**Module 2**

**Linux server - Operate running systems**

**1.** PID stands for Process IDentifier. It's a unique identification number assigned to each running process. When a process is started, the kernel assigns it a PID which can be used to uniquely identify and control that process.

2. PPID stands for Parent Process IDentifier. It refers to the PID of the parent process that spawned a particular process. Every process, except for the initial "init" process (PID 1), has a parent process from which it was created.

3. The ps command in Linux is used to list currently running processes on a system. It provides information about these processes, such as their process IDs (PIDs), parent process IDs (PPIDs), CPU and memory usage, execution status, and more.

4. The ps aux command is a popular and powerful way to list detailed information about all processes running on a Linux system.

5. The top command is a powerful tool used in Linux and Unix-like operating systems to monitor system processes and resource usage in real-time.

6. In Linux, you can change the priority of a process using the nice command or the renice command.

7. To display a list of jobs that are currently running in the background or suspended in the shell session.

8.For searching text patterns within files or streams of data. Its name is derived from the ed (editor) command "g/re/p," which stands for "globally search for a regular expression and print matching lines."

9. A daemon is a background process that runs continuously, typically providing specific services or performing system tasks. Daemons are usually started during the system boot process and run independently of user interaction.

10. OpenSSH is an essential tool in Linux for secure remote access and communication between systems.

11. The lastb command in Linux is used to display a list of the last logged-in users who attempted to log in but failed.

**Assignment Level Intermediate**

1. To access a remote user via SSH, you would typically use the ssh command followed by the username and the IP address or hostname of the remote system. Here's the command:

Ssh username@remote ip or hostname

2. The w command in Linux is used to display information about currently logged-in users and their activities. When used with the -f option, it provides additional details about the login environment, such as the host and terminal.

3. SSH host keys, also known as SSH host key pairs, are cryptographic keys used in the Secure Shell (SSH) protocol to authenticate hosts during the SSH connection process. They serve as a form of identification for the SSH server, allowing clients to verify that they are connecting to the correct server and not an impostor.

4. The default location for storing server's public keys on the client side is typically within the ~/.ssh/known\_hosts file in the user's home directory. This file contains a list of public keys of SSH servers that the user has connected to in the past.

5. The command journalctl --since today is used to display system journal entries since the beginning of the current day.

6.chronyd is a daemon used for time synchronization on Linux systems. It is part of the Chrony suite, which provides tools for accurately synchronizing system clocks with remote NTP (Network Time Protocol) servers.

7. Network Time Protocol.

8. 123.

9. You can set the system time zone using the timedatectl command, which is part of the systemd suite.