

**Made By**

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**010 Practical - Commands of change permissions of file,  
group, directory and Basic Shell Scripting of Linux on EC2  
with Amazon Linux Machine - 08 Feb 2022**

The screenshot shows a terminal window titled "3. root@ip-172-31-35-32/" running on MobaXterm Personal Edition v21.5. The window displays a welcome message for the X server, SSH client, and network tools. It includes instructions about accessible drives, DISPLAY settings, and command status symbols. An "Important" section highlights the difference between the Personal and Professional editions, mentioning customization options like logos and MSI packages. The terminal then shows a series of commands: navigating to the Desktop directory, changing to the "keys" subdirectory, and attempting an SSH connection to an Amazon Linux 2 AMI instance. The connection fails due to X11 forwarding requests. The terminal also displays the URL for Amazon Linux 2 documentation and a note about security package availability. At the bottom, a message encourages users to support the software by subscribing to the professional edition.

```
• MobaXterm Personal Edition v21.5 •
(X server, SSH client and network tools)

> Your computer drives are accessible through the /drives path
> Your DISPLAY is set to 192.168.0.105:0.0
> When using SSH, your remote DISPLAY is automatically forwarded
> Your HOME folder is not persistent: it will be erased on restart
> Each command status is specified by a special symbol (✓ or ✗)

• Important:
This is MobaXterm Personal Edition. The Professional edition
allows you to customize MobaXterm for your company: you can add
your own logo, your parameters, your welcome message and generate
either an MSI installation package or a portable executable.
We can also modify MobaXterm or develop the plugins you need.
For more information: https://mobaxterm.mobatek.net/download.html

10/02/2022 10:28.45 cd Desktop
10/02/2022 10:28.50 cd keys
10/02/2022 10:28.53 ssh -i "10-feb-linux-machine.pem" ec2-user@ec2-13-232-199-188.ap-south-1.compute.amazonaws.com
X11 forwarding request failed on channel 0
Last login: Thu Feb 10 04:21:59 2022 from 45.251.15.4

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
3 package(s) needed for security, out of 6 available

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```

- Login to your linux machine

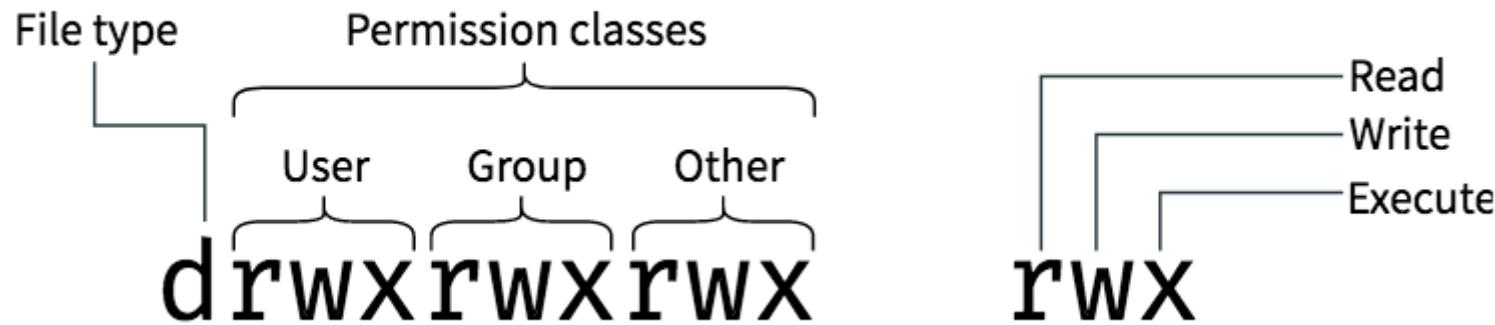
```
# ls -l file
-rw-r--r-- 1 root root 0 Nov 19 23:49 file
```

The diagram shows the output of the command `ls -l file`. It highlights the permission string `-rw-r--r--` with colored arrows and labels:

- File type:** `-`
- User (Owner):** `r` (red)
- Group:** `w` (blue)
- Other:** `r` (purple)

To the right, a legend defines the symbols:

- r** = Readable
- w** = Writeable
- x** = Executable
- = Denied



- By using above picture you can clearly able to understand how permission classes are divided along with their access permissions.

The screenshot shows a MobaXterm window with two panes. The left pane is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command history:

```
[root@ip-172-31-35-32 /]#
[root@ip-172-31-35-32 /]#
[root@ip-172-31-35-32 /]# mkdir satish
[root@ip-172-31-35-32 /]#
[root@ip-172-31-35-32 /]# cd satish
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# mkdir 10feb
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# cd 10feb
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# touch file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-rw-r--r-- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right pane is a Notepad++ window titled 'new 3 - Notepad++' containing the same command history, numbered from 2 to 14.

At the bottom of the MobaXterm window, there is a status bar with the following information:

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Length Ln : 14 Col : 9 Pos : 108 Windows (CR LF) UTF-8 INS

Icons for various applications are visible in the taskbar at the bottom.

- Here you can see that permissions of **file1** as below :-  
- rw- r-- r-- 1 root root
- Now we have to change permissions for **file1**

The screenshot shows a MobaXterm interface. On the left, a terminal window titled '3. root@ip-172-31-35-32: satish/10feb' displays the following command history:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-rw-r--r-- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 777 file1
```

On the right, a Notepad++ window titled 'new 3 - Notepad++' shows the command being typed:

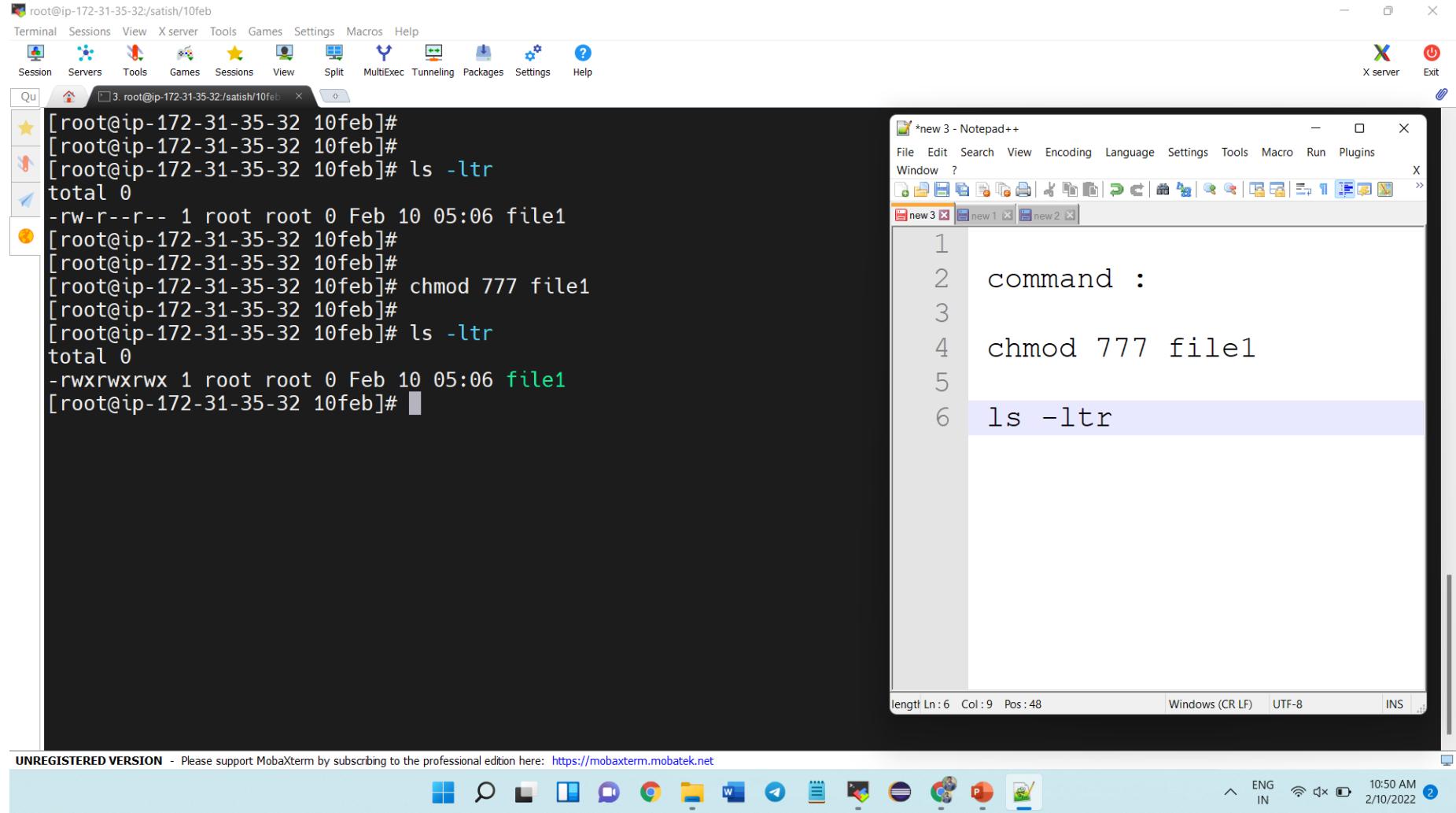
```
1
2 command :
3
4 chmod 777 file1
```

The status bar at the bottom of the terminal window indicates: length! Ln : 4 Col : 17 Pos : 35 Windows (CR LF) UTF-8 INS.

At the bottom of the screen, a taskbar shows various application icons, and the system tray displays the date and time: 10:41 AM 2/10/2022.

## chmod 777 file1

- By using this command we can able to change access permissions as read, write and access to all permission class.



The screenshot shows a MobaXterm window with two panes. The left pane is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command-line session:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-rw-r--r-- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 777 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-rwxrwxrwx 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right pane is a Notepad++ window titled 'new 3 - Notepad++' with the file 'new 3'. It contains the following text:

```
1
2 command :
3
4 chmod 777 file1
5
6 ls -ltr
```

At the bottom of the Notepad++ window, there is status information: Length! Ln : 6 Col : 9 Pos : 48 Windows (CR LF) UTF-8 INS.

At the very bottom of the MobaXterm interface, there is a taskbar with various icons for Windows applications like File Explorer, Task View, Start, and others. On the far right of the taskbar, there are system status indicators for language (ENG IN), connectivity (Wi-Fi), battery (10:50 AM 2/10/2022), and notifications.

- Here you can see that access permissions are changed for all permission classes

The screenshot shows a MobaXterm interface with a terminal window and a Notepad++ window.

**Terminal Window:**

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# chmod 000 file1  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# ls -ltr  
total 0  
----- 1 root root 0 Feb 10 05:06 file1  
[root@ip-172-31-35-32 10feb]#
```

**Notepad++ Window:**

```
*new 3 - Notepad++  
File Edit Search View Encoding Language Settings Tools Macro Run Plugins  
Window ?  
new 3 new 1 new 2  
1  
2 command :  
3  
4 chmod 000 file1  
5  
6 ls -ltr
```

Length Ln : 6 Col : 9 Pos : 48 Windows (CR LF) UTF-8 INS

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

ENG IN 10:52 AM 2/10/2022 2

- Use the above command and see result

The screenshot shows a MobaXterm interface with two windows. The left window is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command history and output:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 400 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-r----- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right window is a Notepad++ editor titled 'new 3 - Notepad++'. It contains the following text:

```
1
2 command :
3
4 chmod 400 file1
5
6 ls -ltr
```

The status bar at the bottom of the MobaXterm window shows:

Length! Ln : 6 Col : 9 Pos : 48 Windows (CR LF) UTF-8 INS

At the very bottom, there is an unregistered version notice and a taskbar with various icons.

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with two windows. The left window is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command history:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 040 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
---r---- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right window is a Notepad++ document titled 'new 3 - Notepad++'. It contains the following text:

```
1
2 command :
3
4 chmod 040 file1
5
6 ls -ltr
```

At the bottom of the terminal window, there is a status bar with the following information:

Length! Ln : 6 Col : 9 Pos : 48 Windows (CR LF) UTF-8 INS ↵

At the very bottom of the screen, there is a taskbar with various icons.

- Use above command and check results in access permissions

The screenshot shows a MobaXterm window with two panes. The left pane is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command history:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 004 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-----r-- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right pane is a Notepad++ editor titled 'new 3 - Notepad++' with the following content:

```
1
2 command :
3
4 chmod 004 file1
5
6 ls -ltr
```

At the bottom of the terminal pane, there is a message: 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>'.

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with a terminal window and a Notepad++ window.

**Terminal Window:**

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# chmod 444 file1  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# ls -ltr  
total 0  
-r--r-- 1 root root 0 Feb 10 05:06 file1  
[root@ip-172-31-35-32 10feb]#
```

**Notepad++ Window:**

```
*new 3 - Notepad++  
File Edit Search View Encoding Language Settings Tools Macro Run Plugins  
Window ?  
new 3 new 1 new 2  
1  
2 command :  
3  
4 chmod 444 file1  
5  
6 ls -ltr
```

Length Ln : 4 Col : 17 Pos : 35 Windows (CR LF) UTF-8 INS

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ENG IN 10:55 AM 2/10/2022 2

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with two windows. The left window is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command history:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 644 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-rw-r--r-- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right window is a Notepad++ document titled 'new 3 - Notepad++' with the following content:

```
1
2 command :
3
4 chmod 644 file1
5
6 ls -ltr
```

At the bottom of the terminal window, there is a message: 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>'.

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with two windows. The left window is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command history:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 664 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-rw-rw-r-- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right window is a Notepad++ editor titled 'new 3 - Notepad++'. It contains the following text:

```
1
2 command :
3
4 chmod 664 file1
5
6 ls -ltr
```

At the bottom of the terminal window, there is a message: 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>'.

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with a terminal window and a Notepad++ window.

**Terminal Window:**

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# chmod 666 file1  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# ls -ltr  
total 0  
-rw-rw-rw- 1 root root 0 Feb 10 05:06 file1  
[root@ip-172-31-35-32 10feb]#
```

**Notepad++ Window:**

```
1  
2 command :  
3  
4 chmod 666 file1|  
5  
6 ls -ltr
```

Length Ln : 4 Col : 17 Pos : 35      Windows (CR LF)      UTF-8      INS

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

ENG IN 10:57 AM 2/10/2022 2

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with a terminal window and a Notepad++ window.

**Terminal Window:**

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# chmod 766 file1  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# ls -ltr  
total 0  
-rwxrw-rw- 1 root root 0 Feb 10 05:06 file1  
[root@ip-172-31-35-32 10feb]#
```

**Notepad++ Window:**

```
*new 3 - Notepad++  
File Edit Search View Encoding Language Settings Tools Macro Run Plugins  
Window ?  
new 3 new 1 new 2  
1  
2 command :  
3  
4 chmod 766 file1|  
5  
6 ls -ltr
```

Length Ln : 4 Col : 17 Pos : 35 Windows (CR LF) UTF-8 INS

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ENG IN 10:58 AM 2/10/2022 2

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with two windows. The left window is a terminal session titled '3. root@ip-172-31-35-32:satish/10feb'. It displays the following command history:

```
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# chmod 776 file1
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]#
[root@ip-172-31-35-32 10feb]# ls -ltr
total 0
-rwxrwxrwx- 1 root root 0 Feb 10 05:06 file1
[root@ip-172-31-35-32 10feb]#
```

The right window is a Notepad++ document titled 'new 3 - Notepad++'. It contains the following text:

```
1
2 command :
3
4 chmod 776 file1
5
6 ls -ltr
```

At the bottom of the terminal window, there is a message: 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>'.

- Use above command and check results in access permissions

The screenshot shows a Linux desktop environment with a terminal window and a text editor window.

**Terminal Window:**

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# chmod 777 file1  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]#  
[root@ip-172-31-35-32 10feb]# ls -ltr  
total 0  
-rwxrwxrwx 1 root root 0 Feb 10 05:06 file1  
[root@ip-172-31-35-32 10feb]#
```

**Notepad++ Window:**

```
1  
2 command :  
3  
4 chmod 777 file1  
5  
6 ls -ltr
```

Length Ln : 4 Col : 17 Pos : 35 Windows (CR LF) UTF-8 INS

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

ENG IN 10:59 AM 2/10/2022 2

- Use above command and check results in access permissions

The screenshot shows a MobaXterm interface with two windows. The left window is a terminal session titled '3. root@ip-172-31-35-32:satish'. It displays a list of files and directories with their permissions, owner, group, and timestamps. The first file listed is '10feb'. Two boxes highlight the 'root' entry under both 'OWNER' and 'GROUP' for this file. A yellow arrow points from the word 'OWNER' to the yellow box, and a red arrow points from the word 'GROUP' to the red box. The right window is a Notepad++ editor titled '\*new 3 - Notepad++'. It contains a single line of code: 'ls -ltr'. The status bar at the bottom of the Notepad++ window shows 'length| Ln : 4 Col : 9 Pos : 27 Windows (CR LF) UTF-8 INS'.

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# ls -ltr  
total 0  
drwxr-xr-x 2 root root 19 Feb 10 05:06 10feb  
drwxr-xr-x 2 root root 6 Feb 10 05:34 dir6  
drwxr-xr-x 2 root root 6 Feb 10 05:34 dir5  
drwxr-xr-x 2 root root 6 Feb 10 05:34 dir4  
drwxr-xr-x 2 root root 6 Feb 10 05:34 dir3  
drwxr-xr-x 2 root root 6 Feb 10 05:34 dir2  
drwxr-xr-x 2 root root 6 Feb 10 05:34 dir1  
[root@ip-172-31-35-32 satish]#
```

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OWNER  
GROUP

\*new 3 - Notepad++  
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?  
new 3 new 1 new 2  
1  
2 command :  
3  
4 ls -ltr

- Now for changing the owner and group of any file or directory we have some commands.

The screenshot shows a terminal session on a Linux system with root privileges. The user has run the command `ls -ltr`, which lists files in reverse chronological order. A red arrow points from the terminal window to a Notepad++ window, highlighting the file entry for "10feb". The Notepad++ window shows the command history, including the executed command and its output.

```
[root@ip-172-31-35-32 satish]# ls -ltr
total 0
drwxr-xr-x 2 root root 19 Feb 10 05:06 10feb
[root@ip-172-31-35-32 satish]#
```

Notepad++ History:

```
1 command :
2 ls -ltr
```

- We are going to change owner of this directory

The screenshot shows a MobaXterm window with two tabs open. The left tab is a terminal session titled '3. root@ip-172-31-35-32:/satish'. It displays a series of commands and their outputs:

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# ls -ltr  
total 0  
drwxr-xr-x 2 root root 19 Feb 10 05:06 10feb  
[root@ip-172-31-35-32 satish]# chown ec2-user 10feb  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# ls -ltr  
total 0  
drwxr-xr-x 2 ec2-user root 19 Feb 10 05:06 10feb  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#
```

A red arrow points from the word 'ec2-user' in the second 'ls -ltr' command output to the 'ec2-user' entry in the Notepad++ file. The Notepad++ window is titled '\*new 3 - Notepad++' and contains the following text:

```
1 command :  
2 ls -ltr  
3  
4  
5  
6 chown ec2-user 10feb
```

The status bar at the bottom of the MobaXterm window shows:

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

Length Ln : 6 Col : 22 Pos : 53 Windows (CR LF) UTF-8 INS

ENG IN 11:12 AM 2/10/2022 2

## chown ec2-user 10feb

- Here you can see that owner is changed

The screenshot shows a terminal window titled 'root@ip-172-31-35-32:satish' with a black background. The user has run the command 'ls -ltr' and is viewing the output. A red box highlights the word 'root' in the first file entry, and a large red arrow points upwards from the bottom towards this box. The terminal window includes a standard Linux menu bar at the top.

[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# ls -ltr  
total 0  
drwxr-xr-x 2 ec2-user root 19 Feb 10 05:06 10feb  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#

A Notepad++ window titled 'new 3 - Notepad++' is open in the background. It contains the following text:

```
1 command :  
2  
3  
4 ls -ltr
```

The status bar at the bottom of the Notepad++ window shows: length! Ln : 4 Col : 9 Pos : 27 Windows (CR LF) UTF-8 INS.

- Now, we are going to change group of this directory

The screenshot shows a MobaXterm window with a terminal session and a Notepad++ editor.

**MobaXterm Terminal Session:**

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# ls -ltr  
total 0  
drwxr-xr-x 2 ec2-user root 19 Feb 10 05:06 10feb  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# chgrp ec2-user 10feb  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# ls -ltr  
total 0  
drwxr-xr-x 2 ec2-user [red box] 19 Feb 10 05:06 10feb  
[root@ip-172-31-35-32 satish]#
```

A red arrow points from the terminal output to the file name "10feb" in the terminal, which is also highlighted with a red box.

**Notepad++ Editor:**

\*new 3 - Notepad++

```
File Edit Search View Encoding Language Settings Tools Macro Run Plugins  
Window ?  
new 3 new 1 new 2  
1  
2 command :  
3  
4 ls -ltr  
5  
6 chgrp ec2-user 10feb
```

The text "chgrp ec2-user 10feb" is highlighted in the Notepad++ editor.

**chgrp ec2-user 10feb**

- Here you can see that group is changed

**Now we are going to learn basic shell scripting**

The screenshot shows a MobaXterm interface. On the left, a terminal window titled '3. root@ip-172-31-35-32:satish' displays the command 'vi sagar.sh' being typed. On the right, a Notepad++ window titled 'new 3 - Notepad++' shows the contents of the file 'sagart.sh' with the text 'command : vi sagar.sh'. The status bar at the bottom indicates the file has 4 lines, 14 columns, and is in position 32. The system tray shows the date and time as 2/10/2022 11:40 AM.

```
[root@ip-172-31-35-32 satish]# vi sagar.sh
```

```
1 command :  
2  
3  
4 vi sagar.sh
```

- Create one file using **vi editor** and give extension as **.sh**

```
#!/bin/bash
```

```
# script that takes value from user
```

```
echo "Please enter your first name"
```

```
read NAME
```

```
echo "Please enter your last surname"
```

```
read LNAME
```

```
echo "Enter your profession"
```

```
read pro
```

```
echo "My first name is $NAME and my last name is $LNAME and I am $pro"
```

- Copy above sample code and paste inside vi editor

- Save it by :x!

The screenshot shows a MobaXterm interface. On the left, a terminal window titled '3. root@ip-172-31-35-32:satish' displays the following script content:

```
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# vi sagar.sh
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# cat sagar.sh
#!/bin/bash

# script that takes value from user
echo "Please enter your first name"
read NAME

echo "Please enter your last surname"
read LNAME

echo "Enter your profession"
read pro

echo "My first name is $NAME and my last name is $LNAME and I am $pro"
[root@ip-172-31-35-32 satish]#
```

On the right, a Notepad++ window titled 'new 3 - Notepad++' shows the same script content with line numbers 1 through 4. The line 'cat sagar.sh' is highlighted in blue.

- After saving file you can view able to view it by **cat** command

The screenshot shows a terminal window titled '3. root@ip-172-31-35-32:satish' running on a Linux system. The user has typed the command `./sagar.sh`, which results in the error message `-bash: ./sagar.sh: Permission denied`. This indicates that the file lacks execute permissions.

The terminal window is part of a larger interface with a menu bar at the top and a taskbar at the bottom. A Notepad++ window is also visible in the background, showing a script with the line `./sagar.sh`.

UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>

length : Ln : 4 Col : 12 Pos : 30 Windows (CR LF) UTF-8 INS

1  
2 command :  
3  
4 ./sagar.sh

- Permission denied because we did not have any execute permissions set for this file.

The screenshot shows a terminal window titled '3. root@ip-172-31-35-32:satish' in MobaXterm. The terminal output is as follows:

```
[root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# ./sagar.sh -bash: ./sagar.sh: Permission denied [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# ls -ltr total 4 -rw-r--r-- 1 root root 261 Feb 10 06:16 sagar.sh [root@ip-172-31-35-32 satish]#
```

To the right of the terminal, there is a Notepad++ window titled 'new 3 - Notepad++'. It contains the following text:

```
1 command :  
2  
3  
4 ./sagar.sh
```

The status bar at the bottom of the Notepad++ window shows: length : Ln : 4 Col : 12 Pos : 30 Windows (CR LF) UTF-8 INS.

At the very bottom of the screen, a taskbar is visible with various icons for Microsoft Office applications like Word, Excel, and PowerPoint, along with other system icons. The system tray shows the date and time as 2/10/2022 11:55 AM.

- We have checked the permissions

The screenshot shows a MobaXterm window with two panes. The left pane is a terminal session titled '3. root@ip-172-31-35-32:satish'. It displays the following command-line interaction:

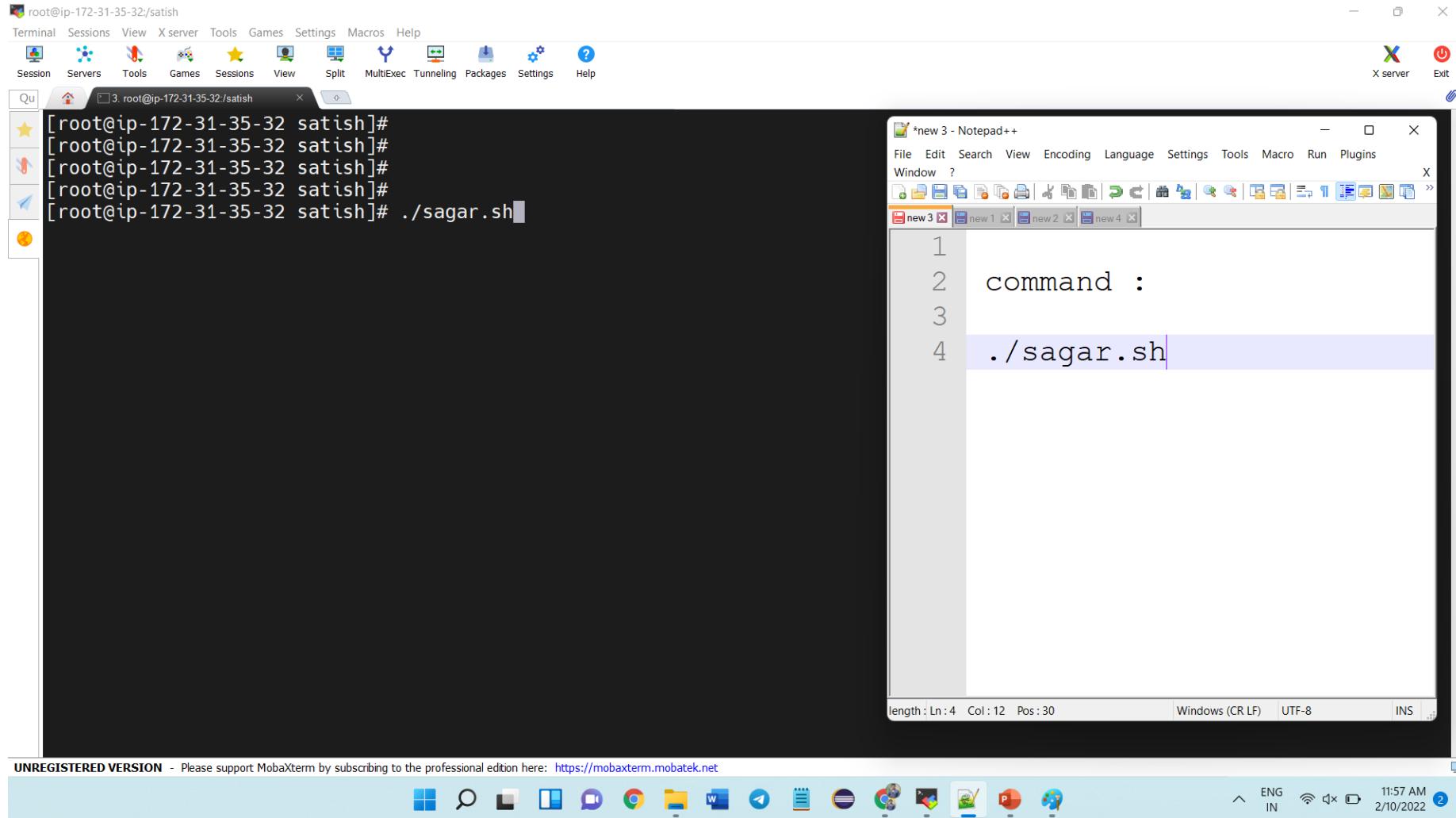
```
[root@ip-172-31-35-32 satish]# ./sagar.sh
-bash: ./sagar.sh: Permission denied
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# ls -ltr
total 4
-rw-r--r-- 1 root root 261 Feb 10 06:16 sagar.sh
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# chmod 550 sagar.sh
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# ls -ltr
total 4
-rwxr-x--- 1 root root 261 Feb 10 06:16 sagar.sh
[root@ip-172-31-35-32 satish]#
```

The right pane is a Notepad++ editor titled 'new 3 - Notepad++' with the file content:

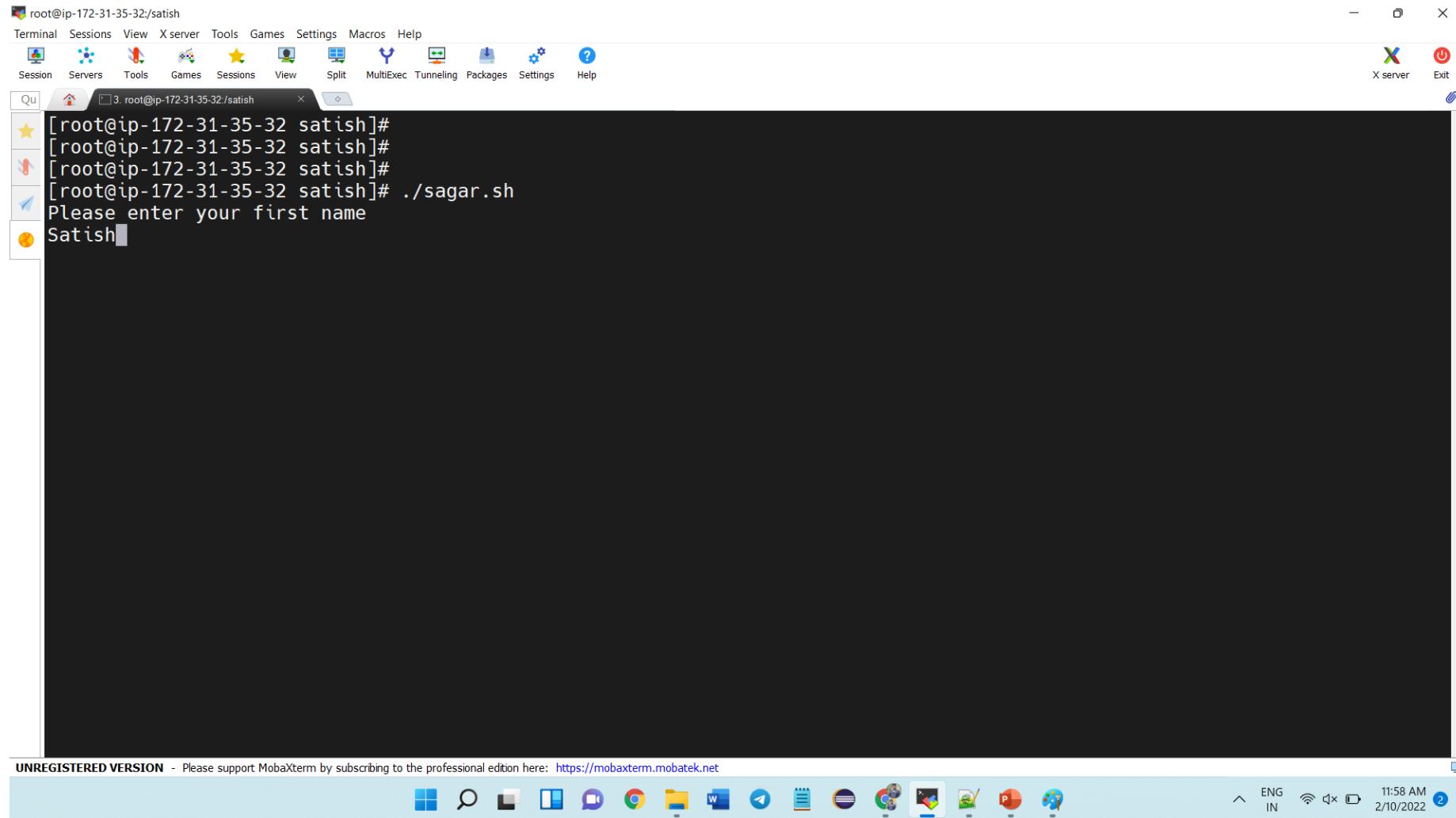
```
1 command :
2 .
3 ./sagar.sh
4
5 ls -ltr
6
7
8 chmod 550 sagar.sh
```

The line 'chmod 550 sagar.sh' is highlighted in purple.

- So use above command to give execute permissions to file



- Use **./sagar.sh** press enter



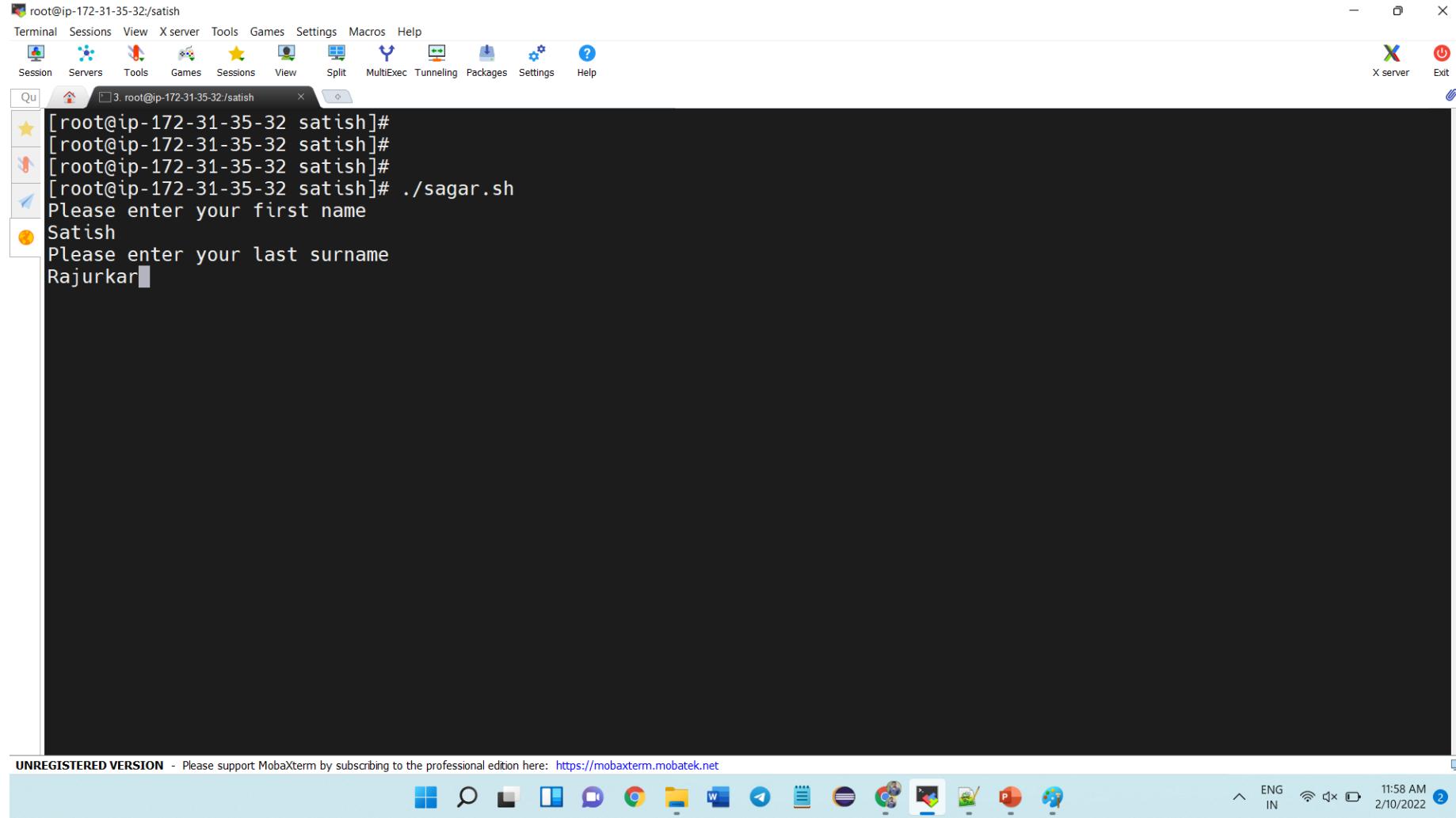
The screenshot shows a terminal window in MobaXterm. The title bar indicates the session is for root at ip-172-31-35-32. The terminal window displays the following text:

```
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# ./sagar.sh
Please enter your first name
Satish
```

At the bottom of the terminal window, there is a watermark that reads "UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>".

The taskbar at the bottom of the screen shows various pinned icons, including File Explorer, Task View, Search, Microsoft Edge, Google Chrome, File Explorer, Word, Mail, OneDrive, Microsoft Store, Paint 3D, and Snipping Tool. The system tray shows the date and time as 11:58 AM, 2/10/2022, along with language settings (ENG IN) and a battery icon.

- Enter 1<sup>st</sup> name and press enter



```
[root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# ./sagar.sh Please enter your first name Satish Please enter your last surname Rajurkar
```

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11:58 AM 2/10/2022

- Enter 2<sup>nd</sup> name and press enter

The screenshot shows a terminal window titled 'Qu' with the identifier '3. root@ip-172-31-35-32:satish'. The terminal interface includes a menu bar with 'Terminal', 'Sessions', 'View', 'Xserver', 'Tools', 'Games', 'Settings', 'Macros', and 'Help', and a toolbar with icons for 'Session', 'Servers', 'Tools', 'Games', 'Sessions', 'View', 'Split', 'MultiExec', 'Tunneling', 'Packages', 'Settings', and 'Help'. The main window displays a shell session where the user has run a script named 'sagar.sh'. The script prompts for the first name ('Please enter your first name'), last name ('Please enter your last surname'), and profession ('Enter your profession'). The user has entered 'Satish', 'Rajurkar', and 'R and D Engineer' respectively. A watermark at the bottom of the terminal window reads 'UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: <https://mobaxterm.mobatek.net>'. The system tray at the bottom right shows the date and time as '2/10/2022 12:00 PM'.

```
[root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# [root@ip-172-31-35-32 satish]# ./sagar.sh Please enter your first name Satish Please enter your last surname Rajurkar Enter your profession R and D Engineer
```

- Enter profession and press enter

The screenshot shows a terminal window titled 'root@ip-172-31-35-32:satish'. The terminal interface includes a menu bar with options like Terminal, Sessions, View, X server, Tools, Games, Settings, Macros, Help, and a toolbar with icons for Session, Servers, Tools, Games, Sessions, View, Split, MultiExec, Tunneling, Packages, Settings, and Help. The main window displays a shell session where a user runs a script named 'sagar.sh'. The script prompts for the first name ('Satish'), last name ('Rajurkar'), and profession ('R and D Engineer'). It then concatenates these inputs into a single message: 'My first name is Satish and my last name is Rajurkar and I am R and D Engineer'. The session ends with the prompt '[root@ip-172-31-35-32 satish]#'. The bottom status bar shows system information including battery level, network connectivity, and system time ('12:00 PM 2/10/2022').

- You will get output like this.

The screenshot shows a MobaXterm interface. At the top is a menu bar with options like Terminal, Sessions, View, Xserver, Tools, Games, Settings, Macros, and Help. Below the menu is a toolbar with icons for Session, Servers, Tools, Games, Sessions, View, Split, MultiExec, Tunneling, Packages, Settings, and Help. On the right side of the interface are buttons for X server and Exit. A sidebar on the left contains icons for Qu, Session, Servers, Tools, Games, Sessions, View, Split, MultiExec, Tunneling, Packages, Settings, and Help.

The main terminal window (Qu 3) shows a root shell session on a Linux system:

```
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]#  
[root@ip-172-31-35-32 satish]# export JAVA_HOME=/satish/user1
```

Below the terminal is a Notepad++ window titled "new 3 - Notepad++". It contains the following text:

```
1  
2 command :  
3  
4 export JAVA_HOME=/satish/user1
```

The status bar at the bottom of the Notepad++ window displays: length: 49 lines: 4 Ln: 4 Col: 32 Pos: 50 Windows (CR LF) UTF-8 INS. The status bar also shows system information: ENG IN, 12:07 PM, 2/10/2022, and a battery icon.

- To create environmental variables use above command

The screenshot shows a MobaXterm interface with two windows. The top window is a terminal session titled '3. root@ip-172-31-35-32:satish'. It displays the following command history and output:

```
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# export JAVA_HOME=/satish/user1
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]#
[root@ip-172-31-35-32 satish]# echo $JAVA_HOME
```

The bottom window is a Notepad++ editor titled '\*new 3 - Notepad++'. It contains the following text:

```
1
2 command :
3
4 export JAVA_HOME=/satish/user1
5
6 echo $JAVA_HOME
```

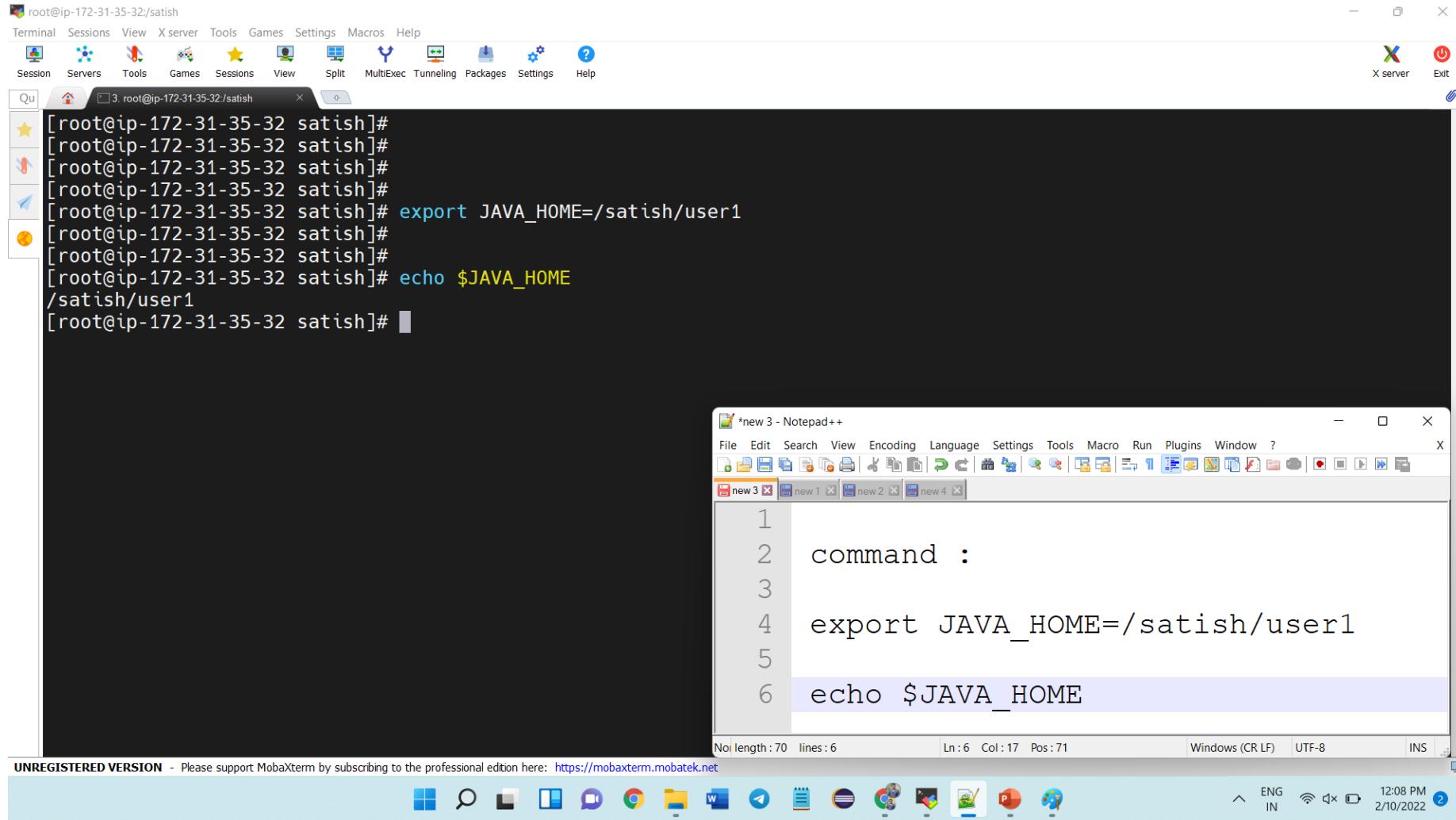
The status bar at the bottom of the Notepad++ window shows:

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No length : 70 lines : 6 Ln : 6 Col : 17 Pos : 71 Windows (CR LF) UTF-8 INS ↵

ENG IN 12:08 PM 2/10/2022 2

- To check use **echo \$JAVA\_HOME**



**Thanks for doing practical with us**