**Module: 4- Linux server - Manage user and Groups and working with file systems**

**1] Manage users and groups with commands like useradd, userdel, groupadd, and passwd**

**Manage Users and Groups**

1. **Add a User**:

sudo useradd <username>

* + Add a home directory:

sudo useradd -m <username>

1. **Delete a User**:

sudo userdel <username>

* + Remove home directory:

sudo userdel -r <username>

1. **Add a Group**:

sudo groupadd <groupname>

1. **Delete a Group**:

sudo groupdel <groupname>

1. **Set/Change User Password**:

sudo passwd <username>

1. **Add a User to a Group**:

sudo usermod -aG <groupname> <username>

**2] Explain different file system types in Linux?**

* ext4: Most common, supports large files and journaling.
* xfs: High-performance journaling filesystem.
* btrfs: Advanced, supports snapshots and self-healing.
* FAT32/NTFS: For compatibility with Windows systems.
* swap: Used for virtual memory.
* tmpfs: Temporary file storage in RAM.

**3] Explain File Permission groups in Linux?**

1. User (u): The file owner.
2. Group (g): Users in the file's group.
3. Others (o): Everyone else.

**4] How do you switch from one desktop environment to another, such as switching from KDE to Gnome?**

Switching Desktop Environments (KDE to GNOME):

1. Install GNOME (if not installed):

sudo apt install gnome-shell

1. Log out and select GNOME on the login screen under "Session" or "Desktop Environment."

**5] What are the kinds of permissions under Linux?**

1. **Read (r)**: View file contents.
2. **Write (w)**: Modify file contents.
3. **Execute (x)**: Run as a program/script.

**6] What are the different modes when using vi editor?**

 **Normal Mode**: For navigation and commands.

 **Insert Mode**: For editing text (enter with i).

 **Command Mode**: For saving/exiting (enter with :).