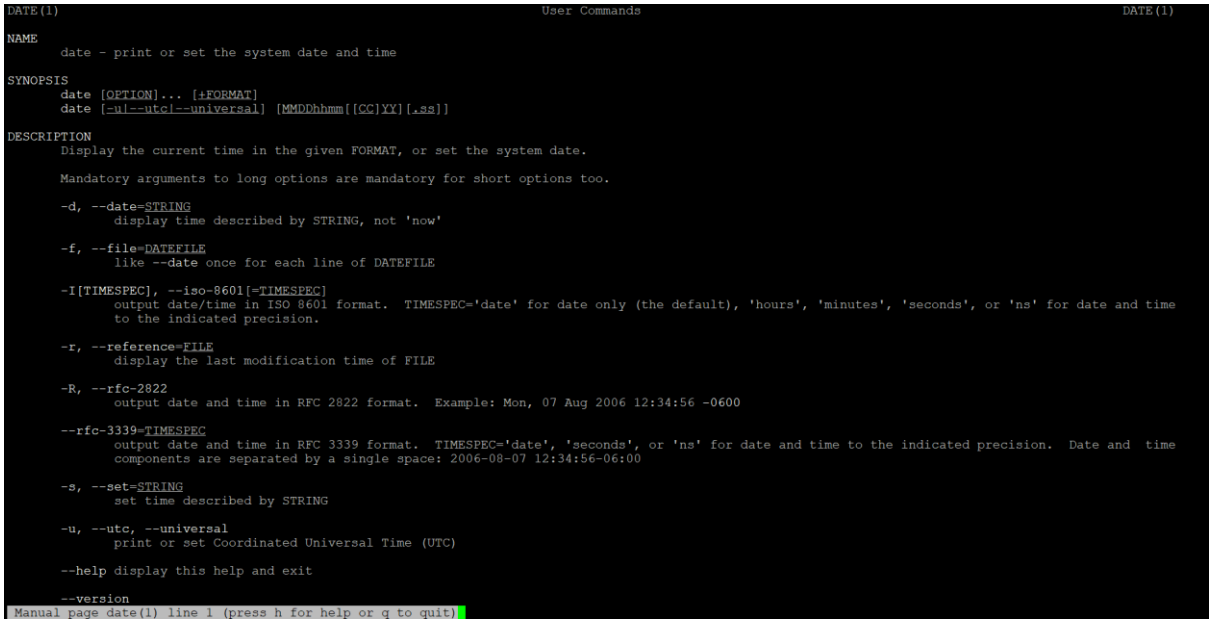
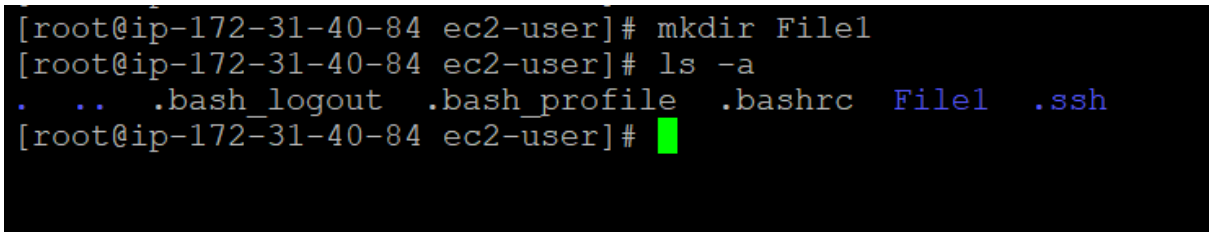
Practical Questions.

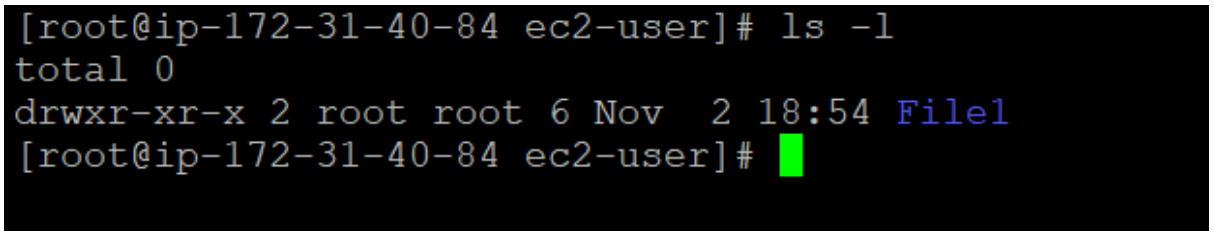
1 man



2 ls



3 . List the contents of a directory and their attributes
Ls -l command used for list the file.



4.

Cd is used for change directory,

Touch is used for create new file,

Cat> filename is used for edit the file.

```
[root@ip-172-31-40-84 ec2-user]# cd File1/
[root@ip-172-31-40-84 File1]# touch info.txt
[root@ip-172-31-40-84 File1]# cat > info.txt
Hii all Welcome to Capgemini
Wish you Happy Diwali
[root@ip-172-31-40-84 File1]# cat info.txt
Hii all Welcome to Capgemini
Wish you Happy Diwali
[root@ip-172-31-40-84 File1]# du -h info.txt
4.0K    info.txt
[root@ip-172-31-40-84 File1]#
```

5 .
Show all files and folders including hidden one.
Ls -a shows the hidden file.

```
[root@ip-172-31-40-84 File1]# ls -a
.  ..  info.txt
[root@ip-172-31-40-84 File1]#
```

6 . list directories recursively

Ls -R command used for listing directory recursively.

```
[root@ip-172-31-40-84 File1]# ls -R
.:
info.txt
[root@ip-172-31-40-84 File1]#
```

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```
[root@ip-172-31-40-84 File1]# touch info1.txt project.txt
[root@ip-172-31-40-84 File1]# cat > info1.txt
Happy Diwali
[root@ip-172-31-40-84 File1]# cat > project.txt
this project is made by our team
team work
win work
[root@ip-172-31-40-84 File1]# ls -s
total 12
4 info1.txt  4 info.txt  4 project.txt
[root@ip-172-31-40-84 File1]#
```

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```
[root@ip-172-31-40-84 File1]# ls -lt
total 12
-rw-r--r-- 1 root root 53 Nov  2 19:01 project.txt
-rw-r--r-- 1 root root 13 Nov  2 19:00 info1.txt
-rw-r--r-- 1 root root 51 Nov  2 18:56 info.txt
[root@ip-172-31-40-84 File1]#
```

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```
[root@ip-172-31-40-84 File1]# which httpd
/sbin/httpd
[root@ip-172-31-40-84 File1]#
```

10 . cd .. command is used for switch the directory .

```
[root@ip-172-31-40-84 File1]# cd ..
[root@ip-172-31-40-84 ec2-user]# ls
File1
[root@ip-172-31-40-84 ec2-user]# cd File1/
[root@ip-172-31-40-84 File1]#
```

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```
[root@ip-172-31-40-84 File1]# env
XDG_SESSION_ID=1
HOSTNAME=ip-172-31-40-84.ap-south-1.compute.internal
SHELL=/bin/bash
TERM=xterm
HISTSIZE=1000
USER=root
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:mi=01;05;37;41:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lz4=01;31:*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.Z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.jpg=01;35:*.jpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.axv=01;35:*.anx=01;35:*.ogv=01;35:*.ogx=01;35:*.aac=01;36:*.au=01;36:*.flac=01;36:*.mid=01;36:*.midi=01;36:*.mka=01;36:*.mp3=01;36:*.mpc=01;36:*.ogg=01;36:*.ra=01;36:*.wav=01;36:*.axa=01;36:*.oga=01;36:*.spx=01;36:*.xspf=01;36:
SUDO_USER=ec2-user
SUDO_UID=1000
USERNAME=root
PATH=/sbin:/bin:/usr/sbin:/usr/bin
MAIL=/var/spool/mail/ec2-user
PWD=/home/ec2-user/File1
LANG=en_US.UTF-8
SHLVL=1
SUDO_COMMAND=/bin/su
HOME=/root
LOGNAME=root
LESSOPEN=||/usr/bin/lesspipe.sh %s
SUDO_GID=1000
_=/bin/env
OLDPWD=/home/ec2-user
[root@ip-172-31-40-84 File1]#
```

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```
[root@ip-172-31-40-84 File1]# var=50
[root@ip-172-31-40-84 File1]# echo $var
50
[root@ip-172-31-40-84 File1]#
```

14.

Print the value of the env variable "PATH" on the console

```
[root@ip-172-31-40-84 File1]# echo $PATH
/sbin:/bin:/usr/sbin:/usr/bin
[root@ip-172-31-40-84 File1]#
```

16. Display your currently logged in user

```
[root@ip-172-31-40-84 File1]# whoami
root
```

17. how do you change the currrently logged in user to another user?

```
[root@ip-172-31-40-84 File1]# useradd user1
[root@ip-172-31-40-84 File1]# su -user1
```

```
[root@ip-172-31-40-84 File1]# su -l user1
[user1@ip-172-31-40-84 ~]$ whoami
user1
[user1@ip-172-31-40-84 ~]$
```

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```
[root@ip-172-31-40-84 ~]# uname -s
Linux
[root@ip-172-31-40-84 ~]# uname -a
Linux ip-172-31-40-84.ap-south-1.compute.internal 4.14.248-189.473.amzn2.x86_64 #1 SMP Mon Sep 27 05:52:26 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux
[root@ip-172-31-40-84 ~]# uname -n
ip-172-31-40-84.ap-south-1.compute.internal
[root@ip-172-31-40-84 ~]# uname -r
4.14.248-189.473.amzn2.x86_64
[root@ip-172-31-40-84 ~]# uname -v
#1 SMP Mon Sep 27 05:52:26 UTC 2021
[root@ip-172-31-40-84 ~]# uname -m
x86_64
[root@ip-172-31-40-84 ~]# uname -p
x86_64
[root@ip-172-31-40-84 ~]# uname -o
GNU/Linux
[root@ip-172-31-40-84 ~]#
```

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```
[root@ip-172-31-40-84 ~]# mkdir File
[root@ip-172-31-40-84 ~]# ls
File
[root@ip-172-31-40-84 ~]# cd File/
[root@ip-172-31-40-84 File]# pwd
/root/File
[root@ip-172-31-40-84 File]#
```

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```
[root@ip-172-31-40-137 ec2-user]# mkdir file1
[root@ip-172-31-40-137 ec2-user]# mkdir file2
[root@ip-172-31-40-137 ec2-user]# cd file
bash: cd: file: No such file or directory
[root@ip-172-31-40-137 ec2-user]# cd file1
[root@ip-172-31-40-137 file1]# cd ..
[root@ip-172-31-40-137 ec2-user]# ls
file1  file2
[root@ip-172-31-40-137 ec2-user]# cd home/
bash: cd: home/: No such file or directory
[root@ip-172-31-40-137 ec2-user]# cd home
bash: cd: home: No such file or directory
[root@ip-172-31-40-137 ec2-user]# cd /home
[root@ip-172-31-40-137 home]# ls
ec2-user
```

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```
[root@ip-172-31-40-137 home]# history
    1  mkdir file1
    2  mkdir file2
    3  cd file
    4  cd file1
    5  cd ..
    6  ls
    7  cd home/
    8  cd home
    9  cd /home
   10  ls
   11  history
[root@ip-172-31-40-137 home]#
```

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```
[root@ip-172-31-40-137 home]# printenv
XDG_SESSION_ID=1
HOSTNAME=ip-172-31-40-137.ap-south-1.compute.internal
SHELL=/bin/bash
TERM=xterm
HISTSIZE=1000
USER=root
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:mi=01;05;37;41:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=3
4;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lz4=01;31:*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*
.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.Z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31
:*.tbz2=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31
:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.jpg=01;35:*.jpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*
.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;3
5:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35
:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.axv=01;35:*.anx=01;35:*.ogv=01;35:*.ogx=01;35:*.
aac=01;36:*.au=01;36:*.flac=01;36:*.mid=01;36:*.midi=01;36:*.mka=01;36:*.mp3=01;36:*.mpc=01;36:*.ogg=01;36:*.ra=01;36:*.wav=01;36:*.axa=01;36:*.oga=01;36:*.s
px=01;36:*.xspf=01;36:
SUDO_USER=ec2-user
SUDO_UID=1000
USERNAME=root
PATH=/sbin:/bin:/usr/sbin:/usr/bin
MAIL=/var/spool/mail/ec2-user
PWD=/home
LANG=en_US.UTF-8
SHLVL=1
SUDO_COMMAND=/bin/su
HOME=/root
LOGNAME=root
LESSOPEN=||/usr/bin/lesspipe.sh %s
SUDO_GID=1000
_=/bin/printenv
OLDPWD=/home/ec2-user
[root@ip-172-31-40-137 home]#
```

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```
[root@ip-172-31-40-137 home]# env | sort -f
HISTSIZE=1000
HOME=/root
HOSTNAME=ip-172-31-40-137.ap-south-1.compute.internal
LANG=en_US.UTF-8
LESSOPEN=||/usr/bin/lesspipe.sh %s
LOGNAME=root
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:mi=01;05;37;41:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=3
4;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lz4=01;31:*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*
.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.Z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31
:*.tbz2=01;31:*.tz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31
:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.jpg=01;35:*.jpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*
.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;3
5:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv=01;35:*.wmv=01;35:*.asf=01;35:*.rm=01;35:*.rmvb=01;35:*.flc=01;35:*.avi=01;35
:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01;35:*.xcf=01;35:*.xwd=01;35:*.yuv=01;35:*.cgm=01;35:*.emf=01;35:*.axv=01;35:*.anx=01;35:*.ogv=01;35:*.ogx=01;35:*.
aac=01;36:*.au=01;36:*.flac=01;36:*.mid=01;36:*.midi=01;36:*.mka=01;36:*.mp3=01;36:*.mpc=01;36:*.ogg=01;36:*.ra=01;36:*.wav=01;36:*.axa=01;36:*.oga=01;36:*.s
px=01;36:*.xspf=01;36:
MAIL=/var/spool/mail/ec2-user
OLDPWD=/home/ec2-user
PATH=/sbin:/bin:/usr/sbin:/usr/bin
PWD=/home
SHELL=/bin/bash
SHLVL=1
SUDO_COMMAND=/bin/su
SUDO_GID=1000
SUDO_UID=1000
SUDO_USER=ec2-user
TERM=xterm
USER=root
USERNAME=root
XDG_SESSION_ID=1
_=/bin/env
[root@ip-172-31-40-137 home]#
```

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```
[root@ip-172-31-40-137 File1]# zip  mydemo.zip info1.txt info2.txt
  adding: info1.txt (stored 0%)
  adding: info2.txt (deflated 7%)
[root@ip-172-31-40-137 File1]# ls
info1.txt  info2.txt  mydemo.zip
[root@ip-172-31-40-137 File1]# rm info1.txt
rm: remove regular file ‘info1.txt’? y
[root@ip-172-31-40-137 File1]# rm info2.txt
rm: remove regular file ‘info2.txt’? y
[root@ip-172-31-40-137 File1]# ls
mydemo.zip
[root@ip-172-31-40-137 File1]# unzip mydemo.zip
Archive:  mydemo.zip
 extracting: info1.txt
  inflating: info2.txt
[root@ip-172-31-40-137 File1]# ls
info1.txt  info2.txt  mydemo.zip
[root@ip-172-31-40-137 File1]# cat info
cat: info: No such file or directory
[root@ip-172-31-40-137 File1]# cat info1.txt
Welcome to Capgemini
Wishing you Happy Diwali
[root@ip-172-31-40-137 File1]# cat info2.txt
happy Diwali From our Team
Team work
Win Work
[root@ip-172-31-40-137 File1]#
```

THEORY QUESTIONS-

Q. What is the diff between log-in and non log in shell.

Ans. It is an important layer of linux architecture .

. shell is an interface which takes I/P from users and sends instructions to the kernel.

. Also takes the o/p from kernel qand send the result back to output shell.

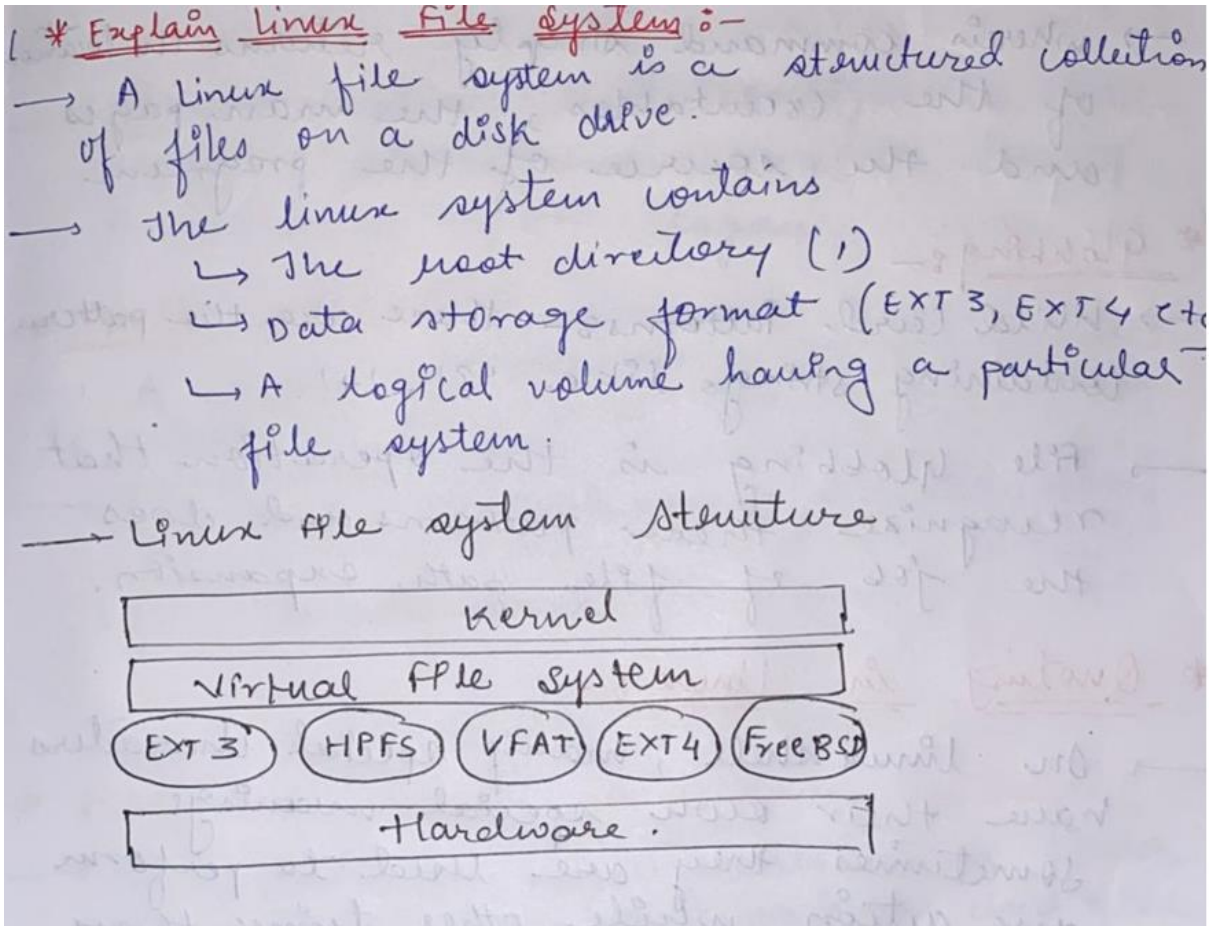
Q. What happens when you start a login shell which files are read and used and why?

Ans. It first read and execute command from the file/etc/profice, it looks for ~/. Bash- profile.

Q. Explain absolute and Relative Paths.

Ans. Absolute path:- It is defined as specifying the location of a file or directory from the root directory. (/)
. Absolute path is complete path from start of actual file system from directory.

. Relative Path :- It is defined as a path related to the present working directory .It starts at your current directory and new starts with a/.



* Difference among whereis, locate and find command.

→ Find is what you use when you want to search by particular criteria and also manipulate files.

→ Locate is used to scan the whole system quickly for something. You might use this when you have no idea where something is

→ whereis command simply returns the location of the executables, the man pages and the source of the program.

* Globbing :-

→ Wild Card Patterns :- these are the patterns containing strings like '?', '*'.

→ File Globbing is the operation that recognize these patterns and does the job of file path expansion.

* Quoting in Linux :-

→ In linux shell, many special characters have their own special meanings. Sometimes they are used to perform an action while other times they are just used as characters. So the quoting mechanism perfoms this task it make us use them in whatever way we want to.

→ metacharacters :- $, >, >>, <, <<, *, ? etc

Eg:- $name = Hello
$echo '$name'
O/P → $name
$echo "$name"
O/P → Hello

* Shell configuration file :-

→ Shell configuration files are executed automatically when you log in and out of a shell.

→ They Initialize and configure a shell upon login and perform cleanup operation upon logout.

* Shell variables :-

→ A shell variable is a variable that is available only to the current shell.

→ Syntax :- variablename = variable_value

Eg:- computer_name = "mercury"
↓ shell variable ↓ value

* How to create your own variable?

→ To create a variable choose a lower case name for the variable and give it a value using an equal (=) sign.

How to start a new bash shell?

1. Go to Run (Press windows + R).
2. Type cmd to open command prompt.
3. Now type bash
4. This will take you to the bash prompt

Local and global shell variable in Linux.

→ Local variable is declared inside a function whereas Global variable is declared outside the function.

Why we need to export the variable?

→ Export makes the variable available to sub processes.