

① what is operating system?

operating system is a software that manages the computer hardware & provides the consistent and safe environment for running program

It acts as an interface between the program and hardware resources that these program uses

② what is advantages using linux as over the other OS?

* Open source:-

As it is open source its source code is easily available. Anyone having programming knowledge can customise the operating system. One can contribute modify distribute & enhance the code for any purpose

* Free:-

One of the biggest advantages of the linux system is that it is free to use. we can easily download it

* Light weight:-

linux is lightweight the requirement for running linux are much less than other operating system. In linux the memory footprint and disk space are also lesser

* Stability:-

linux is more stable than other OS. linux doesn't require to reboot the system to maintain performance level it rarely hang up. as slow down it has big up-time

* performance:-

linux system provides high performance over different n/w. because it is capable of handling a large number of user simultaneously

③ Name few of the linux based OS

- Ubuntu
- Kali Linux
- Linux mint
- Arch Linux
- gentoo
- Debian

④ what is two pathing technique?

* Absolute pathname:-

• many linux commands use file and directory name as arguments presumed to existing directory

• if the first character of the pathname is / the file location determined with respect to the root - this absolute path

ex! /home/new/A.txt

* Relative pathname:-

• Relative pathname - either the current working or present directory as reference and specifies path relative to it

• A relative pathname using dot (.) and double dot (..) notation

ex! .. /spit /new

⑤ Define following commands with example?

* ls:-

-> README

chup1

chup2

* cd:-

• changing the current directory

• Navigating around in the file system can be done by cd command

ex! cd ../path

ex! cd /home/new

* pwd:-

• checking current directory

ex \$ pwd

-> /home/new

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cal:

cal command is used to see the calendar of any specific month or a complete year
ex: - cal

→ cal 9-2021

*date:-

Current date can be displayed with the date command
ex: - `%date`

mon Sep 06 09:00:00 IST 2018

`%date +%m`

09

`%date +%h`

Sep

`%date +%h %m`

Sep 09

mkdir:-

• Directories are created with mkdir command

• The command is followed by name of the directory to be created

eg:- mkdir pkg1

eg:- mkdir /home /pkg1

rmdir:-

rmdir can remove the directory

ex:- ~~mkdir pkg1~~ now
rmdir pkg1

rm

• rm command deleted the one more file

• It should be used with caution

ex:-

rm chap 1

* CP:

- CP copies a file or group of files

eg: cp text.txt

* MV:

- move the file from one partition to another
- mv command is used rename the file

eg: mv chap2 chap3

* chmod:

- changing the file permission

eg: chmod ugo+x file

* exit:

exit command in Linux is used to exit the shell where it is currently running. It takes one or more parameters as [n] and exit the shell with return of status n. If n is provided then it simply returns the status of last command that is executed.

ex: exit

* History:

history command is used to view the previously executed command. This feature was not available in the Bourne shell. In bash shell history command shows the whole list of the command.

eg: history

* tree:

tree is a recursive directory listing program that produces a depth-indented listing of file with no argument tree list the files in the current directory.

eg: tree -a /etc

-> /etc

demo1

sample.txt

sample.txt

whoami:-

it displays the username of the current user when this command is executed

eg:- whoami
-> ABCD

⑥ Create a directory and in that directory create a text file with the name "helloworld.txt". after which return ls -l helloworld.txt and answer the output

-rw-r--r-- 1 user 0 Sep 6 7:20 helloworld.txt

⑦ Name few text editors of linux

- * Vi / vim editor
- * nano editor
- * gedit editor
- * sublime text editor
- * gno emacs
- * gvim editor
- * Vscade
- * Ajan editor
- * Sublime text editor

⑧ write down the steps involved in following scenario?

Step 1

create file with the sample.txt
touch sample.txt

Step 2:- then open file with nano editor

\$ nano sample.txt

Step 3: then edit file with name, user, college name, ~~1234~~

ABCD
user123456
Srihar Institute of Technology

Step 4:

Save the file with ctrl + s and exit using ctrl + x

⑨

Explore the commands / dir's O/P for following

a) \$ mkdir dir1 / dir2 / dir3

\$ ls

dir1

dir2

dir3

b) \$ mkdir -p dir1 / dir2 / dir3

\$ ls

→ dir1

\$ ls dir1

→ - dir2

\$ ls dir1 / dir2

- dir3

c) cp -f \$ touch file.txt

→ \$ ls

file.txt

d) cp file1.txt dir2 / file2.txt

\$ ls dir2

dir3

file2.txt

⑩

Describe the main two chmod techniques with an example each

relative permission:-

- chmod only changes the permission specified in the command line and leave the other permissions unchanged
- | category | operation | permission |
|---------------|------------|-------------|
| u - user | + assign | r - read |
| g - group | - remove | w - write |
| o - other | = absolute | x - execute |
| a - all (ugo) | | |

absolute permissions:-

- If the current file permissions are not known then set all new permissions explicitly
- A string of three octal digit is used as an expression
- The permission can be represented by one octal digit for each category

Read permission - 4 (octal 100)

Write permission - 2 (octal 010)

Execute permission - 1 (octal 001)

ex:

chmod 666 file.txt

⑪ How to rename a file in linux? give example

- using mv command rename (move) file
- it does not create a copy of the file & ~~not~~ rename it

ex: mv chap 01 man 01

⑫ Create test file with any name and give all the permissions to user, Read & execute permission to group and only read permission to other

-> \$ touch sample.txt

- rw-r--r--

\$ chmod u+r sample.txt

\$ chmod g+rx sample.txt

\$ chmod o+r sample.txt

\$ ls -l sample.txt

- rw-r--r--