Objective:- Assignments will help trainees to understand the basics of unix command and how to explore and use it.

DO NOT copy paste commands from internet, you can take help of the Unix in-built command manual.

Be Honest to yourself!

Important command and option to learn unix commands:-

man Command

Example:-

man ls

--help Option

Example:-

ls --help

NOTE:- Always use "man" command before using any unix commands and read about it and its options and how to use it.

Assignments:-

1.List the contents of a directory and their attributes

A. ls

2.Long list the content with file, directory ownership, permissions,sizes, etc…

A:ls -l

3.Display the size of the file in human readable format

A:ls -h

4.Show all files and folders including hidden one

A:ls -a

5.list directories recursively

A:ls -R

6.Sort the files by size with largest at the top

A: ls -S

7.Sort the files by last time modified displaying the newest first.

A: ls -t

8.Display the location of a program/command, where it is installed.

A: type -p or which command

9.Which command is used to switch directory from one to another

A: cd

10.List all the environment variables set for the current shell environment

A: env

11.Did you notice something in the output of "env" command?

A: Yes list of environment varaibles

12.Which command is used to print the text or any variables value in the Console/Terminal?

A. Printenv

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

A. echo $PATH

14.Is linux a case-sensitive operating system?

A: Yes

15.Is, "Ls" same as "ls"?

A.No

16.Display your currently logged in user

A.who or who am i

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

A. sudo su - username

18.Which command is used to leave a shell environment that you are currently logged in to?

A. exit

19.How do you reboot the system?

A. shutdown -r

20.How do you shutdown the system?

A. shutdown -h

21.Display all the major running processes in the system

A. ps

22.Understand the output of command used in above question of displaying processes, explain the meaning of each column and what data it displays?

A. PID,TTY,TIME,CMD

23.Display the name of the system kernel

A.uname

24.display the kernel release number

A. uname -r

25.display the machine type of the current kernel

A.uname

26.Display the name of the operating system that the kernel is running on

A. uname

27.Display all info that uname command can show.

A.  Machine Name , Kernel Name

28.Display the name of directory that you are currently pointing to

A.pwd

29.change the current directory to another directory that you have in your system.

A. cd dirname

30.Go up one directory

A. cd..

31.Return to last directory

A. cd -

32.change the current directory to home(logged in user's) directory

A. cd $home

33.How to check all the command used from the prompt (Command History)

A. history

34.In which file the history of commands are stored in?

A..bash\_history

35.How many lines of history does the system keep and from where you can change it?

A. 500 , HISTCONTROL

36.How can you modify bash's history behaviour

A. by pressing up and down arrow

37.Display all the commands entered so far, now, try to run a particular command from the history list without typing that command.

A. history, re-execute

NOTE:- TAB key is your friend when it comes to command completion and having long file and directory names autocompleted at the bash prompt for you. JUST BE LAZY AND USE TAB KEY FOR AUTO COMPLETION ;-)

38.What are the different types of shell and where are they used and how do we use them?

A. Bash shell, ksh shell, zsh shell , sh hell

To perform repetitive tasks,

Automation

39.What is the difference between login shell and non-login shell?

A. If the output is the name of our shell, prepended by a dash, then it is a login shell. For example -bash, -su etc.

A Non login shell is started by a program without a login. ... For example, for a Bash shell it will be simply bash.

40.How do we start login shell and non-login shell?

A. su –login {username}

A Non login shell is started by a program without a login (Bash Shell)

41.What happens when you start a login shell (which files are read and used and Why)?

A. login shell will set the PATH environment variable, TERM, the UID and GID of the terminal amongst other things. ... Upon start-up, your login shell consults two sets of files: users', & profile files.

42.What happens when you start a non-login shell (Which files are read and used and Why)?

A. non-login shell calls ~/.bashrc.

43.What are Shell Configuration Files, why do we need it?

A. Shell configuration files (commonly known simply as config files) are files used to configure the parameters and initial settings for some computer programs. They are used for user applications, server processes and operating system settings.

44.Explain the Order of file usage from the system/user's home directory when user logs in to the System.

A. /home/userid/files

45.What are Shell Variables, list major shell variables and what do they represent?

A. local variables on the shell which has effect on that particular shell.

46.How we see all our env variables?

A. printenv or env command

47.How we see all env variables in alphabetical order?

A. env | sort

48.What Format does the env var and its values are stored?

A. Character. The value assigned could be a number, text, filename, device, or any other type of data.

49.How do you create your own variable?

A. $ myvar=hello

50.How do you start a new bash shell?

A.  File Explorer by typing “bash” into the address bar and pressing Enter.

51.Difference between Local/Shell variables to Global Variable

A. Create a new file under /etc/profile. d to store the global environment variable(s) which can be accessed globally where as local variable can be accessed in that particular shell.

52.Making a variable accessible from other the shell in the system.

A. make it as persistent and create it in a file

53.Show the real life use case of exporting a variable

A.

54.Convert the above script file into a command, The file should run with "myappp" instead of "myapp.sh"

A.

55.What is Globbing? Explain in depth with examples?

A.

56.List all entries with extension ".sh"

A. find . -type f \( -name “\*.sh\*\)

grep -i “\*.sh”

57.List all entries with numbers in it.

A.

58.List all entries that starts with a character and ends with a number

A. find . -type -f -name

59.List all entries that name length more than 5 characters

A.

60.What is Quoting? and Why do we need it?

A. Quoting is used to remove the special meaning of certain characters or words to the shell.

 Used to prevent reserved words from being recognized as such, and to prevent parameter expansion.

61.Write few(minimum 3) unique examples that shows, how a particular problem is solved using Quoting.

A.

62.How do you find a particular files/directories based on a particular search criteria?

HINT:- look for commands -> locate, find and whereis

A. Find command

63.Write major difference between locate, find and whereis?

A. locate - to perform faster system-wide searches for files through a prebuilt database of files generated by the updatedb command

find – to search files by file folder name and by date along with permissions in the real system.

whereis – used to locate the binary , source and manual pages for a command in a particular path.

64.How Globbing is different from locate, find and whereis?

A. Globbing is an operation that recognizes the wildcard pattern and expands it into its path name.

65.Explain the Linux File System.

A. Structured collection of files on a disk or drive or partition.

66.Explain absolute and Relative Paths

A. An absolute or full path points to the same location in a file system, regardless of the current working directory. To do that, it must include the root directory.

A relative path refers to a location that is relative to a current directory. Relative paths make use of two special symbols, a dot (.) and a double dot (..), which translate into the current directory and the parent directory. Double dots are used for moving up in the hierarchy.

67.What are the different ways of creating a File in linux System? Write an example of each and the difference between them.

A. touch abc.txt

vi abc1.txt

cat abc2.txt

* >abc3.txt
* nano test1.txt
* vim test2.txt
* we can create files using output commands echo and printf as well.

68.In how many ways we can delete the files from linux system? write an example of each and the difference between them.

A. 3 ways

rm filename1 – remove the file with out prompting

rm -i filename1 – will prompt before deleting the file

rm -f filename1 – forceful delete the file

69.Archiving files using linux command, write a command to archive set of files from linux commands.

A. $tar -cf archive.tar file1 file2 file3

70. Archiving files using linux command, write a command to archive set of files from linux commands.archived files from the above step.

A. $tar -xf archive.tar