



## Assignment 1 -Linux

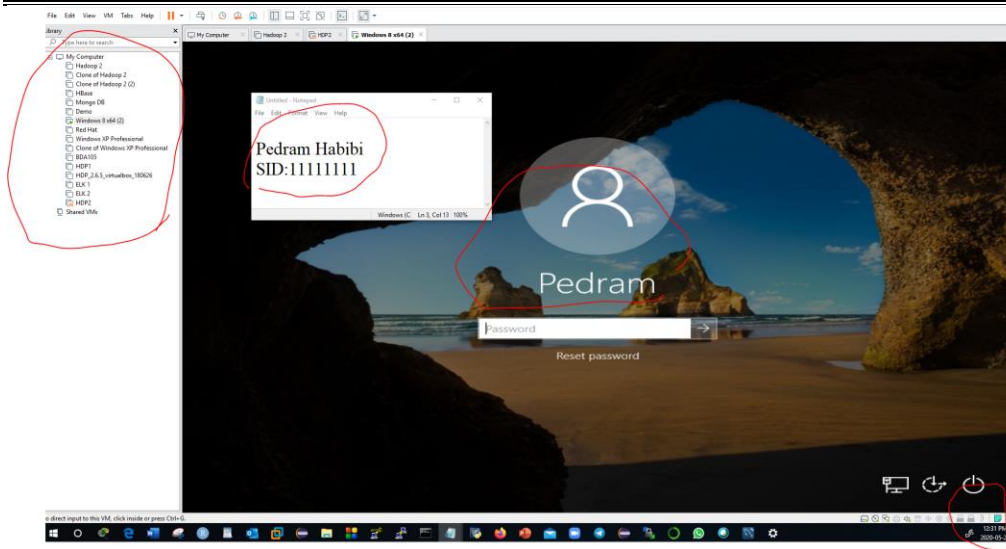
### Part 1: Week 1 and 2

**Objective:** Run few basic commands in Linux

1. Connect to your VM by using putty then change the color to system color and font to 14
2. Demonstrate the following commands (run it in your VM or EC2)  
mkdir , touch ,mv, cp ,rm ,ls ,ll ,ifconfig ,scp
3. Create a file by using vi and put some contents in it like “Hello Group x” x is your group number. Verify it by using cat command (to show the contents)
4. Use WinSCP to transfer a file to your Linux VM
5. Create a user with password then log in with new username by using sudo
6. Create a file then modify the permission to full permission
7. Download Hadoop by using wget then unzip it (any Hadoop version is fine)
8. Install any package (like http) then remove it
9. Create your local.repo and make sure its working .If already has been set up just show it .Explain why it's used.
10. From the command line upgrade your VM to GUI

**Note:** Provide your screenshots and explanation below each question

## Sample screen shot



## Part 2 : Deliverable

1. Must be PDF format.
2. Format of the report as following
  - a. Table of contents
  - b. Body of report (which has screen shots **with explanation and timestamp. These screen shots proof that you have done the activity successfully**)
  - c. Achievement (Write a paragraph and explain what you have learned in this activity)
3. Use this submission template otherwise you lose mark
4. I do not accept your lab or assignment through email
5. Drop the screen shot below each section (each Task)
6. All your results should have screen shot with time stamp and customized background otherwise you do not get any grade
7. Please make sure, you provide enough screen shots to avoid deduction in your grade. Moreover, all screen shots require explanation.
8. All screen shots must have time stamp otherwise you do not get mark
9. There will be 10% deduction for each day delay. After three days I do not accept the assignment and you get zero.

## Table of Content

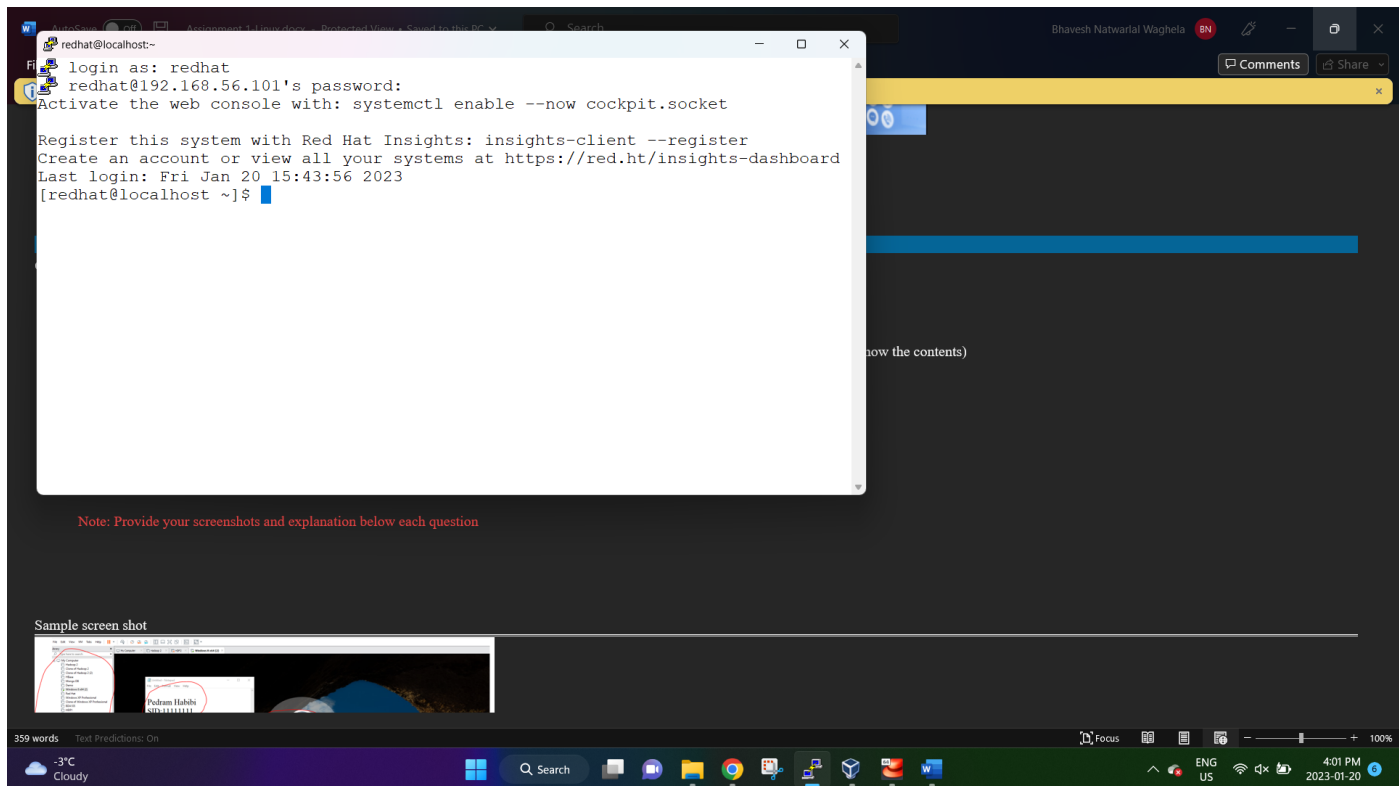
1. Connect to VM by using putty - change the color to system color and font to 14.
2. Demonstrate the following commands
  - mkdir
  - touch
  - mv
  - cp
  - rm
  - ls , ll
  - ifconfig
  - scp
3. Create a file by using vi command and Verify it by using cat command (to show the contents)
4. Use WinSCP to transfer a file to your Virtual Machine
5. Create a user with password - log in with new username.
6. Create a file then modify the permission to full permission
7. Download Hadoop by using wget - unzip.
8. Install any package (like http) - remove it
9. Create your local.repo.
10. Command line - upgrade VM to GUI

### **1. Connect to VM by using putty - change the color to system color and font to 14.**

Network configurations required in the Virtual Box settings change it from NAT to Broker so that we can connect to putty.

Ifconfig on Linux terminal to get the IP address for the system. Add that IP address to putty Configuration – Host Name and Open.

Putty settings change the Color to system default and Appearance – font size 14.



## 2. Demonstrate the following commands

- a. **mkdir** – This command we used for creating a directory.

```
+ FullyQualifiedErrorId : UnauthorizedAccess
PS C:\Users\bhave> ssh redhat@192.168.56.101
The authenticity of host '192.168.56.101 (192.168.56.101)' can't be established.
ED25519 key fingerprint is SHA256:v2uekbTEmBxcukGHmc7CmAy83ThJ1GvR+lprN2peFy4.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '192.168.56.101' (ED25519) to the list of known hosts.
redhat@192.168.56.101's password:
Permission denied, please try again.
redhat@192.168.56.101's password:
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last failed login: Wed Jan 25 01:09:32 EST 2023 from 192.168.56.1 on ssh:notty
There was 1 failed login attempt since the last successful login.
Last login: Wed Jan 25 01:08:20 2023
[redhat@localhost ~]$
[redhat@localhost ~]$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[redhat@localhost ~]$ cd /var/
[redhat@localhost var]$ ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool tmp yp
[redhat@localhost var]$ mkdir www
mkdir: cannot create directory 'www': Permission denied
[redhat@localhost var]$ sudo mkdir www

We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:

    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.

[sudo] password for redhat:
[redhat@localhost var]$ ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool tmp www yp
[redhat@localhost var]$
```

b. **touch** – This command I have user for creating an empty file.

```
Warning: Permanently added '192.168.56.101' (ED25519) to the list of known hosts.
redhat@192.168.56.101's password:
Permission denied, please try again.
redhat@192.168.56.101's password:
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last failed login: Wed Jan 25 01:09:32 EST 2023 from 192.168.56.1 on ssh:notty
There was 1 failed login attempt since the last successful login.
Last login: Wed Jan 25 01:08:20 2023
[redhat@localhost ~]$
[redhat@localhost ~]$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
[redhat@localhost ~]$ cd /var/
[redhat@localhost var]$ ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool tmp yp
[redhat@localhost var]$ mkdir www
mkdir: cannot create directory 'www': Permission denied
[redhat@localhost var]$ sudo mkdir www

We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:

    #1) Respect the privacy of others.
    #2) Think before you type.
    #3) With great power comes great responsibility.

[sudo] password for redhat:
[redhat@localhost var]$ ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool tmp www yp
[redhat@localhost var]$ cd /var/www/
[redhat@localhost www]$ touch test
touch: cannot touch 'test': Permission denied
[redhat@localhost www]$ sudo su
[root@localhost www]# touch testfile
[root@localhost www]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
[root@localhost www]#
```

- c. **mv** – This command is used for moving the file to another location

```
[sudo] password for redhat:
[redhat@localhost var]$ ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool tmp www yp
[redhat@localhost var]$ cd /var/www/
[redhat@localhost www]$ touch test
touch: cannot touch 'test': Permission denied
[redhat@localhost www]$ sudo su
[root@localhost www]# touch testfile
[root@localhost www]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
[root@localhost www]# mv testfile /var/
[root@localhost www]# cd ..
[root@localhost var]# ll
total 16
drwxr-xr-x. 2 root root 19 Jan 20 15:21 account
drwxr-xr-x. 2 root root 6 Aug 9 2021 adm
drwxr-xr-x. 18 root root 4096 Jan 20 15:33 cache
drwxr-xr-x. 2 root root 6 Jul 11 2022 crash
drwxr-xr-x. 3 root root 18 Jan 20 15:17 db
drwxr-xr-x. 2 root root 6 Aug 9 2021 empty
drwxr-xr-x. 2 root root 6 Aug 9 2021 ftp
drwxr-xr-x. 2 root root 6 Aug 9 2021 games
drwxr-xr-x. 3 root root 18 Jan 20 15:17 kerberos
drwxr-xr-x. 55 root root 4096 Jan 20 15:33 lib
drwxr-xr-x. 2 root root 6 Aug 9 2021 local
lrwxrwxrwx. 1 root root 11 Jan 20 15:16 lock -> ../run/lock
drwxr-xr-x. 15 root root 4096 Jan 20 22:11 log
lrwxrwxrwx. 1 root root 10 Aug 9 2021 mail -> spool/mail
drwxr-xr-x. 2 root root 6 Aug 9 2021 nis
drwxr-xr-x. 2 root root 6 Aug 9 2021 opt
drwxr-xr-x. 2 root root 6 Aug 9 2021 preserve
lrwxrwxrwx. 1 root root 6 Jan 20 15:16 run -> ../run
drwxr-xr-x. 10 root root 106 Jan 20 15:21 spool
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
drwxrwxrwt. 13 root root 4096 Jan 25 01:10 tmp
drwxr-xr-x. 2 root root 6 Jan 25 01:20 www
drwxr-xr-x. 2 root root 6 Aug 9 2021 yp
[root@localhost var]#
```

- d. **cp** – This command is used to copy the file to a different location

```
root@localhost:/var/www$ sudo su
[root@localhost www]# touch testfile
[root@localhost www]# ll
total 0
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
[root@localhost www]# mv testfile /var/
[root@localhost www]# cd ..
[root@localhost var]# ll
total 16
drwxr-xr-x. 2 root root 19 Jan 20 15:21 account
drwxr-xr-x. 2 root root 6 Aug 9 2021 adm
drwxr-xr-x. 18 root root 4096 Jan 20 15:33 cache
drwxr-xr-x. 2 root root 6 Jul 11 2022 crash
drwxr-xr-x. 3 root root 18 Jan 20 15:17 db
drwxr-xr-x. 2 root root 6 Aug 9 2021 empty
drwxr-xr-x. 2 root root 6 Aug 9 2021 ftp
drwxr-xr-x. 2 root root 6 Aug 9 2021 games
drwxr-xr-x. 3 root root 18 Jan 20 15:17 kerberos
drwxr-xr-x. 55 root root 4096 Jan 20 15:33 lib
drwxr-xr-x. 2 root root 6 Aug 9 2021 local
lrwxrwxrwx. 1 root root 11 Jan 20 15:16 lock -> ../run/lock
drwxr-xr-x. 15 root root 4096 Jan 20 22:11 log
lrwxrwxrwx. 1 root root 10 Aug 9 2021 mail -> spool/mail
drwxr-xr-x. 2 root root 6 Aug 9 2021 nis
drwxr-xr-x. 2 root root 6 Aug 9 2021 opt
drwxr-xr-x. 2 root root 6 Aug 9 2021 preserve
lrwxrwxrwx. 1 root root 6 Jan 20 15:16 run -> ../run
drwxr-xr-x. 10 root root 106 Jan 20 15:21 spool
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
drwxrwxrwt. 13 root root 4096 Jan 25 01:10 tmp
drwxr-xr-x. 2 root root 6 Jan 25 01:20 www
drwxr-xr-x. 2 root root 6 Aug 9 2021 yp
[root@localhost var]#
[root@localhost var]# ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool testfile tmp www yp
[root@localhost var]# cp testfile /var/www/
[root@localhost var]# cd /var/www/
[root@localhost www]# ls
testfile
[root@localhost www]#
```

- e. **rm** – This command is used for removing the file ie. Delete it permanently.

```

root@localhost/var/www  x  +  v
total 0
-rw-r--r-- 1 root root 0 Jan 25 01:12 testfile
[root@localhost www]# mv testfile /var/
[root@localhost www]# cd ..
[root@localhost var]# ll
total 16
drwxr-xr-x. 2 root root 19 Jan 20 15:21 account
drwxr-xr-x. 2 root root 6 Aug 9 2021 adm
drwxr-xr-x. 18 root root 4096 Jan 20 15:33 cache
drwxr-xr-x. 2 root root 6 Jul 11 2022 crash
drwxr-xr-x. 3 root root 18 Jan 20 15:17 db
drwxr-xr-x. 2 root root 6 Aug 9 2021 empty
drwxr-xr-x. 2 root root 6 Aug 9 2021 ftp
drwxr-xr-x. 2 root root 6 Aug 9 2021 games
drwxr-xr-x. 3 root root 18 Jan 20 15:17 kerberos
drwxr-xr-x. 55 root root 4096 Jan 20 15:33 lib
drwxr-xr-x. 2 root root 6 Aug 9 2021 local
lrwxrwxrwx. 1 root root 11 Jan 20 15:16 lock -> ../run/lock
drwxr-xr-x. 15 root root 4096 Jan 20 22:11 log
lrwxrwxrwx. 1 root root 10 Aug 9 2021 mail -> spool/mail
drwxr-xr-x. 2 root root 6 Aug 9 2021 nis
drwxr-xr-x. 2 root root 6 Aug 9 2021 opt
drwxr-xr-x. 2 root root 6 Aug 9 2021 preserve
lrwxrwxrwx. 1 root root 6 Jan 20 15:16 run -> ../run
drwxr-xr-x. 10 root root 106 Jan 20 15:21 spool
-rw-r--r-- 1 root root 0 Jan 25 01:12 testfile
drwxrwxrwt. 13 root root 4096 Jan 25 01:10 tmp
drwxr-xr-x. 2 root root 6 Jan 25 01:20 www
drwxr-xr-x. 2 root root 6 Aug 9 2021 yp
[root@localhost var]#
[root@localhost var]# ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool testfile tmp www yp
[root@localhost var]# cp testfile /var/www/
[root@localhost var]# cd /var/www/
[root@localhost www]# ls
testfile
[root@localhost www]# rm testfile
rm: remove regular empty file 'testfile'? y
[root@localhost www]# ls
[root@localhost www]#

```

- f. **ls** – This command is used for listing all the elements inside the current folder. Files as well as directory.

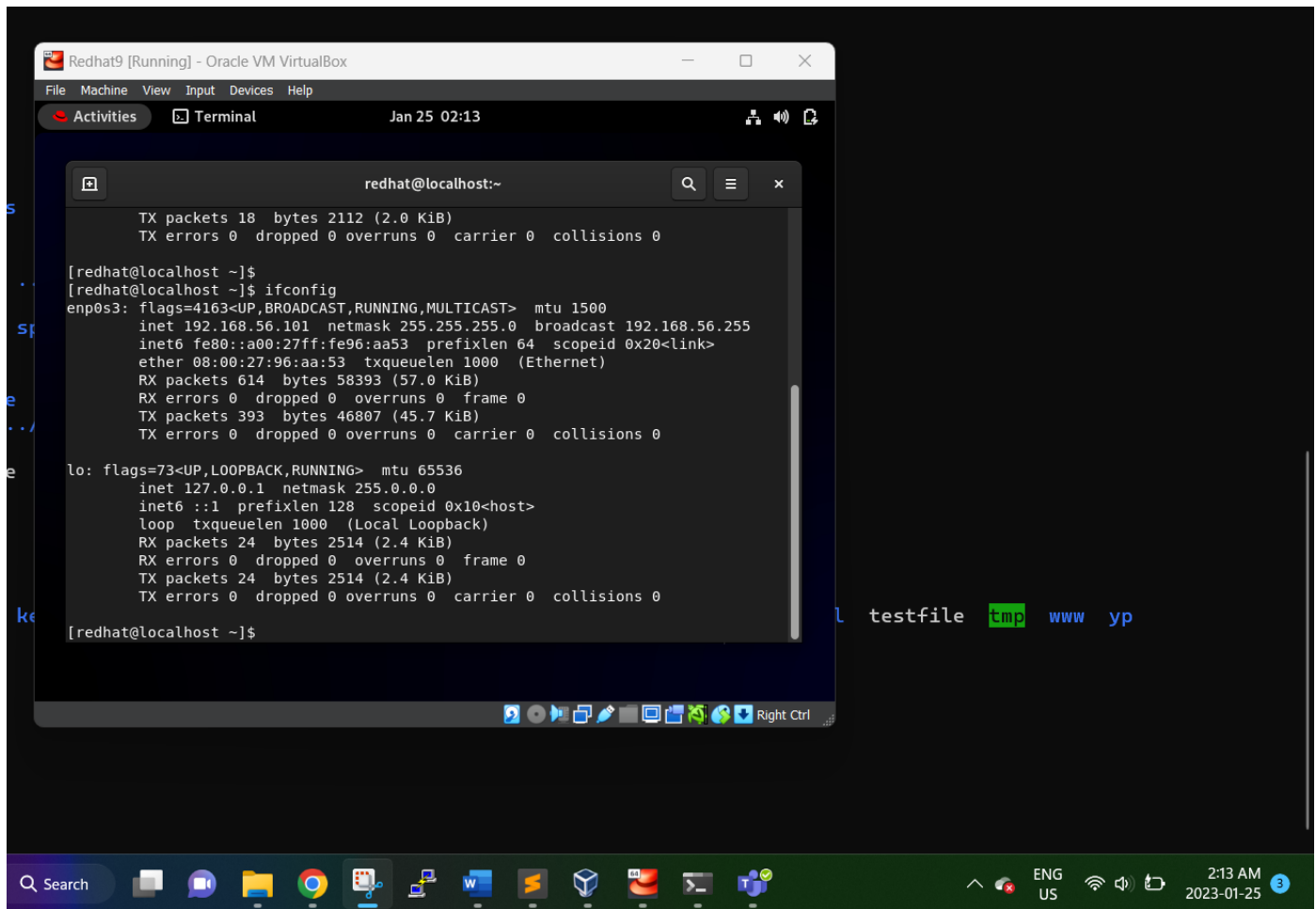


```
root@localhost:var/www x + v
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
[root@localhost www]# mv testfile /var/
[root@localhost www]# cd ..
[root@localhost var]# ll ..
total 16
drwxr-xr-x. 2 root root 19 Jan 20 15:21 account
drwxr-xr-x. 2 root root 6 Aug 9 2021 adm
drwxr-xr-x. 18 root root 4096 Jan 20 15:33 cache
drwxr-xr-x. 2 root root 6 Jul 11 2022 crash
drwxr-xr-x. 3 root root 18 Jan 20 15:17 db
drwxr-xr-x. 2 root root 6 Aug 9 2021 empty
drwxr-xr-x. 2 root root 6 Aug 9 2021 ftp
drwxr-xr-x. 2 root root 6 Aug 9 2021 games
drwxr-xr-x. 3 root root 18 Jan 20 15:17 kerberos
drwxr-xr-x. 55 root root 4096 Jan 20 15:33 lib
drwxr-xr-x. 2 root root 6 Aug 9 2021 local
lrwxrwxrwx. 1 root root 11 Jan 20 15:16 lock -> ../run/lock
drwxr-xr-x. 15 root root 4096 Jan 20 22:11 log
lrwxrwxrwx. 1 root root 10 Aug 9 2021 mail -> spool/mail
drwxr-xr-x. 2 root root 6 Aug 9 2021 nis
drwxr-xr-x. 2 root root 6 Aug 9 2021 opt
drwxr-xr-x. 2 root root 6 Aug 9 2021 preserve
lrwxrwxrwx. 1 root root 6 Jan 20 15:16 run -> ../run
drwxr-xr-x. 10 root root 106 Jan 20 15:21 spool
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
drwxrwxrwt. 13 root root 4096 Jan 25 01:10 tmp
drwxr-xr-x. 2 root root 6 Jan 25 01:20 www
drwxr-xr-x. 2 root root 6 Aug 9 2021 yp
[root@localhost var]#
[root@localhost var]# ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool testfile tmp www yp
[root@localhost var]# cp testfile /var/www/
[root@localhost var]# cd /var/www/
[root@localhost www]# ls
testfile
[root@localhost www]# rm testfile
rm: remove regular empty file 'testfile'? y
[root@localhost www]# ls
[root@localhost www]#
```

- g. ll - This command I have used to list information about files and directory that are present in the current directory.

```
root@localhost:var/www  X  +  v
-rw-r--r--. 1 root root 0 Jan 25 01:12 testfile
[root@localhost www]# mv testfile /var/
[root@localhost www]# cd ..
[root@localhost var]# ll ..
total 16
drwxr-xr-x. 2 root root   19 Jan 20 15:21 account
drwxr-xr-x. 2 root root   6 Aug 9 2021 adm
drwxr-xr-x. 18 root root 4096 Jan 20 15:33 cache
drwxr-xr-x. 2 root root   6 Jul 11 2022 crash
drwxr-xr-x. 3 root root   18 Jan 20 15:17 db
drwxr-xr-x. 2 root root   6 Aug 9 2021 empty
drwxr-xr-x. 2 root root   6 Aug 9 2021 ftp
drwxr-xr-x. 2 root root   6 Aug 9 2021 games
drwxr-xr-x. 3 root root   18 Jan 20 15:17 kerberos
drwxr-xr-x. 55 root root 4096 Jan 20 15:33 lib
drwxr-xr-x. 2 root root   6 Aug 9 2021 local
lrwxrwxrwx. 1 root root   11 Jan 20 15:16 lock -> ../run/lock
drwxr-xr-x. 15 root root 4096 Jan 20 22:11 log
lrwxrwxrwx. 1 root root   10 Aug 9 2021 mail -> spool/mail
drwxr-xr-x. 2 root root   6 Aug 9 2021 nis
drwxr-xr-x. 2 root root   6 Aug 9 2021 opt
drwxr-xr-x. 2 root root   6 Aug 9 2021 preserve
lrwxrwxrwx. 1 root root   6 Jan 20 15:16 run -> ../run
drwxr-xr-x. 10 root root  106 Jan 20 15:21 spool
-rw-r--r--. 1 root root   0 Jan 25 01:12 testfile
drwxrwxrwt. 13 root root 4096 Jan 25 01:10 tmp
drwxr-xr-x. 2 root root   6 Jan 25 01:20 www
drwxr-xr-x. 2 root root   6 Aug 9 2021 yp
[root@localhost var]#
[root@localhost var]# ls
account adm cache crash db empty ftp games kerberos lib local lock log mail nis opt preserve run spool testfile tmp www yp
[root@localhost var]# cp testfile /var/www/
[root@localhost var]# cd /var/www/
[root@localhost www]# ls
testfile
[root@localhost www]# rm testfile
rm: remove regular empty file 'testfile'? y
[root@localhost www]# ls
[root@localhost www]#
```

- h. **ifconfig** – This command I used for getting the IP address for the linux system so that we can connect to putty and winscp.



```
Redhat9 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Jan 25 02:13

redhat@localhost:~
TX packets 18 bytes 2112 (2.0 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[redhat@localhost ~]$
[redhat@localhost ~]$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.56.101 netmask 255.255.255.0 broadcast 192.168.56.255
    inet6 fe80::a00:27ff:fe96:aa53 prefixlen 64 scopeid 0x20<link>
    ether 08:00:27:96:aa:53 txqueuelen 1000 (Ethernet)
    RX packets 614 bytes 58393 (57.0 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 393 bytes 46807 (45.7 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 24 bytes 2514 (2.4 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 24 bytes 2514 (2.4 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[redhat@localhost ~]$
```

- i. **scp** – This command I have used in my local terminal for transfer a file to redhat.

```

Windows PowerShell
/home/redhat
[redhat@localhost ~]$ cd ..
[redhat@localhost home]$ cd
bhavesh2/ redhat/
[redhat@localhost home]$ cd bhavesh2/
-bash: cd: bhavesh2/: Permission denied
[redhat@localhost home]$ ls
bhavesh2 myfile redhat
[redhat@localhost home]$ logout
Connection to 192.168.56.101 closed.
PS C:\>
PS C:\>
PS C:\> ls

Directory: C:\

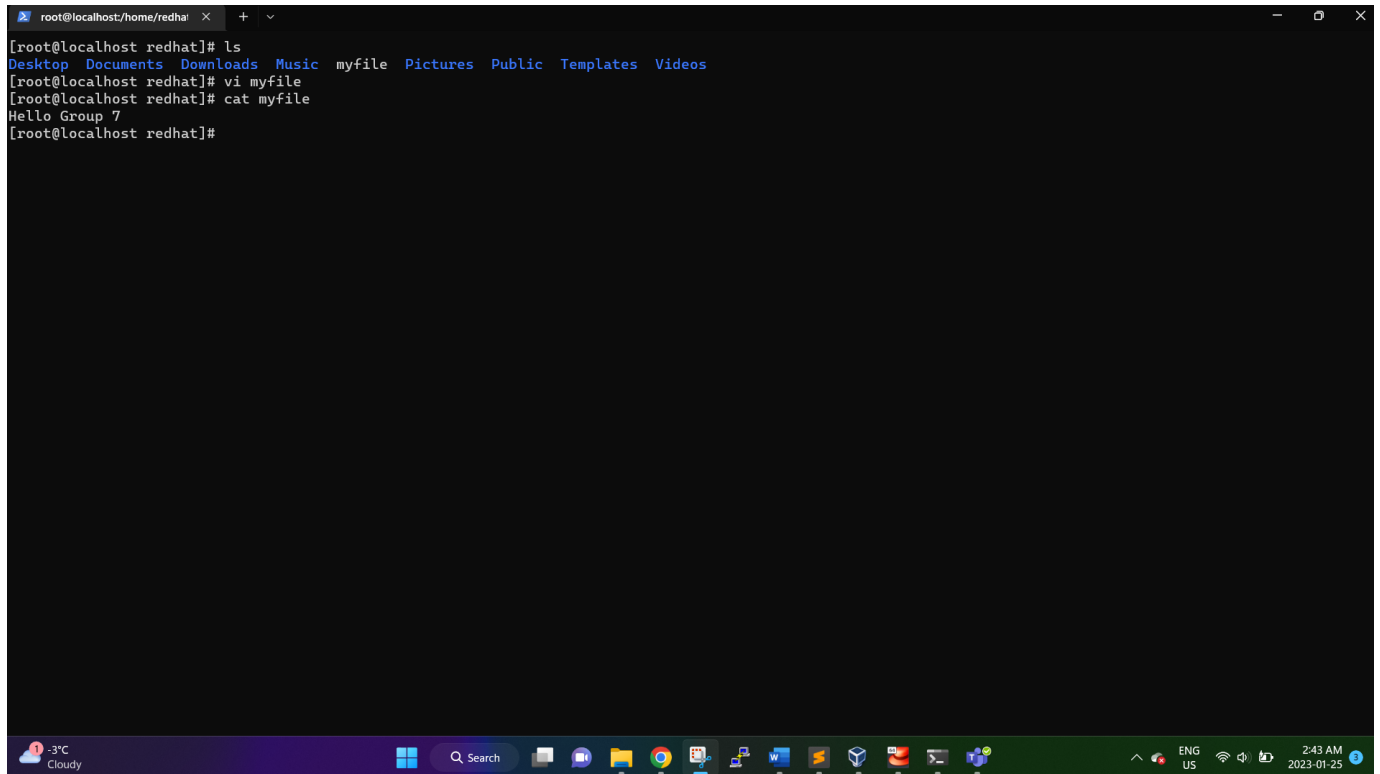
Mode                LastWriteTime         Length Name
----                -
d-----          2023-01-10   7:04 PM             Bhavesh
d-----          2022-06-23   1:27 PM             eSupport
d-----          2022-05-07   1:24 AM             PerfLogs
d-r-----        2023-01-26   4:55 PM          Program Files
d-r-----        2023-01-18   3:42 PM          Program Files (x86)
d-r-----        2023-01-26   4:55 PM             Users
d-----          2023-01-18   3:38 PM             Windows

PS C:\> cd .\Users\bhave\Downloads\
PS C:\Users\bhave\Downloads> scp .\dog.jfif redhat@192.168.56.101:/var/www/mydir2
redhat@192.168.56.101's password:
scp: /var/www/mydir2/dog.jfif: Permission denied
PS C:\Users\bhave\Downloads> scp .\dog.jfif redhat@192.168.56.101:/var/www/mydir2
redhat@192.168.56.101's password:
dog.jfif                                     100% 14KB 2.8MB/s 00:00
PS C:\Users\bhave\Downloads>
PS C:\Users\bhave\Downloads>
PS C:\Users\bhave\Downloads>
PS C:\Users\bhave\Downloads>

```

### 3. Create a file by using vi command and Verify it by using cat command (to show the contents)

I have used VI command for creating a file and editing the file. And then I have used cat command to display the contents of the file.



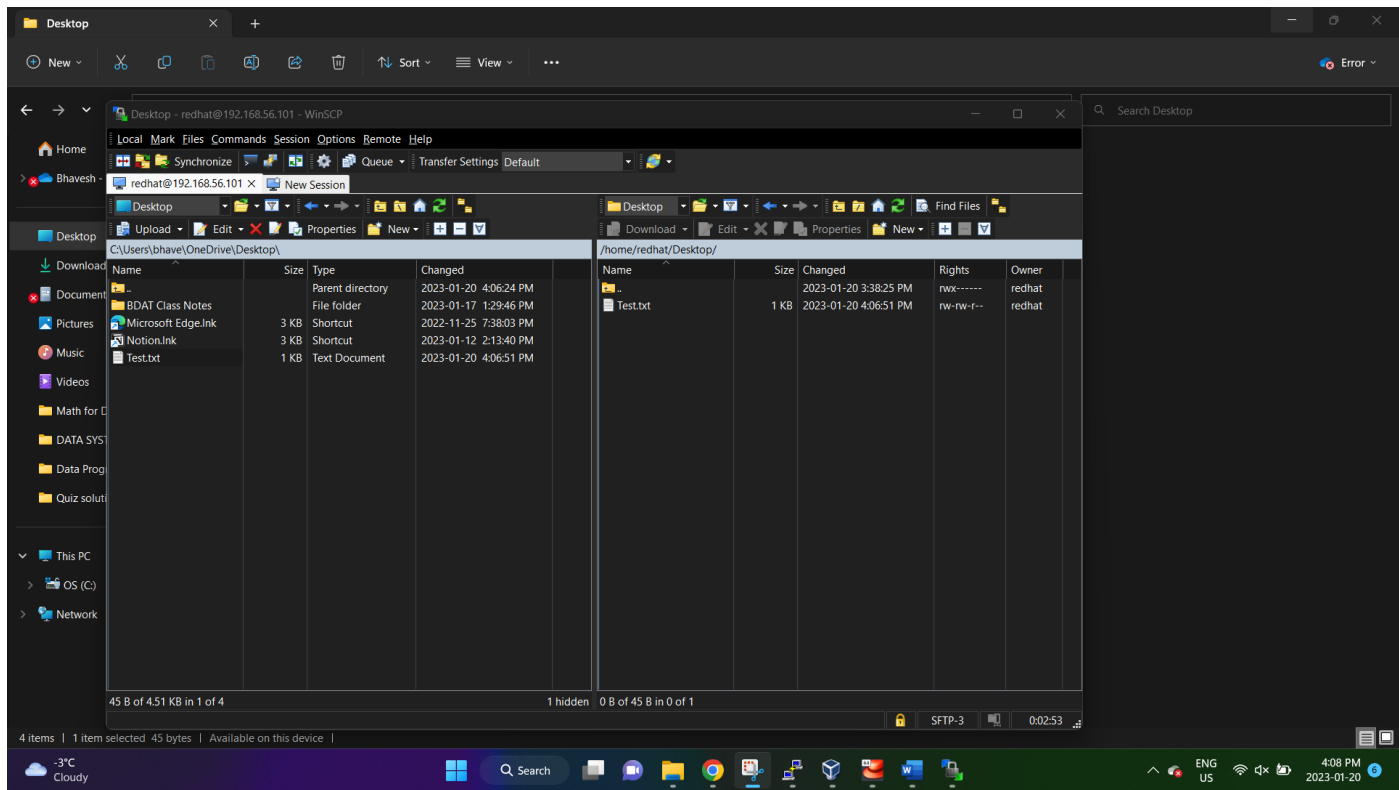
The image shows a terminal window with a dark background. The terminal text is as follows:

```
root@localhost/home/redhat x + v
[root@localhost redhat]# ls
Desktop Documents Downloads Music myfile Pictures Public Templates Videos
[root@localhost redhat]# vi myfile
[root@localhost redhat]# cat myfile
Hello Group 7
[root@localhost redhat]#
```

Below the terminal window is a Windows taskbar. On the left, it shows the weather as -3°C and Cloudy. In the center is a search bar and several application icons. On the right, it shows system icons for language (ENG US), network, and volume, along with the date and time: 2:43 AM, 2023-01-25.

#### **4. Use WinSCP to transfer a file to your Virtual Machine**

This is the tool that we have used for connecting to Redhat and transfer files from local machine to Linux machine.



## 5. Create a user with password - log in with new username.

Created a new user name bhavesh2 added a password to it and logged in with the same user into the linux system.

```
bhaves2@localhost/home/ x + v
[root@localhost redhat]# ls
Desktop Documents Downloads Music myfile Pictures Public Templates Videos
[root@localhost redhat]# vi myfile
[root@localhost redhat]# cat myfile
Hello Group 7
[root@localhost redhat]# useradd bhaves2
[root@localhost redhat]# sudo useradd bhaves2
useradd: user 'bhaves2' already exists
[root@localhost redhat]#
[root@localhost redhat]# passwd bhaves2
Changing password for user bhaves2.
New password:
BAD PASSWORD: The password is a palindrome
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost redhat]# sudo bhaves2
sudo: bhaves2: command not found
[root@localhost redhat]# sudo u bhaves2
sudo: u: command not found
[root@localhost redhat]# sudo -u bhaves2
usage: sudo -h | -K | -k | -V
usage: sudo -v [-AknS] [-g group] [-h host] [-p prompt] [-u user]
usage: sudo -l [-AknS] [-g group] [-h host] [-p prompt] [-U user] [-u user] [command]
usage: sudo [-AbEHknPS] [-r role] [-t type] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory] [-T timeout] [-u user] [VAR=value] [-i|-s] [<command>]
usage: sudo -e [-AknS] [-r role] [-t type] [-C num] [-D directory] [-g group] [-h host] [-p prompt] [-R directory] [-T timeout] [-u user] file ...
[root@localhost redhat]# sudo -u bhaves2
bash: -u: command not found...
[root@localhost redhat]#
[root@localhost redhat]# sudo su bhaves2
[bhaves2@localhost redhat]$
```

## 6. Create a file then modify the permission to full permission

```
root@localhost/home
login as: bhaves2
bhaves2@192.168.0.195's password:
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Sun Jan 29 18:16:31 2023
[bhaves2@localhost ~]$ cd ..
[bhaves2@localhost home]$ ls
bhaves2
[bhaves2@localhost home]$ touch file2
touch: cannot touch 'file2': Permission denied
[bhaves2@localhost home]$ sudo su

We trust you have received the usual lecture from the local System
Administrator. It usually boils down to these three things:

#1) Respect the privacy of others.
#2) Think before you type.
#3) With great power comes great responsibility.

[sudo] password for bhaves2:
[root@localhost home]# touch file2
[root@localhost home]# ls
bhaves2 file2
[root@localhost home]# ll
total 4
drwx----- 14 bhaves2 bhaves2 4096 Jan 29 18:16 bhaves2
-rw-r--r-- 1 root root 0 Jan 29 18:19 file2
[root@localhost home]# chmod -R 777 file2
[root@localhost home]# ll
total 4
drwx----- 14 bhaves2 bhaves2 4096 Jan 29 18:16 bhaves2
-rwxrwxrwx 1 root root 0 Jan 29 18:19 file2
[root@localhost home]#
```

## 7. Download Hadoop by using wget - unzip.

Install wget command – use wget command to install Hadoop to local machine.

```
[root@localhost redhat]# yum install wget
Updating Subscription Management repositories.
Last metadata expiration check: 0:05:15 ago on Fri 27 Jan 2023 08:56:31 PM.
Package wget-1.21.1-7.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@localhost redhat]# wget https://dcln.apache.org/hadoop/common/hadoop-3.3.4/hadoop-3.3.4-src.tar.gz
--2023-01-27 21:02:10-- https://dcln.apache.org/hadoop/common/hadoop-3.3.4/hadoop-3.3.4-src.tar.gz
Resolving dcln.apache.org (dcln.apache.org)... 2a04:4e42::644, 151.101.2.132
Connecting to dcln.apache.org (dcln.apache.org)|2a04:4e42::644|:443...
failed: Connection timed out.
Connecting to dcln.apache.org (dcln.apache.org)|151.101.2.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 35633659 (34M) [application/x-gzip]
Saving to: 'hadoop-3.3.4-src.tar.gz'

hadoop-3.3.4-src.tar.gz      100%[=====] 33.98M  24.5MB/s  in 1.4s

2023-01-27 21:04:24 (24.5 MB/s) - 'hadoop-3.3.4-src.tar.gz' saved [35633659/35633659]

[root@localhost redhat]#
[root@localhost redhat]#
```

Use 'tar -xvf hadoop-3.3.4-src.tar.gz' command to unzip the Hadoop gz file.

```
root@localhost:var
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/pi/math/package.html
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/pi/math/ArithmeticProgression.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/pi/Util.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/pi/package.html
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/Grep.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/AggregateWordHistogram.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/Sort.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/WordStandardDeviation.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/QuasiMonteCarlo.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/RandomWriter.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/RandomTextWriter.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/main/java/org/apache/hadoop/examples/package.html
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/test/java/org/apache/hadoop/mapreduce/lib/db/TestDBJob.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/test/java/org/apache/hadoop/examples/TestWordStats.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/test/java/org/apache/hadoop/examples/terasort/TestTeraSort.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/test/java/org/apache/hadoop/examples/pi/math/TestSummation.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/test/java/org/apache/hadoop/examples/pi/math/TestModular.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/test/java/org/apache/hadoop/examples/pi/math/TestLongLong.java
hadoop-3.3.4-src/hadoop-mapreduce-project/hadoop-mapreduce-examples/src/test/java/org/apache/hadoop/examples/TestBaileyBorweinPlouffe.java
hadoop-3.3.4-src/hadoop-mapreduce-project/bin/mapred
hadoop-3.3.4-src/hadoop-mapreduce-project/bin/mapred-config.sh
hadoop-3.3.4-src/hadoop-mapreduce-project/bin/mapred.cmd
hadoop-3.3.4-src/hadoop-mapreduce-project/bin/mapred-config.cmd
hadoop-3.3.4-src/hadoop-mapreduce-project/bin/mr-jobhistory-daemon.sh
hadoop-3.3.4-src/hadoop-mapreduce-project/conf/mapred-env.cmd
hadoop-3.3.4-src/hadoop-mapreduce-project/conf/mapred-site.xml
hadoop-3.3.4-src/hadoop-mapreduce-project/conf/configuration.xml
hadoop-3.3.4-src/hadoop-mapreduce-project/conf/mapred-queues.xml.template
hadoop-3.3.4-src/hadoop-mapreduce-project/conf/mapred-env.sh
hadoop-3.3.4-src/BUILDING.txt
hadoop-3.3.4-src/hadoop-assemblies/pom.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-src.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-yarn-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-registry-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-nfs-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-kms-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-resourceestimator.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-hdfs-nfs-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-dynamometer-infra.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-https-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-mapreduce-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-dynamometer.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-dynamometer-workload.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-dist.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-sls.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-dynamometer-blockgen.xml
hadoop-3.3.4-src/hadoop-assemblies/src/main/resources/assemblies/hadoop-tools.xml
hadoop-3.3.4-src/.github/pull_request_template.md
[root@localhost var]#
```

## 8. Install any package (like http) - remove it



```
root@localhost/dvd/AppStream
Installing      : mod_http2-1.15.19-2.el9.x86_64
Installing      : mod_lua-2.4.53-7.el9.x86_64
Installing      : httpd-2.4.53-7.el9.x86_64
Running scriptlet: httpd-2.4.53-7.el9.x86_64
Verifying      : apr-1.7.0-11.el9.x86_64
Verifying      : apr-util-1.6.1-20.el9.x86_64
Verifying      : apr-util-bdb-1.6.1-20.el9.x86_64
Verifying      : apr-util-openssl-1.6.1-20.el9.x86_64
Verifying      : httpd-2.4.53-7.el9.x86_64
Verifying      : httpd-core-2.4.53-7.el9.x86_64
Verifying      : httpd-filesystem-2.4.53-7.el9.noarch
Verifying      : httpd-tools-2.4.53-7.el9.x86_64
Verifying      : mod_http2-1.15.19-2.el9.x86_64
Verifying      : mod_lua-2.4.53-7.el9.x86_64
Verifying      : redhat-logos-httpd-90.4-1.el9.noarch
Installed products updated.

Installed:
apr-1.7.0-11.el9.x86_64      apr-util-1.6.1-20.el9.x86_64      apr-util-bdb-1.6.1-20.el9.x86_64      apr-util-openssl-1.6.1-20.el9.x86_64      httpd-2.4.53-7.el9.x86_64
httpd-core-2.4.53-7.el9.x86_64      httpd-filesystem-2.4.53-7.el9.noarch      httpd-tools-2.4.53-7.el9.x86_64      mod_http2-1.15.19-2.el9.x86_64      mod_lua-2.4.53-7.el9.x86_64
redhat-logos-httpd-90.4-1.el9.noarch

Complete!
[root@localhost AppStream]# yum remove httpd
Updating Subscription Management repositories.
Dependencies resolved.
=====
Package                                Architecture      Version            Repository          Size
=====
Removing:
httpd                                  x86_64            2.4.53-7.el9      @dvd                59 k
Removing unused dependencies:
apr                                  x86_64            1.7.0-11.el9      @dvd                289 k
apr-util                             x86_64            1.6.1-20.el9      @dvd                213 k
apr-util-bdb                         x86_64            1.6.1-20.el9      @dvd                16 k
apr-util-openssl                    x86_64            1.6.1-20.el9      @dvd                24 k
httpd-core                          x86_64            2.4.53-7.el9      @dvd                4.6 M
httpd-filesystem                    noarch            2.4.53-7.el9      @dvd                400
httpd-tools                         x86_64            2.4.53-7.el9      @dvd                198 k
mod_http2                           x86_64            1.15.19-2.el9      @dvd                385 k
mod_lua                             x86_64            2.4.53-7.el9      @dvd                142 k
redhat-logos-httpd                  noarch            90.4-1.el9        @dvd                12 k
=====
Transaction Summary
=====
Remove  11 Packages

Freed space: 5.9 M
Is this ok [y/N]: [Y]

-14°C
Snow off and on
```

## 9. Create your local.repo.

```
root@localhost/dvd/AppStream
-r--r--r--. 1 bhavesh bhavesh 3682 Oct 27 04:33 RPM-GPG-KEY-redhat-release
[root@localhost dvd]# cd AppStream/
[root@localhost AppStream]# ls
Packages  repodata
[root@localhost AppStream]# nano /etc/yum.repos.d/localyum.repo
[root@localhost AppStream]# cat /etc/yum.repos.d/localyum.repo
[dvd]
name=redhat DVD
baseurl=file:///dvd/AppStream
enabled=1
gpgcheck=0
[root@localhost AppStream]# nano /etc/yum.repos.d/localyum.repo
[root@localhost AppStream]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M  0  4.0M   0% /dev
tmpfs           1.8G  0  1.8G   0% /dev/shm
tmpfs           732M  13M  719M   2% /run
/dev/mapper/rhel-root 17G  4.0G  14G  24% /
/dev/sda1       1014M  284M  731M  28% /boot
tmpfs          366M  112K  366M   1% /run/user/1000
/dev/sr0        8.5G  8.5G   0 100% /dvd
[root@localhost AppStream]# yum repolist
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

repo id                                repo name
dvd                                     redhat DVD
[root@localhost AppStream]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M  0  4.0M   0% /dev
tmpfs           1.8G  0  1.8G   0% /dev/shm
tmpfs           732M  13M  719M   2% /run
/dev/mapper/rhel-root 17G  4.0G  14G  24% /
/dev/sda1       1014M  284M  731M  28% /boot
tmpfs          366M  112K  366M   1% /run/user/1000
/dev/sr0        8.5G  8.5G   0 100% /dvd
[root@localhost AppStream]# nano /etc/yum.repos.d/localyum.repo
[root@localhost AppStream]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M  0  4.0M   0% /dev
tmpfs           1.8G  0  1.8G   0% /dev/shm
tmpfs           732M  13M  719M   2% /run
/dev/mapper/rhel-root 17G  4.0G  14G  24% /
/dev/sda1       1014M  284M  731M  28% /boot
tmpfs          366M  112K  366M   1% /run/user/1000
/dev/sr0        8.5G  8.5G   0 100% /dvd
[root@localhost AppStream]# yum repolist
```

## 10. Command line - upgrade VM to GUI

The screenshot shows a Windows 11 desktop. On the left, a document editor window titled 'Assignment 1-Linux.docx' is open in 'Protected View'. It contains a list of tasks for a Linux VM assignment. On the right, a VirtualBox window titled 'Redhat9 [Running] - Oracle VM VirtualBox' is open, displaying the Red Hat Enterprise Linux 9 desktop environment. The desktop features the Red Hat logo and the text 'Red Hat Enterprise Linux'. The task list in the document editor includes:

- 1. Connect to your VM by using putty then change the color to system
- 2. Demonstrate the following commands (run it in your VM or EC2)  
`mkdir , touch ,mv, cp ,rm ,ls ,ll ,ifconfig ,scp`
- 3. Create a file by using vi and put some contents in it like "Hello Grok"
- 4. Use WinSCP to transfer a file to your Linux VM
- 5. Create a user with password then log in with new username by using
- 6. Create a file then modify the permission to full permission
- 7. Download Hadoop by using wget then unzip it (any Hadoop version)
- 8. Install any package (like http) then remove it
- 9. Create your local.repo and make sure its working .If already has been
- 10. From the command line upgrade your VM to GUI

Below the task list, a note states: 'Note: Provide your screenshots and explanation below each question'. At the bottom of the document editor, a 'Sample screen shot' section is visible, showing a weather widget and a taskbar. The taskbar at the bottom of the desktop includes the Start button, Search, and various application icons. The system tray shows the date and time as '9:19 PM 2023-01-27'.

Part 1: Week 1 and 2

Objective: Run few basic commands in Linux

1. Connect to your VM by using putty then change the color to system

2. Demonstrate the following commands (run it in your VM or EC2)  
`mkdir , touch ,mv, cp ,rm ,ls ,ll ,ifconfig ,scp`

3. Create a file by using vi and put some contents in it like "Hello Grok"

4. Use WinSCP to transfer a file to your Linux VM

5. Create a user with password then log in with new username by using

6. Create a file then modify the permission to full permission

7. Download Hadoop by using wget then unzip it (any Hadoop version)

8. Install any package (like http) then remove it

9. Create your local.repo and make sure its working .If already has been

10. From the command line upgrade your VM to GUI

Note: Provide your screenshots and explanation below each question

Sample screen shot