

Q1. What is Inode and process ID?

Ans: Inode stands for Index Node which consists of information about the files and the directories, their disk allocation size in a file system.

Process ID: Every process that is running in an operating system can be identified uniquely by a process ID or PID.

Q2. Which are the linux directory commands in linux?

Ans: Linux directory commands on linux are the commands that are used to interact with directories. Some linux directory commands are:

- pwd: shows present working directory
- mkdir: makes new directory
- ls: list files in a directory
- Cd: change directory

Q3. What is a virtual desktop?

Ans: Virtual desktop is a program that helps us to create multiple desktops over a single machine using virtualization. The virtual machines that are created are completely isolated from each other.

Q4. What are different modes of vi editor?

Ans: vi editor has the following modes:

- Insert mode: In this mode we can insert data. We can go to insert mode by pressing i.
- Command mode: In this mode we can enter vi commands to do file manipulations like cut, copy, past, etc. We can go to command mode by pressing Esc key.

Q5. What are daemons?

Ans: Daemons are the processes that are run in the background in linux. Mostly in linux the servers and services like web server, ssh, etc are run as daemons.

Q6. What are process states in linux?

Ans: Process states are the states in which a process can go while running. There are 5 types of process states in linux:

- Running: The process that are in running currently
- Interruptible Sleep: These are the processes that are running but are waiting for some input or data.
- Uninterruptible sleep: These are the processes that are waiting for some process to complete.
- Stopped Process: these are the processes that have completed running and have now stopped.
- Zombie Process: these are the processes that have stopped running but the parent process is running that sometimes causes memory leak.

Q7. Explain grep command?

Ans: Grep command is used to do pattern matching in a file or output of a command. It can also be used to search complex patterns using regex.

e.g.: The following command searches for test string in the file test.txt

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$ grep test test.txt
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Q8. Explain process management system calls in linux?

Ans: Process management system calls are way in which a program or application requests a service related to the process from the system like:

- Fork: These calls are used to create a duplicate process.
- Wait: these calls are used to pause a certain process till some other process gets completed.
- Exec: This calls loads the program into the memory and starts the execution.
- Exit: This terminates the process.

Q9. Explain the 'ls' command?

Ans: ls command is used to list the contents present inside a directory in an alphabetic order by default. It supports many other options among which most common variations are:

- ls -l : shows contents in a long list form with extra details
- ls -a: shows all contents of the directory including the hidden files.

Q10. Explain redirection operator?

Ans: There are 3 types of redirection in linux:

1. Input Redirection: < symbol is used in input redirection.
E.g.: cat < test.txt: The input for the cat command will be redirected from the STDOUT of the test.txt file.
2. Output redirection: > symbol is used for output redirection
E.g.: cat > file.txt : this command will take input from STDIN and redirect the output to file.txt.
3. Error Redirection: Error redirection is used to redirect the output of the wrong command to some other file instead of STDOUT. &> is used for error redirection.
E.g.: ksd &> file.txt: This command will redirect the error message to the file.txt