

Technology and management

Lucknow

SESSION :- 2023-24

SUBMITTED.....

N.

BRANCH...C.S.E....2nd year

SUBJECT...operating system

DATE.....

SINGNATURE.....

Experiment No : 1

Object:- Demonstration of all the controls provided in Windows control panel.

The **Control Panel** in Microsoft Windows enables a user to change various computer hardware and software features. Settings for the mouse, display, sound, network, and keyboard represent a few examples of what may be modified in the Control Panel. Below are examples of how the Control Panel appeared in Windows.

From the Start Menu

1. Open the Start Menu.
2. Scroll down to **W**, click **Windows System**, then click **Control Panel**.

From the Cortana search bar

1. The Cortana search bar is on the left side of the taskbar, next to Start Menu button. Click the search bar to place your cursor in this box.
2. Type the word **control**. Cortana lists best matches above as you type.
 - In this list, select **Control Panel**.

From the Run box

The **control** command can open the Control Panel from the Windows Run box.

1. Open the Run box by pressing **Win+R** (hold down the Windows key on your keyboard, then press the **R** key).
2. Type **control** and press Enter.

As mentioned in the Windows command line section below, you can also run the **control** command from the Windows 10 Command Prompt.

How to open the Control Panel in Windows 8 and 8.1

1. Move the mouse to the bottom left corner of the screen and right-click.
2. In the Power User Menu, select **Control Panel**.

How to open the Control Panel in Windows Vista and 7

1. On the Windows desktop screen, click Start.
2. Click **Control Panel** on the right side of the Start Menu.
3. You may see a window similar to the following image. You may also see the expanded version of the Control Panel, with icons for all the various utilities available.

Windows Control Panel

Sections of the Windows Control Panel

There are eight main areas on the Control Panel, containing different tools designed to optimize your computer.

- **System and Security** - A section to check your computer's status, backup and restore, and others.
- **Network and Internet** - View network status.
- **Hardware and Sound** - View which devices are on your computer and add devices.
- **Programs** - Uninstall programs.
- **User Accounts** - Change user accessibility.
- **Appearance and Personalization** - Change desktop options, like fonts and screen readers.
- **Clock and Region** - Change date and time.
- **Ease of access** - Optimize your display settings.

Experiment No.2

Object:-Exercise on Basic of Window.

Introduction to Windows Basics

This page discusses basic *Microsoft Windows* concepts and terminology. It discusses how to perform some basic Windows tasks. This page is not exhaustive, and will be developed as the need arises.

Some of the content is legacy and may not apply to the version of Windows you're running.

Locating System Information

This information is available under **System** in the *Control Panel*. Depending upon what version of Windows you're viewing this on, you can choose one of these options:

- Windows Vista, 7 and 8 users can *right-click* on *Computer* then select *Properties* to show *System*.
- Alternatively, click on Start ⇒ Control Panel ⇒ System.
- Search for *System*.
- Windows 10 users can *right-click* on the *Start Button* then select *System*.
- The Windows 10 build is found in Settings ⇒ Update & Security ⇒ OS build info.

The following are just some of the terms used to describe the Windows desktop you are likely to run into. Most are indicated in the diagram below the list:

- **Desktop** refers to the background of your screen on which the various programs run. Think of your computer screen as your electronic desktop.
- **Icons** are those small pictures on the desktop and inside folders that represent various programs, specialized folders, etc.
- **Folders** are containers that can contain icons, programs, data or other folders (sub-folders). The default folder icon looks like a Manila file folder but the look varies with different Windows versions. System folders generally look like icons and any folder can be modified to change its appearance.
- **Title bar** refers to the bar at the top of an open window. The folder's title will tell you what the folder is used for. It contains the minimize, maximize and close buttons. You can use the title bar to move a window around.
- **Cursor** is the graphic pointer which indicates where the mouse is and what sort of action it is performing. The cursor will change from the default arrow to various

shapes according to the purpose it is serving at the time. For instance, it may form an I-beam shape when you are selecting text in a document or a double-arrow when you are resizing a window.

- **Task bar** refers to the bar usually at the bottom of your Windows screen (it is movable) containing the Start Button on the left and the clock and grouped icons on the right.
- A **Scroll Bar** appears when there is more information in the window than can be displayed. This is usually a vertical scroll bar, but a horizontal scroll bar may appear if the width of the window is too narrow. Windows 10 often hides scroll bars until you hover over them.
- The **Address Bar** tells you your location and provides the tools to navigate around your computer. These settings vary by Windows version and can be modified.

Files & Folders

The Windows folder can be thought of in the same manner as a folder in a filing cabinet. It is designed to hold files and other folders (which are called "nested" folders).

If you remember the pre-Windows DOS environment, directories served the same purpose as folders except that they are not represented by a GUI which most modern operating systems are, including Windows.

The Window

The window (from which the term "Windows" is derived) has various elements. In Windows, the desktop and most windows are also folders.

The most common elements of a typical window are labelled in the Windows 10 diagram below which can help to communicate what you're dealing with when speaking to another person or documenting a procedure for future reference:

This folder is one of the optional desktop folders called the User's Files.

- The **Navigation Pane** provides quick links to various folders and locations on your computer.
- The **Title Bar** contains the Quick Access toolbar inherited from Office.
- The **Ribbon** is another toolbar inherited from Office.
- **Documents** contains most of your user documents and files (except for music, pictures and videos).
- Some of the content are normally hidden (the lighter coloured icons such as the AppData and MicrosoftEdgeBackups folder and NTUSER.DAT file) but I've changed the settings to display them.
- The **Address Bar** has a *bread crumb* menu when the folder is contained within other folders (e.g., "> Owner > Documents > Backups"). Clicking on any of the listed items

takes you to that folder. Clicking behind the address transforms it into the `C:\Owner\Documents\Backups` format.

- o A longer address example would be "`> Owner > Pictures > Family`" which would transforms into `C:\Owner\Pictures\Family`.
- o Clicking on *Pictures* would take you back to the Pictures folder.
- o Clicking on *Owner* would take you to the folder shown in the diagram above.

Windows 7 displays these elements somewhat differently. The most common are labelled in the diagram below:

Some of these folders are not standard in Windows 7 such as Dropbox and Screen Captures.

Windows Hidden Folders

Many of the system folders are hidden by default but can be displayed in Windows if you change the default settings.

- Look for *Folder Options* in the *Control Panel*, click on the *View* tab then click the radio button on "Show hidden files, folders and drives."
- Once unhidden, previously hidden files and folders are displayed as slightly translucent to distinguish them from regular folders (see the diagram of the Window).

Experiment No.3

Object:-Installation of linux Operating System.

Hardware requirement

Computer Dell Precision Workstation 380N, 3.4 GHz, P4

RAM 1 GB, non-ECC, 533MHz DDR2 SRAM, 2 x 512, GX270(311-2865)

Graphics 64 MB nVidia Quadro NVS 280

Hard disk 80 GB SATA, 7200 RPM

CD drive DVD/CD-RW drive

Second network interface card installed

Mouse wheel mouse

Linux 64 bit version of Red Hat Enterprise Linux WS v. 4 with patch

1. Booting from the Installation CD

Use the 64 bit version of Linux for this installation. During the installation process use the arrow keys (up, down, left, or right) or the mouse to select options. The instruction to Restart the computer requires powering down the computer and powering it back up. Rebooting the computer is automatic in some cases or requires a user action at a prompt to select or accept a restart.

1. Start the computer.
2. Press F2 during the start-up process and access the BIOS settings. If the screen passes before F2 is pressed, restart the computer and try again.
3. Insert the first of the Linux installation CDs into the CD/DVD drive.
4. Change Boot Sequence in the BIOS settings.
 - a. Go to the Boot Sequence section after entering the BIOS setup window and press Enter.

Boot options:

onboard or USB floppy drive

onboard SATA hard drive

onboard IDE hard drive

onboard or USB CD-ROM

b. Change this sequence so that the CD-ROM is first in boot order. The computer first looks at the CD-ROM drive for bootable media; if it does not find bootable media on the CD-ROM drive, it will then check the hard drive or diskette drive.

c. Follow the on screen instructions and press enter to save the changes.

5. Set SATA Operation to Combination as follows:

a. Select Drives Boot options: onboard or USB floppy drive onboard SATA hard drive onboard IDE hard drive onboard or USB CD-ROM

b. Select Enter

c. Select SATA Operation.

d. Select Enter.

e. Select Combination.

f. Select Enter.

Ignore the popup window. The system saves changes to the BIOS settings and automatically reboots the computer. For more information, refer to the documentation that came with the system, or the Red Hat Linux Installation manual.

g. Select ESC to exit.

h. Select Save / Exit.

i. Select Enter.

6. If asked, select the CD-ROM option from the boot loader screen and click OK.

7. Select the Graphical Mode (software will automatically default to graphic mode if no action is taken) for the Red Hat installation — press enter

1.2 Installing the 64 bit Version of Linux

The Red Hat Linux installation Welcome screen should appear on the display. Click Next to begin setting up the installation. A series of screens appear that require making a selection and clicking the Next button. The table in the Quick Install Information section outlines the responses to enter at the prompt. The Detailed Installation section provides step-by-step details for the relevant screens.

- “Responding to Options Presented During Installation” on this page

- section “Installing Linux” on page 9
- section “Setting up Linux” on page 11

Responding to Options Presented During Installation

The following table summarizes the suggested responses to various prompts presented during the installation process and is provided as a guide and reference. Follow in installation procedure in section “Installing Linux” on page 9

Screen	Selection
Test CD Media	Skip
Language Selection	English
Keyboard Configuration	U.S. English
Installation Type (full)	Install Red Hat Enterprise Linux workstation (do not upgrade)
Disk Partitioning Setup on page 9.	Automatically Partition See step 2 in section “Installing Linux”
Boot Loader	
Configuration	GRUB (default)
Network Configuration for eth1	edit eth1; uncheck Configure using DHCP; check Activate on Boot IP Address = see section “Specifying IP Addresses” on page 12
Netmask = 255.255.255.0	
Network Configuration for eth0	edit eth0; uncheck Configure using DHCP; check Activate on Boot; IP Address = see section “Network Information Worksheet” on page 6 Netmask = 255.255.255.0 Hostname->Set the hostname:->manually: enter a hostname Miscellaneous Settings -> Gateway = see section “Network Information Worksheet” on page 6 select No firewall
Firewall Configuration	
Additional Language Support	select English (USA) as the default; select other languages you wish to install.
Time Zone Configuration	select your local time zone
Set Root Password	enter a root password
Package Installation Defaults	select Customize the set of packages to be installed

Package Group Selection

select Everything

Installing Linux

Use the selections listed in section “Responding to Options Presented During Installation” on page 8, to complete the next series of steps. Refer to the Red Hat manuals for more detailed information, if needed.

1. Click on the Next button to begin. Upon completion of each screen the Next button must be click to proceed to the next step. The Back button steps the process backward
2. When the Disk Partitioning Setup screens do the following
 - a. Select Automatically Partition
 - b. Select Remove all Partitions
 - c. Verify that the option: Review (and modify if needed) the partition created is checked.
 - d. Select Yes ... in popup window
3. Add the /home partition is as follows
 - a. Select the / partition.
 - b. Click New. The Add Partition screen appears.
 - c. Mount Point — Enter /home .
 - d. File System Type — Select ext3 for /home
 - e. Size (MB) — Enter the following value: original size of root (/) - 10 GB. Example: if the original size of the root partition (/) is 74000 Mb the size of the /home partition is 64000 Mb.
 - f. Select fixed size.
 - g. Click OK after the /home partition is set up.
4. Click Next to accept the changes and continue.
5. The boot loader in the Boot Loader Configuration screen is displayed. Keep the GRUB boot loader, which is the default.
6. Select devices — configure the Network device, eth0.
 - a. Select eth0
 - b. Click Edit.
 - c. Configure eth0 using the section “Network Information Worksheet” on page 6.
 - d. Ignore DNS warnings if the network does not use DNS.

- c. Do not configure eth1, configuration of this port is part of section “Configuring the Workstation Ethernet Ports” on page 12
- 7. Configure the Firewall in the Firewall Configuration screen — Select No firewall and Enable SELinux active.
- 8. Click on Proceed in the Warning No Firewall popup window.
- 9. For Additional Language Support — Select English (USA) as the default. Select other languages you wish to install
- 10. Enter the time zone information.
- 11. Set the root password as appropriate.
- 12. In the Package Installation Defaults screen — Select Customize the set of packages to be installed

The Package Group Selection screen appears – scroll to the bottom and check the Everything box, which is at the end of the list.

- 13. Click Next to start the software installation.
- 14. Click on Continue in the information window that says CDs 1 to 5 are will be required.

The Installing Packages screen appears with a progress bar. The software begins installing. This can take about an hour or more to finish. Switch CDs as instructed

- 15. Click on Reboot when the last CD has loaded. The installation of the patch for 64 bit operation will fix any graphics issues that appear after the computer reboots
 - a. Restart the computer.
 - b. Press Enter when the Booting Red Hat Graphics Linux screen appears (screen will disappear quickly). Restart the computer after the startup has completed if you miss the Loading Red Hat screen
 - c. Highlight the first entry (do not press Enter): Red Hat Enterprise Linux WS (2.6.9-5.ELsmp)
 - d. Press the a key to modify the Kernel.
 - e. Wait for the following line to be displayed and the Linux kernel to load: greb append>ro root=/dev/VolGroup00/LogVol00 rhgb quiet
 - f. Append a -s to the end of the line that is displayed and press enter.
 - g. Insert the Supplement for DELL 380N CD into the CDROM drive.
 - h. At the sh-3.00# prompt, enter:
`mount /dev/cdrom /media cd media ls`

./pkgsetup

- i. Wait for the patches to install.
- j. Enter the following at the sh-3.00# prompt:

cd

umount media

Eject

Setting up Linux

Complete the setup information requested in the following screens. VnmrJ requires a generic (user01) user account.

- Click Next in the Welcome screen.
- License Agreement -- Read the license agreement and click Yes, I agree to the License Agreement. Click Next.
- Date and Time -- Set the appropriate date and time and disable Network Time Protocol
- Graphics and Monitor -- Select configure.
 - Color Depth: Millions of Colors
 - Screen Resolution: 1280x1024 and click next.
- Click on the message Tell me why ... and provide Red Hat login then click on Next.
- Choose not to register now and click on Next.
- User Account -- Enter user01 or something else appropriate for your site
 - a. Click Use Network Login to configure your name server and authentication
 - b. Click the User Information tab and configure your name server as appropriate for your site. Refer to the Network Information Worksheet on page 6 and your network administrator.
 - c. Click the Authentication tab and disable Use MD5 Passwords.
- Additional CDs -- Install any of the additional CDs listed. These might be useful, but are not required by VnmrJ.
- Finish Setup -- Click Next.
- Login as root.

Linux is now installed

Experiment No. 4

Object:-Usage of Directory Management Commands of linux
:ls,Cd,pwd,mkdir,rmdir.

Linux Directories

What are Commands

A command is an instruction given to our computer by us to do whatever we want. In Mac OS, and Linux it is called terminal, whereas, in windows it is called command prompt. Commands are always case sensitive.

Commands are executed by typing in at the command line followed by pressing enter key.

This command further passes to the shell which reads the command and execute it. Shell is a method for the user to interact with the system. Default shell in Linux is called bash (Bourne-Again Shell).

There are two types of shell commands:

- **Built-in shell commands:** They are part of a shell. Each shell has some built in commands.
- **External/Linux commands:** Each external command is a separate executable program written in C or other programming languages.

Linux ls command

The **ls** is the list command in Linux. It will show the full list or content of your directory. Just type **ls** and press the enter key. The whole content will be shown.

Example:

3. **ls**

Below, you can see, after entering **ls** command, we got the whole content list of **/home/sssit** directory.

```

ssslt@JavaTpoint:~  

ssslt@JavaTpoint:~$ pwd  

/home/ssslt  

ssslt@JavaTpoint:~$ ls  

Desktop Downloads Music Public Videos  

Documents examples.desktop Pictures Templates  

ssslt@JavaTpoint:~$ █

```

Linux ls command options

ls option	Description
<u>ls -a</u>	In Linux, hidden files start with . (dot) symbol and they are not visible in the regular directory. The (ls -a) command will enlist the whole list of the current directory including the hidden files.
<u>ls -l</u>	It will show the list in a long list format.
<u>ls -lh</u>	This command will show you the file sizes in human readable format. Size of the file is very difficult to read when displayed in terms of byte. The (ls -lh) command will give you the data in terms of Mb, Gb, Tb, etc.
<u>ls -lhS</u>	If you want to display your files in descending order (highest at the top) according to their size, then you can use (ls -lhS) command.
<u>ls -l --block-size=[SIZE]</u>	It is used to display the files in a specific size format. Here, in [SIZE] you can assign size according to your requirement.
<u>ls -d */</u>	It is used to display only subdirectories.
<u>ls -g or ls -lG</u>	With this you can exclude column of group information and owner.
<u>ls -n</u>	It is used to print group ID and owner ID instead of their names.
<u>ls --color=[VALUE]</u>	This command is used to print list as colored or discolored.
<u>ls -li</u>	This command prints the index number if file is in the first column.
<u>ls -p</u>	It is used to identify the directory easily by marking the directories with a slash (/) line sign.

Linux cd Command | Linux change directory

Linux **cd** command is used to change the current working directory (i.e., in which the current user is working). The "cd" stands for '**change directory**.' It is one of the most frequently used commands in the Linux terminal.

Syntax:

4. **cd <dirname>**

It is one of the most important and common commands in the Linux system and will be used repeatedly. With the help of this command, we can move all over our directories in our system. We can go to our previous directory or previous to the next directory, or anywhere.

As we are familiar with Linux directories, so, we will perform the following cd operations on directories:

5. Change from the current directory to a new directory
6. Change directory using an absolute path
7. Change directory using the relative path
8. Change to the home directory
9. Change to the previous directory
10. Change to Parent Directory
11. Change to the root directory
12. Change to another user's home directory
13. Change to Directory having Spaces
14. Change up to multiple Sub Directories

1) Change from the current directory to a new directory

We can change our directory from the current working directory to a specified directory. To display the current working directory, execute the command as follows:

15. **pwd**

To change our current working directory, execute the command as follows:

16. **cd < current directory > <specified directory >**

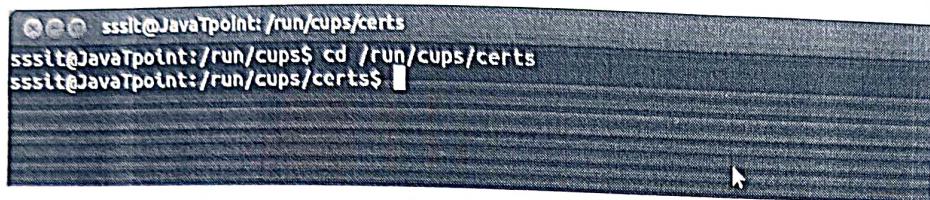
Consider the below output:

```
sssit@JayaTpoint:~/Desktop$  
sssit@JayaTpoint:~$ pwd  
/home/sssit  
sssit@JayaTpoint:~$ cd /home/sssit/Desktop  
sssit@JayaTpoint:~/Desktop$
```

From the above output, we have executed the `pwd` command to display the current working directory, which is `/home/sssit`. Then, we have executed the `'cd'` command to change our current directory and mentioned the path for the new directory as `/home/sssit/Desktop`. As we can see in the output image, we are on our new directory that is Desktop. Therefore, our current working directory has changed to Desktop.

2) Change directory using an absolute path

To change the directory by using an absolute path, we have to mention the whole path starting from the root. Consider the below example:



```
sssit@JavaTpoint:~/run/cups/certs  
sssit@JavaTpoint:~/run/cups$ cd /run/cups/certs  
sssit@JavaTpoint:~/run/cups/certs$
```

From the above output, we are changing our directory to `'certs'` from `'cups'`. So, we have provided the whole path `/run/cups/certs` starting from the root (`/`). This is called an **absolute path**.

3) Change directory using a relative path

We can change our directory by using a relative path; a relative path is a location that is relative to the current directory. Consider the below example:

17. `cd certs`



```
sssit@JavaTpoint:~/run/cups/certs  
sssit@JavaTpoint:~/run/cups$ cd certs  
sssit@JavaTpoint:~/run/cups/certs$
```

From the above output, we are changing the directory by using a relative path. Like the above example, here too, we have changed our directory from `'cups'` to `'certs'`, but have not mentioned the whole path. This is the relative path.

4) Change to the home directory

To change the directory to home directory from the current working directory, execute the command as follows:

18. `cd ~`

The above command will bring us to our home directory. Consider the below output:



```
javatpoint@javatpoint-Inspiron-3542:~/Downloads$ cd ~  
javatpoint@javatpoint-Inspiron-3542:~$
```

As we can see from the above output, we were on the `Downloads` directory, and the `"cd ~"` command has brought us to our home directory.

5) Change to the previous directory

To change to the previous directory from the current working directory, execute the command as follows:

19. cd -

Consider the below output:

```
javatpoint@javatpoint-Inspiron-3542:~/Downloads/akash$ cd .
/home/javatpoint/Downloads
javatpoint@javatpoint-Inspiron-3542:~/Downloads$
```

As we can see from the above output, we were on the "/Downloads/akash" directory. And, by executing the "cd -" command, our current working directory has been changed to its previous directory, i.e."/Downloads."

Linux pwd Command

Linux pwd (print working directory) command displays your location currently you are working on. It will give the whole path starting from the root ending to the directory.

Syntax:

20. pwd

Example:

Let's see an example of pwd command.

Open your terminal and type pwd, press enter key. You can see your directory path. Here, my path is /home/sssit and my current location is sssit.

Notice here, that location will be shown from the root or from the filesystem.

Linux mkdir | Linux Create Directory

Now let's learn how to create your own directory with the help of command prompt.

The mkdir stands for 'make directory'. With the help of mkdir command, you can create a new directory wherever you want in your system. Just type "**mkdir <dir name>**", in place of <dir name> type the name of new directory, you want to create and then press enter.

Syntax:

21. **mkdir <dirname>**

Example:

22. mkdir created

```
sssit@JavaTpoint:~$ pwd  
/home/sssit  
sssit@JavaTpoint:~/home/sssit$ mkdir created  
sssit@JavaTpoint:~/home/sssit$ ls  
created Documents Music Public Untitled Folder  
Desktop Downloads new created Videos  
Diski examples.desktop Pictures Templates  
sssit@JavaTpoint:~/home/sssit$  
sssit@JavaTpoint:~/home/sssit$ pwd  
/home/sssit  
sssit@JavaTpoint:~/home/sssit$ mkdir created  
mkdir: cannot create directory 'created': File exists  
sssit@JavaTpoint:~/home/sssit$
```

In above example, I am in `/home/sssit` directory. I have made a directory '`created`' by passing command "`mkdir created`".

Now if I'll try to create a new file with the same file name '`created`' that technically already exists, I'll get an error message.

Note: If you will not provide a path then by default your file will be created in your current directory only. If you want to create your directory some where else, then provide the path of your destination directory and your file will be created there.

To make multiple directories

Syntax:

23. `mkdir <dirname1> <dirname2> <dirname3> ...`

```
sssit@JavaTpoint:~/home/sssit$ mkdir -p created  
sssit@JavaTpoint:~/home/sssit$ cd created  
sssit@JavaTpoint:~/home/sssit$ ls  
file1 file2 file3  
sssit@JavaTpoint:~/home/sssit$
```

You can also create multiple directories simultaneously. Look the example above, we have created multiple directories '`file1 file2 file3`'.

Mkdir Options

Options	Description
<u><code>mkdir -p, -parents</code></u>	Add directory including its sub directory.
<u><code>mkdir -v, -verbose</code></u>	Print a message for each created directory.

mkdir -m -mode=MODE

Set access privilege.

Linux rmdir Command

This command is used to delete a directory. But will not be able to delete a directory including a sub-directory. It means, a directory has to be empty to be deleted.

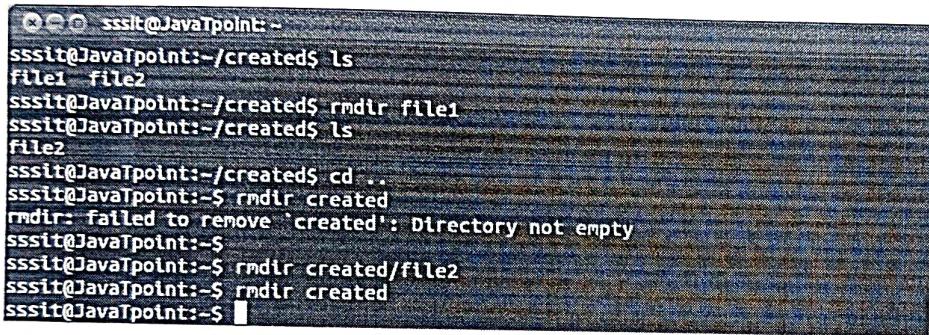
Syntax:

24. `rmdir <dirname>`

Example:

25. `rmdir created`

For example, in the image below we have deleted directory '`file1`' from '`envelope`' successfully. Now we want to delete '`created`' directory. But it shows error as it contain '`file2`'. Hence, to delete '`created`' directory, first we have to delete '`file2`'. Then, we will be able to delete '`created`' directory.



```
sssit@JavaTpoint:~/Desktop$ cd envelope
sssit@JavaTpoint:~/Desktop/envelope$ rm file1
rm: remove directory 'file1'? y
sssit@JavaTpoint:~/Desktop/envelope$ ls
file2
sssit@JavaTpoint:~/Desktop/envelope$ rm created
rm: failed to remove 'created': Directory not empty
sssit@JavaTpoint:~/Desktop/envelope$ rm file2
rm: remove file 'file2'? y
sssit@JavaTpoint:~/Desktop/envelope$ rm created
rm: remove directory 'created'? y
sssit@JavaTpoint:~/Desktop/envelope$ ls
sssit@JavaTpoint:~/Desktop/envelope$
```

`rmdir -p`

This command will delete a directory including its sub-directories all at once. In below picture, all sub-directories have been deleted with '`rmdir -p`' command.

```
sssit@JavaTpoint:~/office  
sssit@JavaTpoint:~/office$ ls -R  
.:  
client  
./client:  
Raj  
./client/Raj:  
date  
./client/Raj/date:  
day  
./client/Raj/date/day:  
sssit@JavaTpoint:~/office$ rmdir -p client/Raj/date/day  
sssit@JavaTpoint:~/office$ ls -R  
.:  
sssit@JavaTpoint:~/office$ █
```

Experiment no. 5

Object:-Usages Of File Management Commands Of Linux: cat, chmod, cp, mv, rm, pg, more find .

Linux Commands with Examples

The Linux command is a utility of the Linux operating system. All basic and advanced tasks can be done by executing commands. The commands are executed on the **Linux terminal**. The terminal is a command-line interface to interact with the system; which is similar to the command prompt in the Windows OS. *Commands in Linux are case-sensitive.*

Linux

provides a powerful command-line interface compared to other operating systems such as Windows and MacOS. We can do basic work and advanced work through its terminal. We can do some basic tasks such as creating a file, deleting a file, moving a file, and more. In addition, we can also perform advanced tasks such as administrative tasks (including package installation, user management), networking tasks (ssh connection), security tasks, and many more.

Linux terminal is a user-friendly terminal as it provides various support options. To open the Linux terminal, press "**CTRL + ALT + T**" keys together, and execute a command by pressing the '**ENTER**' key.

In this topic, we will discuss the top 50 most frequently used Linux commands with their examples. These commands are very useful for a beginner and professional both. We have divided these commands into following sections so that you can easily identify their usage:

- Linux Directory Commands
- Linux File Commands
- Linux File Content Commands
- Linux User Commands
- Linux Filter Commands
- Linux Utility Commands
- Linux Networking Command

cat Command

The cat

command is a multi-purpose utility in the Linux system. It can be used to create a file, display content of the file, copy the content of one file to another file, and more.

Syntax:

26. cat [OPTION]... [FILE]..

To create a file, execute it as follows:

27. cat > <file name>

28. // Enter file content

Press "CTRL+ D" keys to save the file. To display the content of the file, execute it as follows:

29. cat <file name>

Output:

```
javatpoint@javatpoint-Inspiron-3542:~/Newfolder$ cat > Demo.txt
This is a text file.
javatpoint@javatpoint-Inspiron-3542:~/Newfolder$ cat Demo.txt
This is a text file.
```

rm Command

The rm

command is used to remove a file.

Syntax:

rm <file name>

Output:

```
javatpoint@javatpoint-Inspiron-3542:~/Newfolder$ rm Demo.txt
javatpoint@javatpoint-Inspiron-3542:~/Newfolder$ rm Demo1.txt Demo2.txt
```

cp Command

The cp

command is used to copy a file or directory.

Syntax:

To copy in the same directory:

30. cp <existing file name> <new file name>

To copy in a different directory:

Output:

```
javatpoint@javatpoint-Inspiron-3542:~$ cp demo.txt demo1.txt  
javatpoint@javatpoint-Inspiron-3542:~$ cp demo.txt Documents
```

mv Command

The mv

command is used to move a file or a directory from one location to another location.

Syntax:

31. mv <file name> <directory path>

Output:

```
javatpoint@javatpoint-Inspiron-3542:~$ mv demo.txt Directory
```

more command

The more

command is quite similar to the cat command, as it is used to display the file content in the same way that the cat command does. The only difference between both commands is that, in case of larger files, the more command displays screenful output at a time.

In more command, the following keys are used to scroll the page:

ENTER key: To scroll down page by line.

Space bar: To move to the next page.

b key: To move to the previous page.

/ key: To search the string.

Syntax:

32. more <file name>

Output:

```
;; gyp.el - font-lock-mode support for gyp files.  
;; Copyright (c) 2012 Google Inc. All rights reserved.  
;; Use of this source code is governed by a BSD-style license that can be  
;; found in the LICENSE file.  
;; Put this somewhere in your load-path and  
;; (require 'gyp)  
  
(require 'python)  
(require 'cl)  
  
(when (string-match "python-mode.el" (symbol-file 'python-mode 'defun))  
  (error (concat "python-mode must be loaded from python.el (bundled with "  
    "recent emacsen), not from the older and less maintained "  
    "python-mode.el")))  
  
(defadvice python-indent-calculate-levels (after gyp-outdent-closing-parens  
                                              activate)  
  "De-indent closing parens, braces, and brackets in gyp-mode."  
  (when (and (eq major-mode 'gyp-mode)  
            (string-match "^ *[{}]][],)]* *$"  
              (buffer-substring-no-properties  
--More-- (7%))
```

find Command

The find

command is used to find a particular file within a directory. It also supports various options to find a file such as byname, by type, by date, and more.

The following symbols are used after the find command:

(.) : For current directory name

(/) : For root

Syntax:

33. find . -name "*.pdf"

Output:

```
javatpoint@javatpoint-Inspiron-3542:~$ find . -name "*.pdf"  
.Test.pdf  
.Python-3.8.0/Doc/library/turtle-star.pdf  
.Akash/Joomla/Origional Copy/Brochure-Joomla-2019.pdf  
.Akash/Joomla/Origional Copy/Joomla-Guide-Final.pdf  
.local/share/Trash/files/2400966-250544e72f817db3bcef-1587140240830.pdf  
.local/share/Trash/files/2400966-3ad982eaa58c5d43fb53-1585763620407.pdf  
find: './anydesk/incoming': Permission denied  
.Downloads/ConfirmationPage_20030070774.pdf  
.demo1.pdf  
find: './dbus': Permission denied  
find: './cache/dconf': Permission denied  
.Directory/demo.pdf  
.Directory/demo2.pdf  
.Directory/demo1.pdf
```

chmod

This command changes the permission information associated with a file. Every file (including directories, which Unix treats as files) on a Unix system is stored with records indicating who has permission to read, write, or execute the file, abbreviated as r, w, and x. These permissions are broken down for three categories of user: first, the owner of the file; second, a group with which both the user and the file may be associated; and third, all other users. These categories are abbreviated as u for owner (or user), g for group, and o for other.

To allow yourself to execute a file that you own named `myfile`, enter:

```
chmod u+x myfile
```

To allow anyone who has access to the directory in which `myfile` is stored to read or execute `myfile`, enter:

```
chmod o+rwx myfile
```

You can view the permission settings of a file using the `ls` command, described below.

Note:

Be careful with the `chmod` command. If you tamper with the directory permissions of your home directory, for example, you could lock yourself out or allow others unrestricted access to your account and its contents.

For more, see [Manage file permissions on Unix-like systems](#).