BASIC LEVEL

1. What command is used to get the IP addresses of all interfaces on a server?
   Ifconfig command
2. What is the purpose of "mv" command?
   It mainly uses to move files from one directory to other. It is also useful for rename the file in the same directory.
3. Which command is used to create a new empty file?
   Touch command is used to create an empty file.
4. Which command is used to display the contents of a directory?
   Dir command is used to show contents of a directory.
5. Which command is used to display all the file names along with their types of the current directory?
   ls -l is used to get file names with some other details like permissions and author details that also includes file type.
   Other then that if we want to know file type only, we can use **file** command.
   file directoryname/* is used to display all files and filetypes in particular directory.
6. Which command is used to clear the terminal?
   clear command is used to clear the terminal.
7. What are daemons?
   It is the process that runs in background, supervise the system, and provide support to other processes.
8. Which command is used to move to the parent directory?
   cd.. is used to move to the parent directory.
9. What does echo command do?
   It displays the content in the terminal.
   Suppose if we write **echo "Hello world",** then it prints Hello world in the terminal
10. How to display content of a file?
    Cat <filename> is the command to display content of a file.
11. How to identify which shell you are using?
    Echo "$SHELL" is the command to identify the current shell.
12. How do you check if a particular service is running?
    Service [service_name] status is used to check if the service is running or not.
13. What is the command to run a program with elevated permissions?
    Sudo command is used for execute a program with elevated permissions.
14. Which command is used to display the path of the current working directory?
    pwd is used to find the path of the current working directory.
15. How to delete a directory forcefully?
    rm -rf dirname is used to delete directory forcefully.
16. Which command is used to switch from superuser to normal user?

su is used to switch the user.

17. How to switch to superuser (root) with elevated permissions?

    sudo -I

18. How to determine the type of a file?

    file <filename>

INTERMEDIATE LEVEL

1) What are the different modes when using VI editor?
   Command mode and insert mode
2) Which command is used to create multiple directories simultaneously?
   Mkdir command
3) What is LILO?
   It stands for **Linux Loader** that is used to load linux into the memory
4) How cd ~, cd / and cd - are different from each other?
   Cd~ is used to get into home directory
   Cd/ is used to get into root directory
   cd- is used to get into previous directory
5) What is a grep command?
   Grep is used to search for string of characters in specific files
6) If we are in directory X and we are running rmdir X being in that directory X. Will this command successfully remove that directory or not?
   It won't delete directory X, because as we run command rmdir X, it will look for the directory named X in that directory, which would not be found. Hence I can not be deleted.
7) What are the contents of /usr/local?

8) Which command is used to display the current username?
   Id command
9) What command is used to change your password?
   Passwd command
10) How to find the difference in two configuration files?
    Diff <file1> <file2>
11) How to find where a file is located in Linux?
    Find command is used to find for particular file in a directory
    Locate command is used for searching the file in the filesystem that contains all or any part of the search criteria
12) Which command shows the users that are logged in?
    Who command
13) How to forcefully stop a process which is running in the background?
    Firstly, we need to use **ps** command to get the process id and then we can use **kill** command to kill the process.

14) Which command is used to list the name of files starting from any particular alphabet or string?
ls -d abc* command
15) How to move multiple files of the same extension to a different directory?
find . -name *.vob -exec mv '{}' "destination path" ";"
here, .vob is the extension
16) What command would you use to check how much memory is being used?
Cat/proc/meminfo is used to get information abour used and vailable memory
17) Which command is used to display the list of content in reverse order?
ls -r
18) What command is used to show how long it's been since the server was rebooted?
who -b
19) What command is used to change the ownership of a file?
Chown command is used to change the ownership of file

ADVANCED LEVEL

1) How to see the list of mounted devices on a Linux system?
mount
2) How to check disk usage in terms of kilobytes(K), megabytes(M) and gigabytes(G)?
df - h
3) What is Swap Space?What is a typical size for a swap partition in Linux?
When we are working on some bigger spreadsheets or program that fills up the RAM fully,
then we need to stop on working them because there is no more space available in the RAM.
Hence, to free up some space, linux kernal shift some of the programs that are less frequently used or no longer needed to some part of hard drive which can be delivered to RAM if needed.
This process of freeing up some space in RAM is called swap spacing and the total amount of memory in linux system will be RAM plus swap space.
The typical size of swap block depands on the RAM size in linux system.
If the RAM is <2GB, then swap size recommended is 2*RAM
If the RAM is 2GB-8GB, then swap size recommended is same as RAM size
If the RAM is >8GB, then swap size recommended is 8GB

4) How would you schedule a task in Linux?
Linux comes with a powerful tool named CRON which is used to perform specific task at specific time or one can set the task to be performed after some or ore defined interval.

5) How these commands would be working try and explain (files contain “hello” word) :

grep -v -i hello file1.txt : it returns the lines that is not containing "hello" word in any case(upper/lower)

grep -i hello file2.txt : output includes the line numbers that containing "hello" word in any case.

grep -A 2 hello file2.txt : It prints 2 line of trailing context after the line that contains hello, wether they contain hello or not

for example, file text is hello
abcd
efgh

then it will print all three lines(2 trailing lines) even they dont contain hello

grep -C 4 hello file1.txt : it prints 4 lines of output context

grep -B 3 hello file1.txt : It prints 3 line of leading context before the line that contains hello, wether they contain hello or not

for example, file contains hello

abcd
efgh
ijkl
mnop
hello sagar

it will print hello

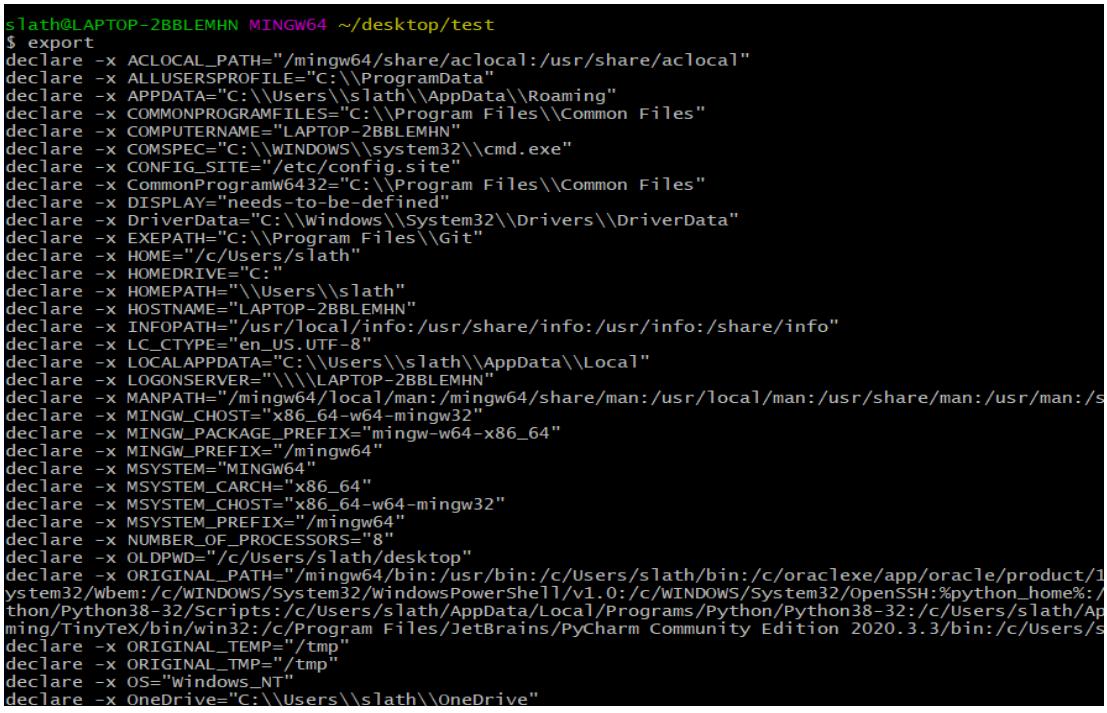
---
efgh
ijkl
mnop
hello sagar.

ps -ef | more : ps -ef shows processes of all users with uids and ppids, while more shows process status in long format, just as ps

awk '{print $2,$5;}' employee.txt : It prints 2nd and fifth word of every line in the file employee.txt

6) What is the export command used for?(Give Example)

It is used to ensure the environment variables and functions to be passed to child processes. It does not affect the existing environment variable.
Here is the example I ran on my system.



7) Explain the redirection operator?
">" is used for output,
example : echo "Hello There" > file.txt will save Hello There in file.txt
"<" is used for standard input
"2>" is used for standard error
">>" is used to append some text to the output
"<<" is used to append some code as a standard input.
"2>>" is same for standard error.

8) Which command is used to review boot messages?
dmesg command is used to review boot messages

9) Which command is used to change the permissions of a file?Explain its usage?
chmod command is used to edit permitions.
there is something called flags which represent by single character. Here is the list.
'o' for all user, 'u' for owner and 'g' for members of the group
Then the permitions are denoted as 'r' for read, 'w' for write, and 'x' for execute or update.
then '+' is to add permirions, '-' is to revoke permitions
All updations in permitions are represented as regular expressions.

for example:
chmod g=r filename : is giving a read permition to group for the filename
chmod a-x filename : removing execute permition for all user
chmod og-rwx filename : removing the read, write and execute permition for all users except the owner
chmod u=rwx,g=r,o= filename : Give read, write and execute permission to the file's owner, read permissions to the file's group and no permissions to all other users

10) Which command would you use to create a file system on a new hard drive?
first mount the drive into linux
create linux partition using fdisk
now make the file system using mkfs
Then mount the linux partition to access that.

11) How to compress files in Linux?
zip <path for compressed file> <file name to be compressed>

12) Which file is used to automatically mount file systems on boot?
/etc/fstab

13) Find out the purpose of each of the following commands:

shutdown:The shutdown command brings the system down in a secure way.

diff: This command is used to display the differences in the files by comparing the files line by line.

sort: It is used for printing lines of input text files and concatenation of all files in sorted order.

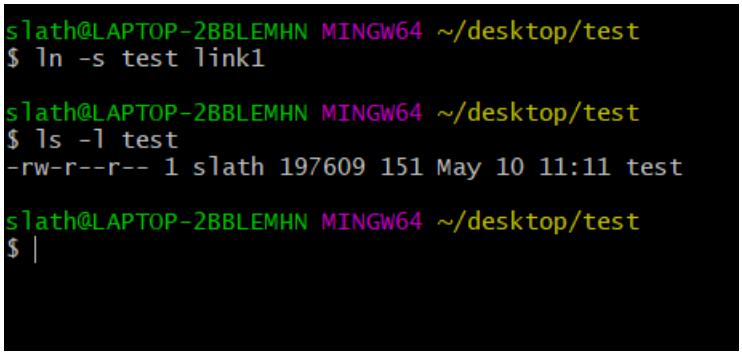
ps: ps command is used to list the currently running processes and their PIDs along with some other information depends on different options.

kill:The kill command sends a signal to specified processes or process groups, causing them to act according to the signal

mount:mount command is used to mount the filesystem found on a device

nano: It is the text editor in linux such as vi.

14) What are symbolic links?How do you create one using command?
It is a special type of file that points to another file or directory.
ln -s <name of the file you want to create symbolic link for> <name of the link>
Here I am attaching the screenshot that I tried on my git bash.



15) How would you copy a file or a directory from your system to another system on the same network?

we need to use SCP or SFTP clients to share over the network
for that, we need PuTTY Secure Copy client - pscp.exe and the PuTTY Secure File Transfer client - psftp.exe.
then we need to run following command
scp <source> <destination>

*I used google as a referance to answer most of the questions.