, Mozilla Thunderbird, and web-based clients like Gmail.
2. **Mail Transfer Agent (MTA):**  
This component is responsible for transferring emails from one server to another using protocols like SMTP (Simple Mail Transfer Protocol). Examples of MTAs include Sendmail and Postfix.
3. **Mail Delivery Agent (MDA):**  
Once the MTA receives the mail, the MDA delivers it to the recipient's mailbox. It stores the email so the user can later retrieve it using protocols such as POP3 or IMAP.

**10. We all have faced Lockdown during COVID19. Explain how NOS services helped us and other big companies from bankruptcy.**

During the COVID-19 lockdown, **Network Operating System (NOS)** services played a very important role in keeping people and businesses connected. These services helped in the following ways:

**1. Remote Access and Communication:**

NOS allowed employees to access company networks and data from home. This made work-from-home possible through tools like Zoom, Microsoft Teams, and Google Meet.

**2. File and Resource Sharing:**

Companies could continue sharing important files, printers, and other resources over the network securely, ensuring teamwork and productivity.

**3. Data Security and Management:**

NOS provided security features such as user authentication, data backup, and access control. This protected company data even when employees worked remotely.

Because of these features, many companies were able to continue their operations online, avoid huge losses, and prevent bankruptcy during the lockdown.