



ALRIGHT!

LINUX TUTORIAL



70 LINUX QUESTIONS

Part - II

- MCQ
- Case study
- Troubleshooting
- Conceptual
- True/False

Linux Basics

SSH

File Permissions

Automation

Services

Networking

Redirection

Process

System Monitoring



Ques: 1

What is RHEL Linux stands for?

Ques: 1

What is RHEL Linux stands for?

Red Hat Enterprise Linux operating system.

Ques: 2

Give some examples of Linux distributions?

Linux Distribution



CentOS



ubuntu



debian

Ques: 3

What is kernel?

Ques: 3

What is kernel?

The Linux kernel is the main component of a Linux OS and is the core interface between a computer's hardware and its processes.

It communicates between the 2, managing resources as efficiently as possible.

Ques: 4

What is swap space?

Ques: 4

What is swap space?

Swap space in Linux is used when the amount of physical memory (RAM) is full. If the system needs more memory resources and the RAM is full, inactive pages in memory are moved to the swap space.

Ques: 5

Search a word in a file and replace it in entire file?

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Search a word in a file and replace it in entire file?

Using **sed** command.

```
sed 's/<string_to_change>/<new_string>/g' file_name
```

Ques: 6

What is use of SCP command?

Ques: 6

What is use of SCP command?

The scp command copies files or directories between a local and a remote system or between two remote systems.

SCP uses SSH for data transfer.

Ques: 7

What is use of FTP command?

Ques: 7

What is use of FTP command?

FTP is the file transfer protocol to exchange files to and from a remote computer or network.

Ques: 8

What is alias and how to setup?

Ques: 8

What is alias and how to setup?

To create shortcut to the command or task

```
alias d="ls -ltr | awk '{print \$9}'"
```

Ques: 9

Difference between upgrade and update system?

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Difference between upgrade and update system?

Update: updates all the presently installed packages to their latest versions that are available in the repositories

Upgrade: performs the same action as “yum update”, but once finished it also removes all of the obsolete packages from the system.

Ques: 10

Name default ports used for DNS, SMTP, FTP, SSH, DHCP and squid.

Ques: 10

DNS - 53

SMTP - 25

FTP - 21

SSH - 22

DHCP - 67,68

Squid - 3128

Http - 80

Https - 443

Ques: 11

How to check if a package is installed or not?

Ques: 11

How to check if a package is installed or not?

```
rpm -qa | grep <package_name>
```

Ques: 12

Which of the following commands sends exactly three ping packets to google.com?

Ques: 12

Which of the following commands sends exactly three ping packets to google.com?

ping -c 3 google.com

Ques: 13

Which file contains a list of group names and GIDs?

Ques: 13

Which file contains a list of group names and GIDs?

/etc/group/

Ques: 14

Which of the following contains the value of the exit status of the previously executed command?

Ques: 14

Which of the following contains the value of the exit status of the previously executed command?

\$?

Ques: 15

Which command displays the number and type of processors used by a Linux system?

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Which command displays the number and type of processors used by a Linux system?

`cat /proc/cpuinfo`

`lscpu`

Ques: 16

Which command should you use to get a list of connected USB devices?

- **listusb**
- **usbls**
- **lsusb**
- **getusb**

Ques: 16

Which command should you use to get a list of connected USB devices?

lsusb

Ques: 17

Which of the following environment variables is used as the default argument for the "cd" command when no directory is provided?

- PWD
- HOME
- PATH
- USERPROFILE

Ques: 17

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- HOME
- PATH
- USERPROFILE

Ques: 18

True or False. A command following a semicolon will be executed no matter the exit status of the command that preceded the semicolon.

Example: `cd /root ; cat /etc/passwd`

Ques: 18

True or False. A command following a semicolon will be executed no matter the exit status of the command that preceded the semicolon.

Example: `cd /root ; cat /etc/passwd`

TRUE

Ques: 19

What are the valid values of the exit status?

Ques: 19

What are the valid values of the exit status?

0-255

Ques: 20

According to the FHS, what is the correct directory for log files?

Ques: 20

According to the FHS, what is the correct directory for log files?

/var/log/

Ques: 21

What port must be open to ping a given host?

Ques: 21

What port must be open to ping a given host?

Ping don't use port

Ques: 22

How will you transfer file from a Linux server to your windows OS and vice versa?



Ques: 22

How will you transfer file from a Linux server to your windows OS and vice versa?

Using SSH, FTP, SFTP and tools like WinSCP, FileZilla

Ques: 23

Can you split a file into two? If yes, then how?

Ques: 23

Can you split a file into two? If yes, then how?

`split -l 3 file_name`

Ques: 24

How you can get the unique values from a list?

Ques: 24

How you can get the unique values from a list?

`sort file_name | uniq`

Ques: 25

Using VI editor, how you will edit and save a file?

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Using VI editor, how you will edit and save a file?

`vi file_name`

`i` - for insert

`ESC` - to come out of insert mode

`wq` - to save

Ques: 26

What is the difference between find and locate command?

Ques: 26

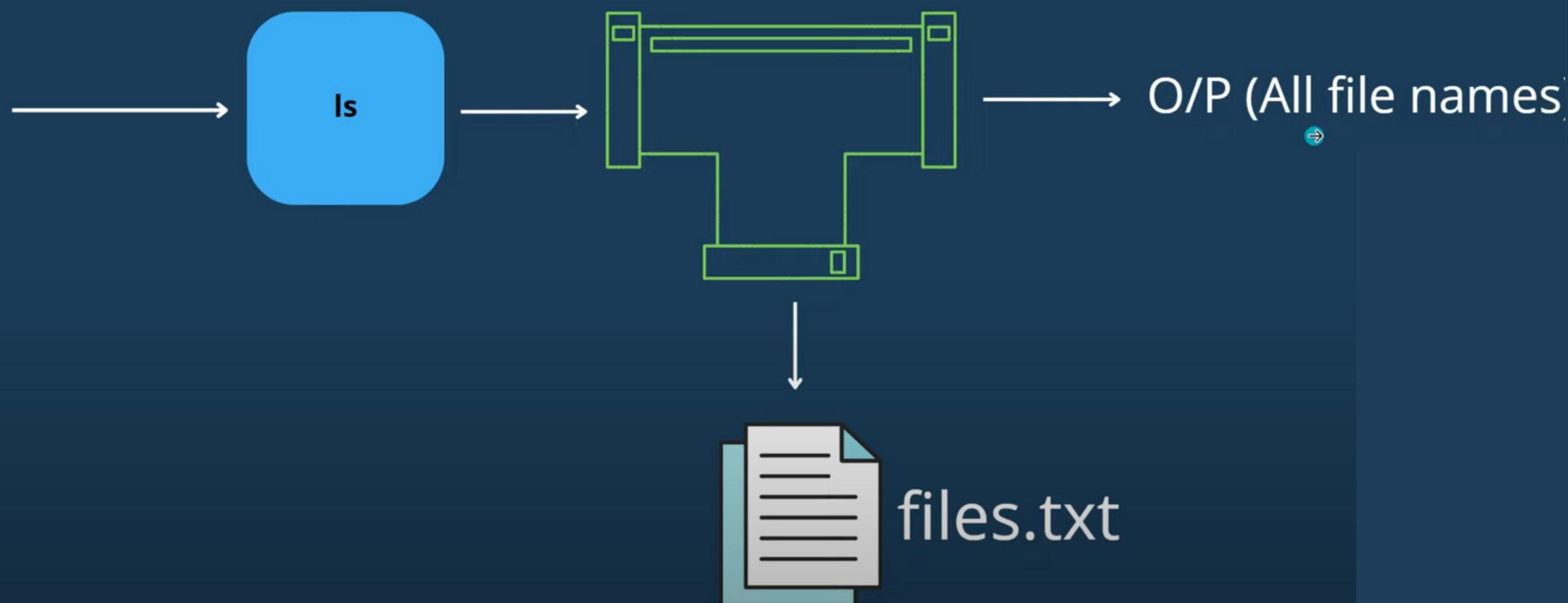
What is the difference between find and locate command?

locate command search in it's own db and you will need to keep updating db.

Ques: 27

What is TEE Command used for?

```
$ ls | tee files.txt
```



Ques: 28

What is Xargs used for?

xargs

It convert the stdInput into command line argument

Ques: 29

How you can find no. of files, folders in a directory?

Ques: 29

How you can find no. of files, folders in a directory?

```
ls -1 | wc -l
```

Ques: 30

I want to read only line 25 to 30th Line, how you will do it?

Ques: 30

I want to read only line 26 to 30th Line, how you will do it?

head -30 file_name | tail -5

Ques: 31

What is the use of Tar command?

Ques: 31

What is the use of Tar command?

The tar command is used to compress a group of files into an archive. Tar archives combine multiple files and/or directories together into a single file.

Ques: 32

How to redirect both standard output and error to a file?

Ques: 32

How to redirect both standard output and error to a file?

command > file 2>&1

Ques: 33

Name some commands for DNS resolution?

Ques: 33

Name some commands for DNS resolution?

ping, nslookup, dig and host

Ques: 34

What is use of At command?

Ques: 34

What is use of At command?

Command used to schedule a task once.

Ques: 35

Which service is used by At command?

Ques: 35

Which service is used by At command?

Atd

Ques: 36

Which command syntax is correct if you want to assign read only permission to everyone and write permission to the owner of the file?

- chmod o+w, chmod a+r
- chmod u+w, chmod a+r
- chmod a+w, chmod o+r
- chmod u-w, chmod a+r

Ques: 36

Which command syntax is correct if you want to assign read only permission to everyone and write permission to the owner of the file?

- chmod o+w, chmod a+r
- **chmod u+w, chmod a+r**
- chmod a+w, chmod o+r
- chmod u-w, chmod a+r

Ques: 37

Which command changes the group ownership of the "/var/www" directory to the "nginx" group?

- **chgrp nginx /var/www**
- **changegrp nginx /var/www**
- **grpchange nginx /var/www**

Ques: 37

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- **chgrp nginx /var/www**
- **changegrp nginx /var/www**
- **grpchange nginx /var/www**

Ques: 38

What is chmod 777 file_name?

Ques: 38

What is chmod 777 file_name?

This is a way of changing permission using numeric mode.
777 means provide all the permissions rwx to user, group and other users also.

Ques: 39

What is ACL and it's advantage?

Ques: 39

What is ACL and it's advantage?

**Access Control List is used to modify the permissions of files.
for this we use setfacl and getfacl commands**

Advantage: We can provide permission to a specific user.

Ques: 40

What are links in Linux and it's type?

What are links in Linux?

A connection between a file name and the actual data on the disk.

We can call it a shortcut.

Ques: 41

Difference between Hard and Soft links?

Difference between Soft and Hard link

Soft link: Link will be removed if original file removed or deleted.

ln -s

Hard link: Renaming, Deleting or removing the file will not effect the link

ln

Ques: 42

What command you can use to see all the environment variables?

Ques: 42

What command you can use to see all the environment variables?

env or printenv

Ques: 43

What are the different ways to set environment variables?

Ques: 43

What are the different ways to set environment variables?

At user level:

- Temporary
- Permanent

At global level

Ques: 44

How can you set environment variables in Linux?

Ques: 44

How can you set environment variables in Linux?

using export command

to set variable for the current user - .bashrc

to set variable for globally - /etc/bashrc or /etc/profile

Ques: 45

What command allows you to display all the process IDs of the running nginx processes?

Ques: 45

What command allows you to display all the process IDs of the running nginx processes?

pidof httpd

Ques: 46

What is nice value of a process?

nice value

Niceness scale goes from -20 to 19. The lower the no. more priority that task gets.

Process priority = nice
(ex: **nice -n 5 process**)

-

Ques: 47

How to check the nice value of a process?

Ques: 47

How to check the nice value of a process?

`ps -l PID`

Ques: 48

You want a process with a PID of 8675 to complete its task faster than the default rate. Which command should you run to accomplish this goal?

Ques: 48

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renice -20 -p 8675,
this can be done by top command also

Ques: 49

What command can be used to check the %CPU and %Memory of a process?

Ques: 49

What command can be used to check the %CPU and %Memory of a process?

top command

Ques: 50

If you want to run a task/script in background even if you close your terminal, what is the way?

nohup

If you want your process keep running even after closing terminal, you can use nohup

nohup process &

nohup process > /dev/null 2>&1 &

Ques: 51

How to see all the active jobs?

Ques: 51

How to see all the active jobs?

jobs

Ques: 52

How to resume a stopped job in background or foreground?

Ques: 52

How to resume a stopped job in background or foreground?

bg

fg

Ques: 53

Which command displays information about kernel-related messages along with hardware and system startup messages stored in kernel ring buffer?

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dmesg

Ques: 54

In a directory you have a combination of files like xml, yml, scripts, logs etc, how you will get/see only xml files?

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`ls -l *.xml`

Ques: 55

Create 100 files with naming file1, file2 file3... file100.

Ques: 55

Create 100 files with naming file1, file2 file3... file100.

touch file{1..100}

Ques: 56

How would you display all the files in the present working directory that start with either the letter "c" or "m"?

Ques: 56

How would you display all the files in the present working directory that start with either the letter "c" or "m"?

`ls [cm]*`

Ques: 57

Run a command that shows all the lines except any lines starting with the a character # in a file?

Ques: 57

Run a command that shows all the lines except any lines starting with the a character # in a file?

cat file | grep -v ^#

Ques: 58

Which of the following commands lists all files and directories except those beginning with the letter "a"?

- `ls -1 | grep -i ^a`
- `ls -1 | grep -v ^a`
- `ls -1 | grep -e ^a`
- `ls -1 | grep -x ^a`

Ques: 58

Which of the following commands lists all files and directories except those beginning with the letter "e"?

`ls -1 | grep -v ^a`

Ques: 59

Which of the following Bash commands produces the output of "bat bet bit bot"?

- echo b{ae}t
- echo b{a,e,i,o}t
- echo b[a,e,i,o]t
- echo b[aeio]t

Ques: 59

Which of the following Bash commands produces the output of "bat bet bit bot"?

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- echo b{a,e,i,o}t
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- echo b[aeio]t

Ques: 60

What is a VM?

Ques: 60

What is a VM?

A virtual machine (VM) is a virtual environment that functions as a virtual computer system with its own CPU, memory, network interface, and storage, created on a physical hardware system

Ques: 61

You have a windows machine and you want to test an application on Linux, what you can do?

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You have a windows machine and you want to test an application on Linux, what you can do?

We can use VM to use multiple OS like Linux on our windows machine and test our application.

Ques: 62

What is hypervisor?



Hypervisor

It is software that creates and runs virtual machines (VMs).

Ques: 63

What are the type of hypervisors?



HOST OS



Hypervisor



Type 2 (Hosted)



Hardware



Type1 or Bare Metal Hypervisor



Hypervisor

1. VMware vSphere / ESXi
2. Xen / Citrix XenServer



Ques: 64

Which command can you use to display a list of currently configured Physical Volumes?

- `lv`
- `lvs`
- `vls`
- `vl`

Ques: 64

Which command can you use to display a list of currently configured Physical Volumes?

lvs

or sudo lvs (as it required root access)

Ques: 65

Which command can you use to display a list of currently configured Volume Groups?

- **vg**
- **vgs**
- **lvg**
- **vgl**

Ques: 65

Which command can you use to display a list of currently configured Volume Groups?

- `vg`
- `vgs`
- `lvg`
- `vgl`

Ques: 66

Which command displays memory usage, including the amount of swap space being used?

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free command

Ques: 67

The /home partition is running out of disk space. Which command can you use to determine which user's home directory is using the most space?

Ques: 67

The /home partition is running out of disk space. Which command can you use to determine which user's home directory is using the most space?

we can use du command

Ques: 68

A user reports that they are receiving a "Connection timed out" error when attempting to SSH into a Linux server you support.

You suspect a firewall is blocking inbound SSH attempts, and you contact the networking team to investigate.

Assuming SSH is using the default port, which port number do you provide to the networking team to investigate?

Ques: 68

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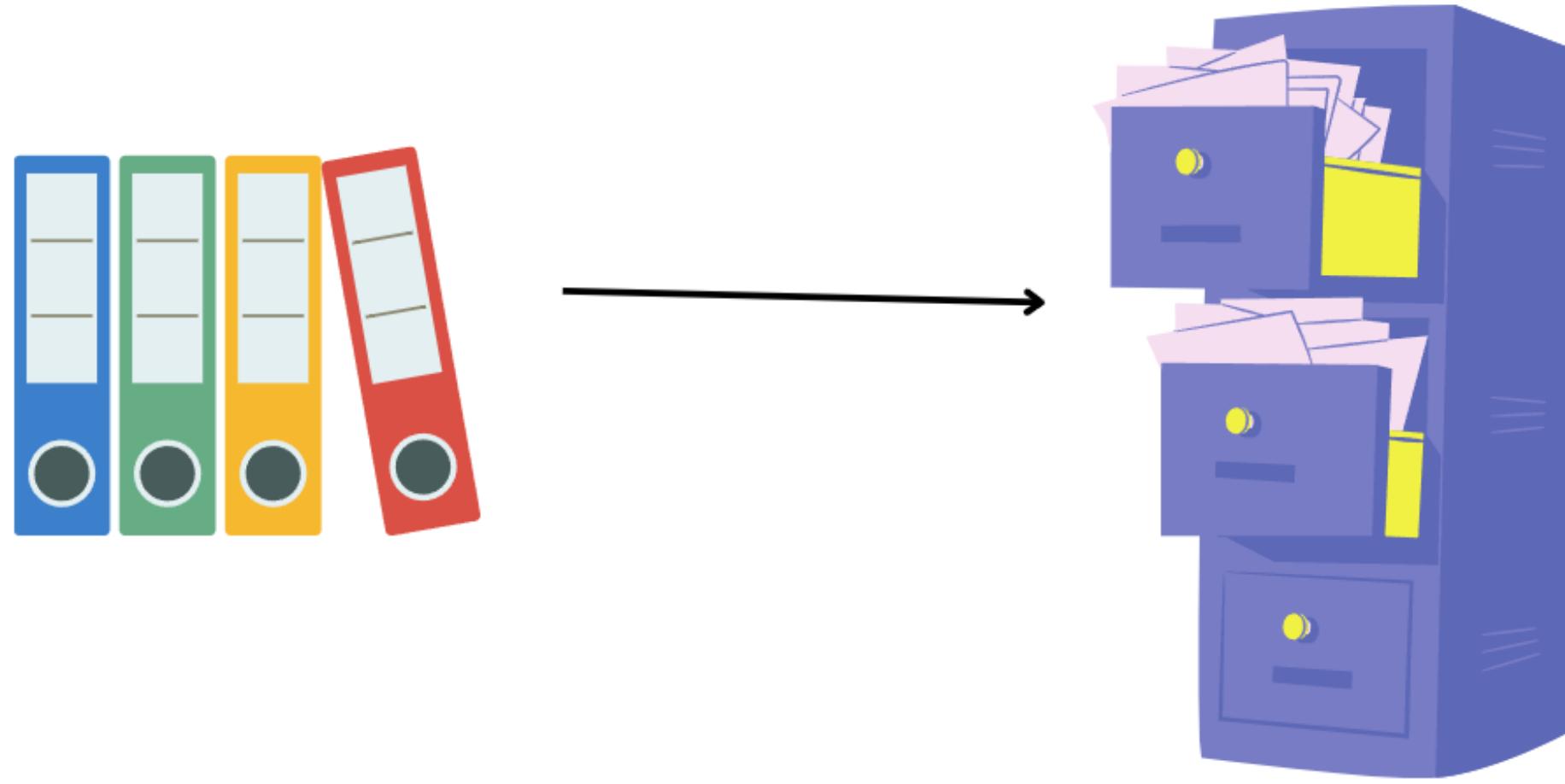
Answer: 22

Ques: 69

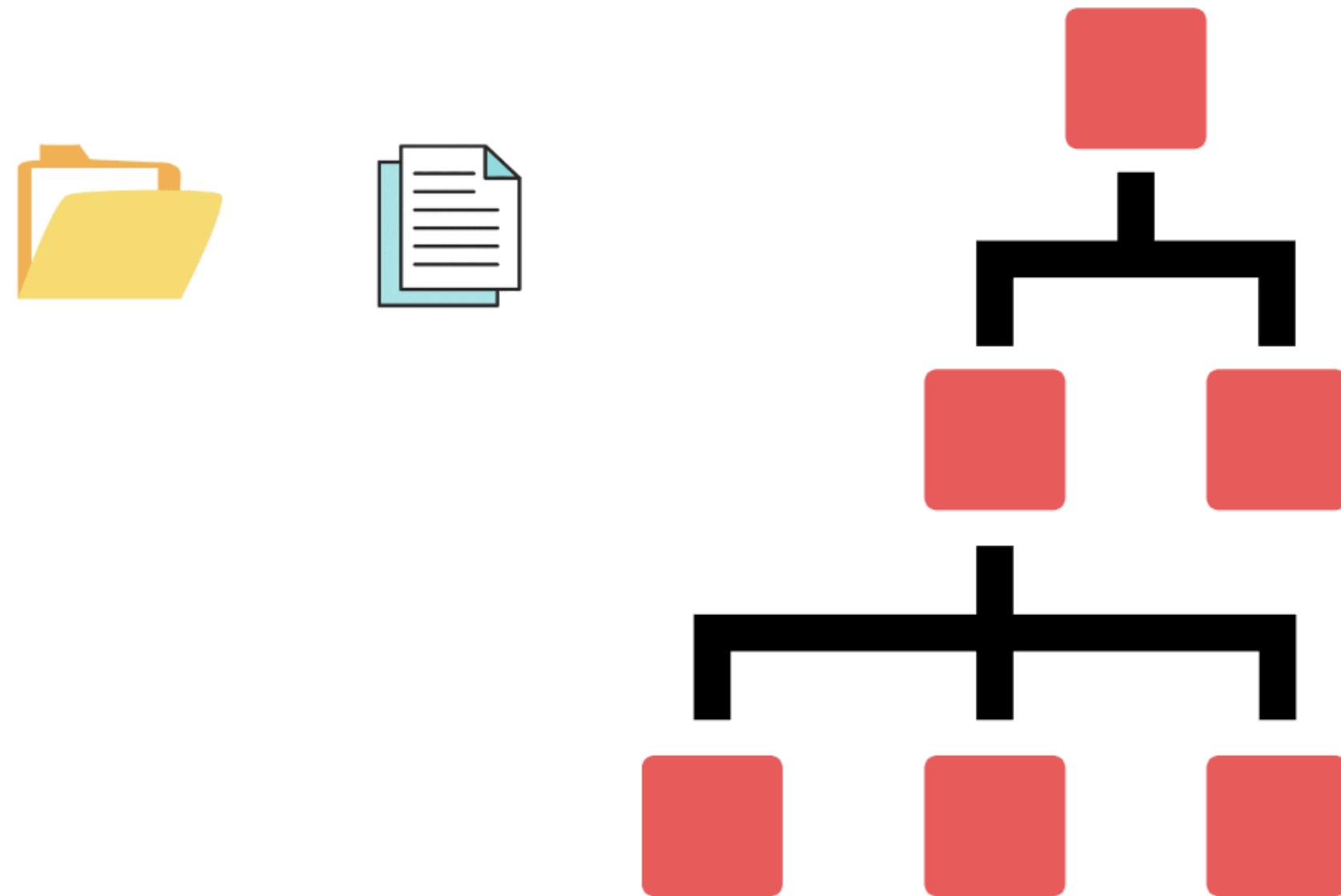
What is Linux FileSystem?

OS store and manage data on disk or partitions using a structure called **Filesystem**.

FileSystem includes files, directories and it's related permissions.



FS stores data in hierarchy of directories and files.



Ques: 70

How to check your Linux FileSystem?

Ques: 70

How to check your Linux FileSystem?

lsblk -f

THANKS FOR WATCHING!