

# PROCESS MANAGEMENT AND USER MANAGEMENT

1) What is Linux process management and Explain Basic commands?

Ans:-

The process is a program in execution.

The process is created when a command is to be executed so, it can be called a running instance of a program in execution. Turning or controlling a process is called process management.

Any process can be run in 2 ways:

- ① Foreground process: By default, All process run in foreground. When a process run in foreground, no other process can be run on same terminal until process is finished or killed. When issuing this type of process, system receives input from the keyboard (stdin) & gives output to the screen (stdout).
- ② Background process: Adding '&' to a foreground command makes it a background process. A B.P runs on its own without input from keyboard (stdin) and waits for input from keyboard. While the process runs in background, other process can run in foreground.

only after the Background process becomes a foreground process, the process gets completed else it will be in stop state.

## The Basic commands used for process management in Linux :

- ① **ps** : displays all process in Execution.  
\* to list all process in background using 'ps f'  
and to know more inf on process use 'ps -ef'.
- ② **kill** : used to process whose pid is known.  
to kill a process forcefully and unconditionally use 'kill -9 PID'.
- ③ **bg** : A job control command that resumes suspended jobs while keeping them running in the background.
- ④ **fg** : It continues a stopped job by running it in foreground.
- ⑤ **top** : Another command that shows all the process running in linux working environment.

Q) Explain types of process in Linux?

Ans:- there are 5 types of process in linux :

1) **Parent process** :

The process created by the user or terminal.  
All process have a parent process, if it was created directly by user then the parent process will be kernel processes.



- ② child process : the process created by another process (by its parent process). All child processes have a parent process.
- ③ Orphan process : sometimes when parent gets executed before its own child process then the child process becomes an orphan process.
- ④ zombie process : the processes which are already dead but shows up in process status & called zombie process. it have 0 CPU consumption.
- ⑤ Daemon process : These are system-related processes that run in background. It has unrecognized has "?" in its TTY field.

3) Explain user management in Linux?

Ans: the important commands used to manage users in Linux are:

- ① to list out all the users in Linux, use the `awk` command, with `-f` option.
- ② using `id` command, you can get ID of any username. Every user has ID assigned to it and user is identified with the help of this ID. By default, this ID is also group ID of user.

`id username`

ex: `id test`

- ③ the command to add a user. `useradd` command add a new user to the directory. username of user will be provided by us to command.

`sudo useradd username`

- ④ Using `passwd` command to assign a password to a user.

`passwd username`

- ⑤ command to change user ID for a user.

`usermod -u new_id username`

this command can change user ID of user.

- ⑥ command to modify group ID of user.

`usermod -g new-group-id username`

this command to change group ID of user.

- ⑦ you can change user login name using `usermod` command.

`sudo usermod -l new-login-name old-login-name`

- ⑧ to delete a username:

the command deletes user whose username is provided. Make sure user is not in group, if user is part of group cannot be deleted directly, we need to remove from group and then we can delete.

`userdel -r username`