



RESEARCH INNOVATION DISCOVERY

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Foundation Day

30-09-2023

RID संस्था समस्या का समाधान

RUN BY TWKSAA WELFARE FOUNDATION

Linux E-Book



Er. Rajesh Prasad(B.E, M.E)
Founder: TWF & RID Org.

- **RID ORGANIZATION** यानि **Research, Innovation and Discovery** संस्था जिसका मुख्य उद्देश्य हैं आने वाले समय में सबसे पहले **NEW (RID, PMS & TLR)** की खोज, प्रकाशन एवं उपयोग भारत की इस पावन धरती से भारतीय संस्कृति, सभ्यता एवं भाषा में ही हो।
- देश, समाज, एवं लोगों की समस्याओं का समाधान **NEW (RID, PMS & TLR)** के माध्यम से किया जाये इसके लिए ही मैं राजेश प्रसाद इस **RID संस्था** की स्थापना किया हूँ।
- Research, Innovation & Discovery में रुचि रखने वाले आप सभी विद्यार्थियों, शिक्षकों एवं बुद्धिजिवियों से मैं आवाहन करता हूँ की आप सभी इस **RID संस्था** से जुड़ें एवं अपने बुद्धि, विवेक एवं प्रतिभा से दुनियां को कुछ नई **(RID, PMS & TLR)** की खोजकर, बनाकर एवं अपनाकर लोगों की समस्याओं का समाधान करें।

“Linux के इस ई-पुस्तक में आप English से जुड़ी सभी बुनियादी अवधारणाएँ सीखेंगे। मुझे आशा है कि इस ई-पुस्तक को पढ़ने के बाद आपके ज्ञान में वृद्धि होगी और आपको English Language के बारे में और अधिक जानने में रुचि होगी”

“In this Linux E-Book you will learn all the basic concepts related to English. I hope after reading this E-Book your knowledge will be improve and you will get more interest to know more thing about English Language”.

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RID हमें क्यों करना चाहिए

(Research)

अनुसंधान हमें क्यों करना चाहिए ?

Why should we do research?

1. नई ज्ञान की प्राप्ति (Acquisition of new knowledge)
2. समस्याओं का समाधान (To Solving problems)
3. सामाजिक प्रगति (To Social progress)
4. विकास को बढ़ावा देने (To promote development)
5. तकनीकी और व्यापार में उन्नति (To advances in technology & business)
6. देश विज्ञान और प्रौद्योगिकी के विकास (To develop the country's science & technology)

(Innovation)

नवीनीकरण हमें क्यों करना चाहिए ?

Why should we do Innovation?

1. प्रगति के लिए (To progress)
2. परिवर्तन के लिए (For change)
3. उत्पादन में सुधार (To Improvement in production)
4. समाज को लाभ (To Benefit to society)
5. प्रतिस्पर्धा में अग्रणी (To be ahead of competition)
6. देश विज्ञान और प्रौद्योगिकी के विकास (To develop the country's science & technology)

(Discovery)

खोज हमें क्यों करना चाहिए?

Why should we do Discovery?

1. नए ज्ञान की प्राप्ति (Acquisition of new knowledge)
2. अविष्कारों की खोज (To Discovery of inventions)
3. समस्याओं का समाधान (To Solving problems)
4. ज्ञान के विकास में योगदान (Contribution to development of knowledge)
5. समाज के उन्नति के लिए (for progress of society)
6. देश विज्ञान और तकनीक के विकास (To develop the country's science & technology)

❖ Research(अनुसंधान):

- अनुसंधान एक प्रणालीकरण कार्य होता है जिसमें विशेष विषय या विषय की नई ज्ञान एवं समझ को प्राप्त करने के लिए सिद्धांतिक जांच और अध्ययन किया जाता है। इसकी प्रक्रिया में डेटा का संग्रह और विश्लेषण, निष्कर्ष निकालना और विशेष क्षेत्र में मौजूदा ज्ञान में योगदान किया जाता है। अनुसंधान के माध्यम से विज्ञान, प्रौद्योगिकी, चिकित्सा, सामाजिक विज्ञान, मानविकी, और अन्य क्षेत्रों में विकास किया जाता है। अनुसंधान की प्रक्रिया में अनुसंधान प्रश्न या कल्पनाएँ तैयार की जाती हैं, एक अनुसंधान योजना डिज़ाइन की जाती है, डेटा का संग्रह किया जाता है, विश्लेषण किया जाता है, निष्कर्ष निकाला जाता है और परिणामों को उचित दर्शाने के लिए समाप्ति तक पहुंचाया जाता है।

❖ Innovation(नवीनीकरण): -

- Innovation एक विशेषता या नई विचारधारा की उत्पत्ति या नवीनीकरण है। यह नए और आधुनिक विचारों, तकनीकों, उत्पादों, प्रक्रियाओं, सेवाओं या संगठनात्मक ढंगों का सृजन करने की प्रक्रिया है जिससे समस्याओं का समाधान, प्रतिस्पर्धा में अग्रणी होने, और उपयोगकर्ताओं के अनुकूलता में सुधार किया जा सकता है।

❖ Discovery (आविष्कार):

- Discovery का अर्थ होता है "खोज" या "आविष्कार"। यह एक विशेषता है जो किसी नए ज्ञान, आविष्कार, या तत्व की खोज करने की प्रक्रिया को संदर्भित करता है। खोज विज्ञान, इतिहास, भूगोल, तकनीक, या किसी अन्य क्षेत्र में हो सकती है। इस प्रक्रिया में, व्यक्ति या समूह नए और अज्ञात ज्ञान को खोजकर समझने का प्रयास करते हैं और इससे मानव सभ्यता और विज्ञान-तकनीकी के विकास में योगदान देते हैं।

नोट : अनुसंधान विशेषता या विषय पर नई ज्ञान के प्राप्ति के लिए सिस्टमैटिक अध्ययन है, जबकि आविष्कार नए और अज्ञात ज्ञान की खोज है।

सुविचार:

1.	समस्याओं का समाधान करने का उत्तम मार्ग हैं → शिक्षा ,RID, प्रतिभा, सहयोग, एकता एवं समाजिक-कार्य
2.	एक इंसान के लिए जरूरी हैं → रोटी, कपड़ा, मकान, शिक्षा, रोजगार, इज्जत और सम्मान
3.	एक देश के लिए जरूरी हैं - → संस्कृति-सभ्यता, भाषा, एकता, आजादी, संविधान एवं अखंडता
4.	सफलता पाने के लिए होना चाहिए → लक्ष्य, त्याग, इच्छा-शक्ति, प्रतिबद्धता, प्रतिभा, एवं सतता
5.	मरने के बाद इंसान छोड़कर जाता हैं → शरीर, अन-धन, घर-परिवार, नाम, कर्म एवं विचार
6.	मरने के बाद इंसान को इस धरती पर याद किया जाता हैं उनके
→ नाम, काम, दान, विचार, सेवा-समर्पण एवं कर्मों से...	

आशीर्वाद (बड़े भैया जी)



Mr. RAMASHANKAR KUMAR

मार्गदर्शन एवं सहयोग



Mr. GAUTAM KUMAR

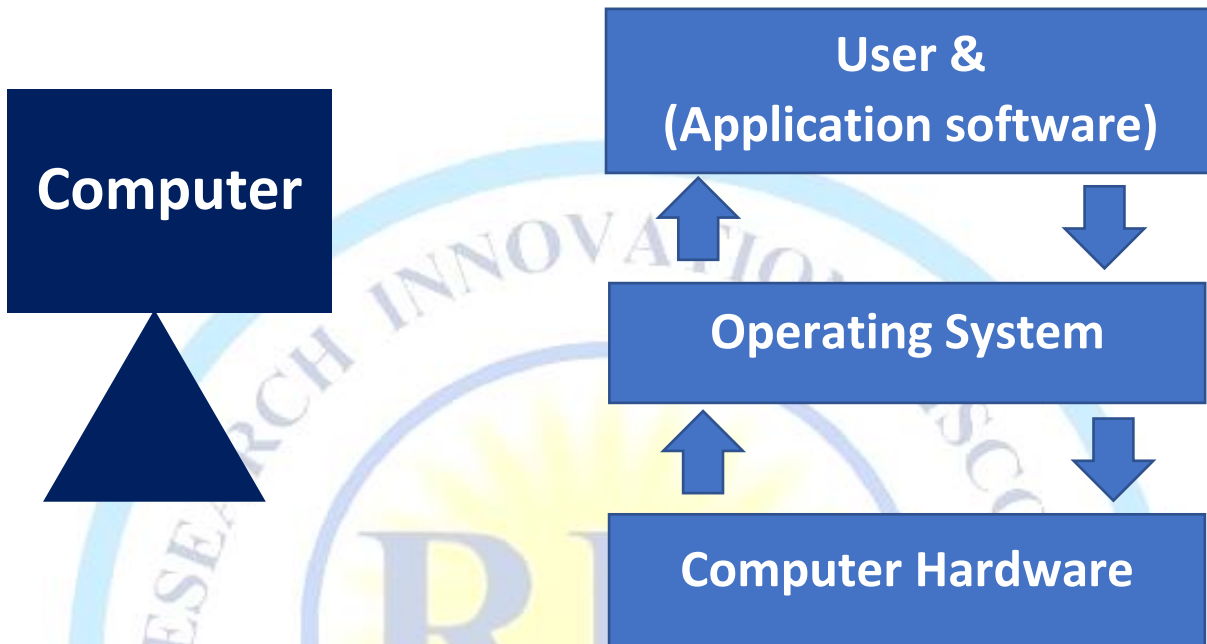


.. सोच है जिनकी नई कुछ कर दिखाने की, खोज है रीड संस्था को उन सभी इंसानों की..

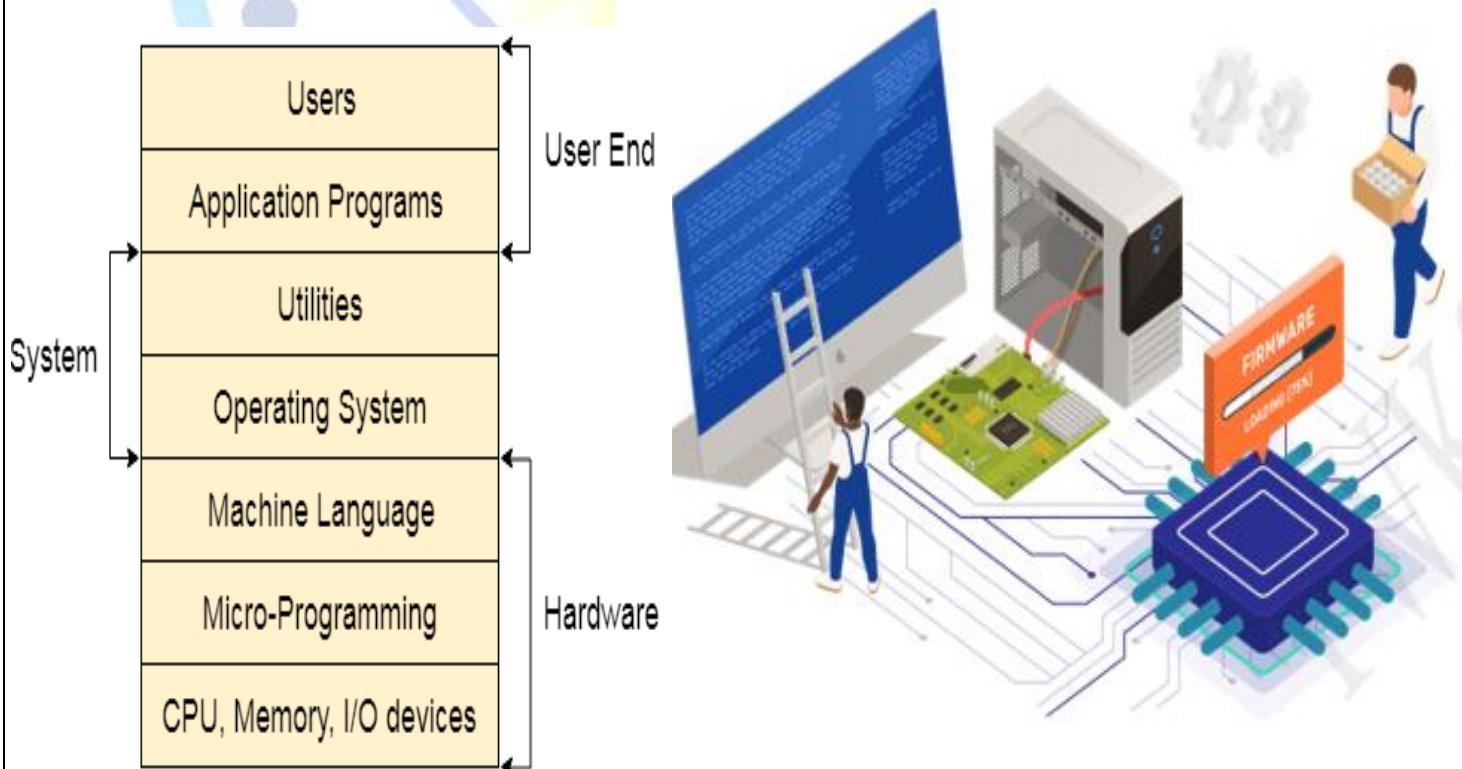
“अगर आप भी **Research, Innovation and Discovery** के क्षेत्र में रुचि रखते हैं एवं अपनी प्रतिभा से दुनियां को कुछ नया देना चाहते हैं एवं अपनी समस्या का समाधान **RID** के माध्यम से करना चाहते हैं तो **RID ORGANIZATION (रीड संस्था)** से जरूर जुड़ें” || धन्यवाद || **Er. Rajesh Prasad (B.E, M.E)**

❖ What is Operating System (OS):

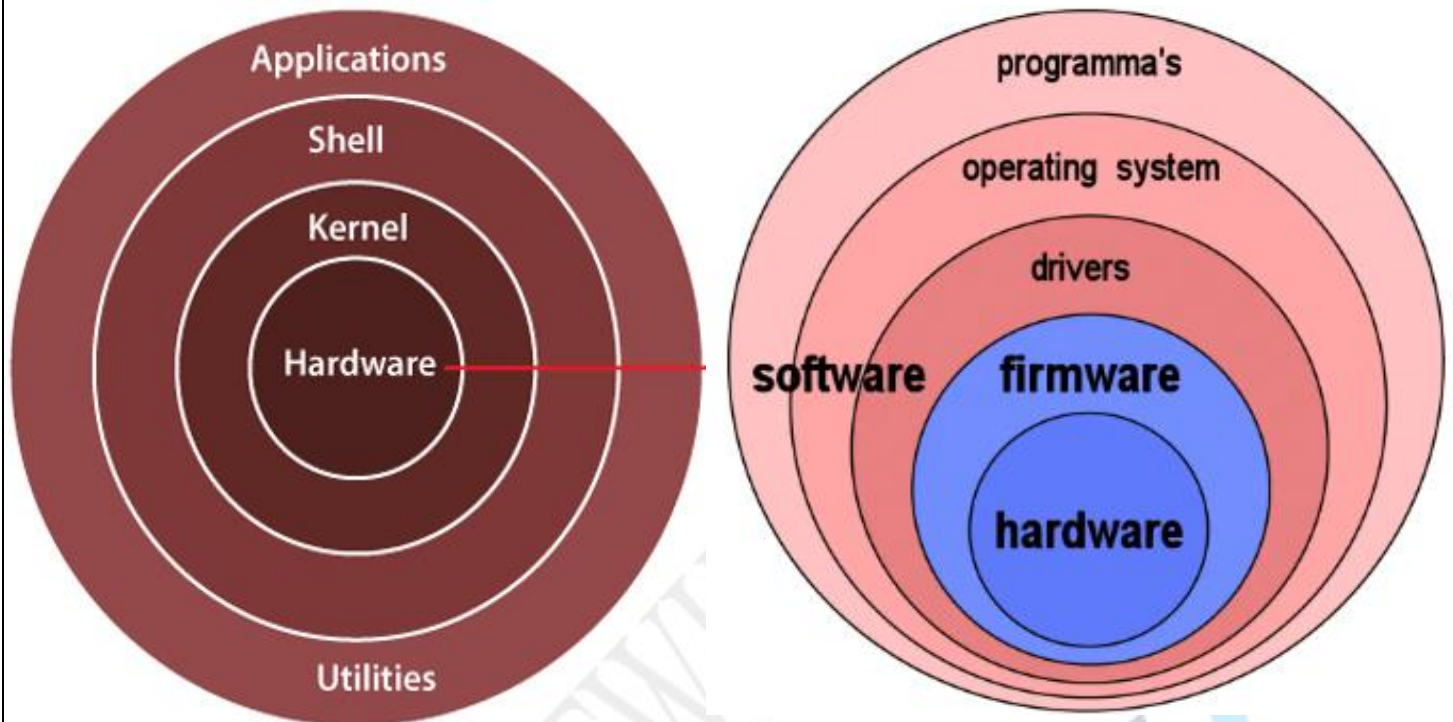
- Operating system is system software that manages computer hardware and software resources, and provides common services for computer programs.
- it is an interface between user and hardware. It is set of Program
- It is responsible for the execution of all the processes, Resource Allocation, CPU management, File Management and many other tasks.



❖ Structure of Computer System:



❖ Structure of operating system:



❖ Parts of operating system:

1. Kernel: -

- Kernel is central component of an operating system that manages operations of computer and hardware.

2. Device Drivers: -

- it is a computer program that operates or controls a particular type of device that is attached to a computer or automaton.

3. User Interface: -

- it is a part of an operating system, program, or device that allows a user to enter and receive information. The user interface could be a basic command line interface (CLI) or a Graphical User Interface (GUI)

4. System Utilities: -

- A utility or software utility is computer system software intended to analyse, configure, monitor, or help maintain a computer.
- utilities refer to a set of specialized software tools and programs designed to help manage and maintain a computer system. These utilities are typically included as part of the operating system or can be installed separately to perform various tasks related to system administration, optimization, troubleshooting, and security.

❖ Types of operating system: -

Linux OS: - Linux is a family of open-source like- Unix operating systems based on the Linux kernel first released on September 17, 1991, by Linus Torvalds Linux is packaged as a Linux distribution.

Developer: -

Linus Torvald (University of Helsinki) & Community contributors

Written: -

Assembly language C and other

Source model: -

Open source

Kernel type: -

Monolithic

OS family: -

Unix

Initial release: -

September 17, 1991

Marketing Target: -

Cloud computing, embedded devices, mainframe computers, mobile devices, personal computers, servers, supercomputers

Linux name Concept: - Linus Torvald (Developer) + MiniX (O.S Developed By Andrew Tanenbaum)

LINUX = LINU + X = LINUX

LINUX= Linux is a Kernel (Kernel is main part of O.S) not an Operating

LINUX O.S = Linux Kernel + GNU(Software)

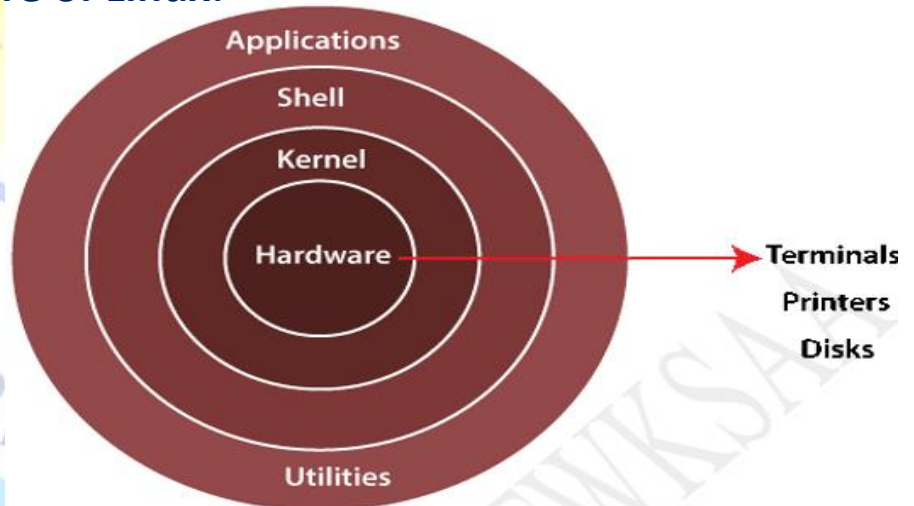
O.S User Interface = 1.GUI (Graphical User Interface) 2.CLI (Command Line interface)



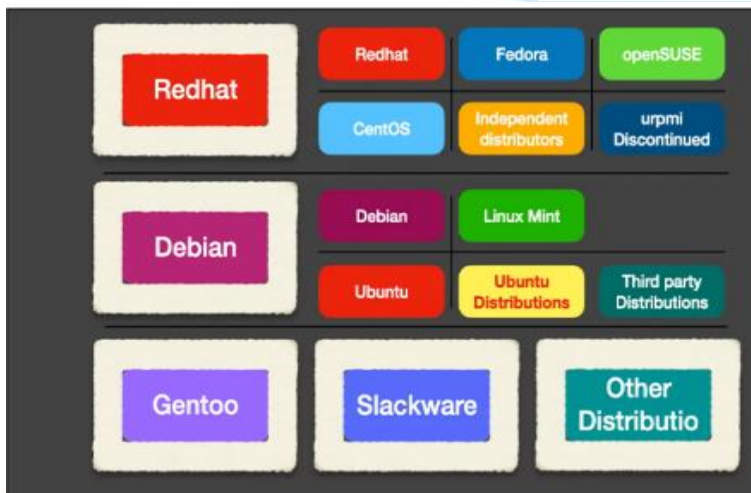
Linus Torvalds, principal author of the Linux kernel

Architecture of Linux: -

LINUX



Distribution of Linux: -

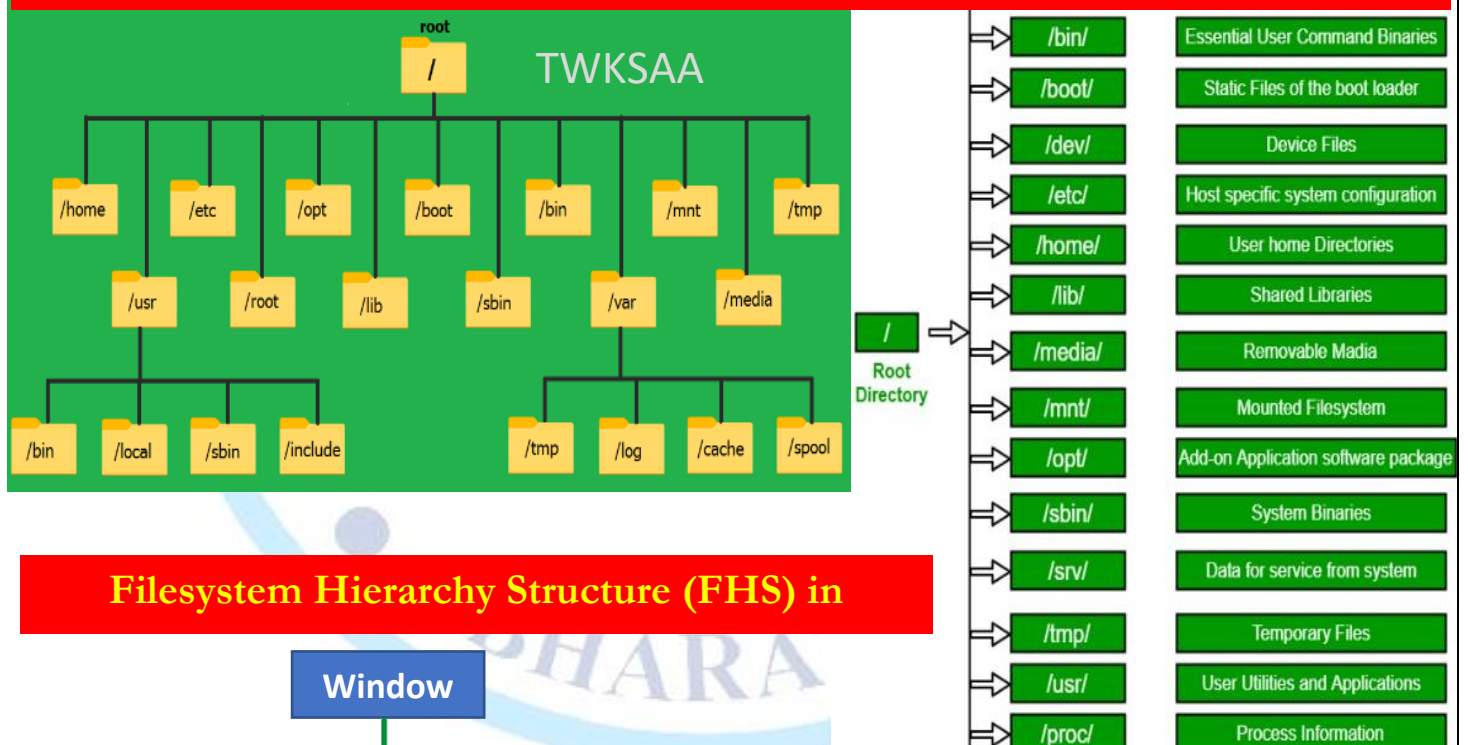


Features of Linux

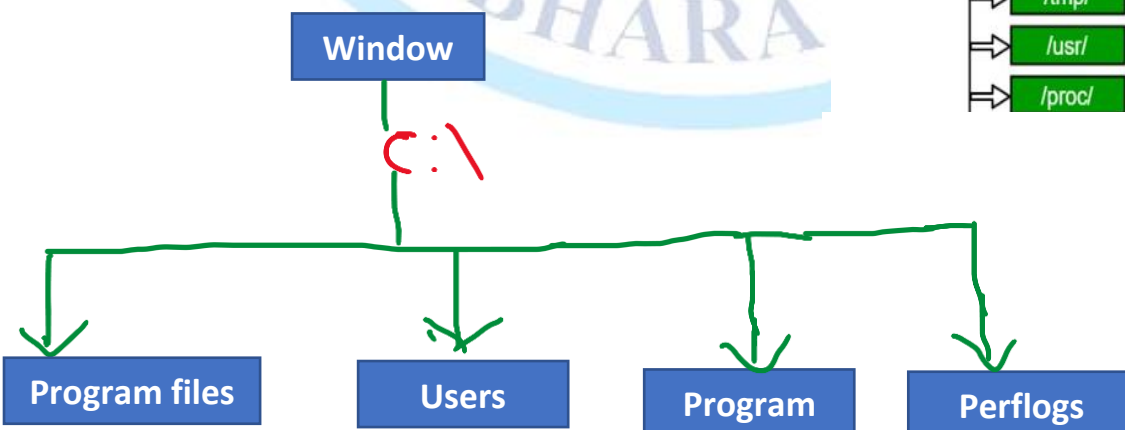
- Light Weight
- Multi user and Multi tasking
- Multi processor
- Multi threading
- Highly customizable
- Secure
- Freely distributed and Open source
- Stable
- Network Friendlinesss
- Simplified Update's for all installed software

Microsoft Windows	Linux
Administrator	Root User
OS	Kernel
Folder	Directory
Shell	Shell
Not Open Source	Open Source
Software	Package
\ (Backward Slash)	/ (Forward Slash)
Ex: c:\X\A\B\C	Ex: /X/A/B/C

Filesystem Hierarchy Structure (FHS) in Linux



Filesystem Hierarchy Structure (FHS) in Window



Command: - A command is an instruction given to our computer by us to do whatever we want.

Types: - 1). **Built-in shell commands:** They are part of a shell. Each shell has some built in commands.

2). **External commands:** - it is a separate executable program written in C or other programming languages.

Directory: - A directory is a location for storing files in computer. It is kind of folder.

For become root user by use "sudo su" command

Sudo su (S-Super, U-user, D-do, S-switch U-user)

```
root@ip-172-31-8-170/home/ec2-user
[ec2-user@ip-172-31-8-170 ~]$
[ec2-user@ip-172-31-8-170 ~]$
[ec2-user@ip-172-31-8-170 ~]$ sudo su
[root@ip-172-31-8-170 ec2-user]#
```

❖ **How to create a directory:** - **Command**=mkdir directory name

```
[ec2-user@ip-172-31-8-170 ~]$ sudo su
[root@ip-172-31-8-170 ec2-user]#
[root@ip-172-31-8-170 ec2-user]# mkdir twksaa
[root@ip-172-31-8-170 ec2-user]# ls
twksaa
[root@ip-172-31-8-170 ec2-user]#
[root@ip-172-31-8-170 ec2-user]#
```

twksaa is directory name, mkdir is command for crating directory

"ls" means "list" this command use for show directory is created or not.

❖ **How to create Multiple directory:** - **Command**=mkdir dir1 dir2 dir3

```
[root@ip-172-31-8-170 ec2-user]# mkdir dir1 dir2 dir3
[root@ip-172-31-8-170 ec2-user]# ls
dir1 dir2 dir3
[root@ip-172-31-8-170 ec2-user]#
```

dir1 dir2 dir3 are directory name

❖ **How to create directory inside directory:** - **Command**=mkdir -p bharat/ mumbai/ andheri

```
[root@ip-172-31-8-170 ec2-user]# mkdir -p bharat/mumbai/andheri
[root@ip-172-31-8-170 ec2-user]# ls
bharat
[root@ip-172-31-8-170 ec2-user]#
```

❖ **How to check current directory:** - **Command**=pwd (present working directory)

```
[root@ip-172-31-8-170 ec2-user]# mkdir -p bharat/mumbai/andheri
[root@ip-172-31-8-170 ec2-user]# ls
bharat
[root@ip-172-31-8-170 ec2-user]# pwd
/home/ec2-user
[root@ip-172-31-8-170 ec2-user]#
```

ec2-user is present working directory

❖ **How to change directory:** - **Command**=cd directory name (cd:- change directory)

```
[root@ip-172-31-8-170 ec2-user]# ls
bharat
[root@ip-172-31-8-170 ec2-user]# pwd
/home/ec2-user
[root@ip-172-31-8-170 ec2-user]# cd bharat
[root@ip-172-31-8-170 bharat]# ls
mumbai
[root@ip-172-31-8-170 bharat]# pwd
/home/ec2-user/bharat
[root@ip-172-31-8-170 bharat]#
```

bharat is present working directory

❖ How to go one step back from current directory: - **Command**= `cd ..`

```
[root@ip-172-31-8-170 bharat]# pwd
/home/ec2-user/bharat
[root@ip-172-31-8-170 bharat]# cd ..
[root@ip-172-31-8-170 ec2-user]# pwd
/home/ec2-user
[root@ip-172-31-8-170 ec2-user]#
```

❖ How to go multiple step back from current directory: - **Command**= `cd ../../..`

```
[root@ip-172-31-8-170 ec2-user]# cd bharat
[root@ip-172-31-8-170 bharat]# cd mumbai
[root@ip-172-31-8-170 mumbai]# cd andheri
[root@ip-172-31-8-170 andheri]# pwd
/home/ec2-user/bharat/mumbai/andheri
[root@ip-172-31-8-170 andheri]# cd ../../..
[root@ip-172-31-8-170 ec2-user]# pwd
/home/ec2-user
[root@ip-172-31-8-170 ec2-user]#
```

❖ How to delete directory: - **Command**= `rmdir directory name` (only empty directory)

```
[root@ip-172-31-8-170 ec2-user]# cd bharat
[root@ip-172-31-8-170 bharat]# cd mumbai
[root@ip-172-31-8-170 mumbai]# rmdir andheri
[root@ip-172-31-8-170 mumbai]# cd..
bash: cd..: command not found
[root@ip-172-31-8-170 mumbai]# cd ..
[root@ip-172-31-8-170 bharat]# pwd
/home/ec2-user/bharat
[root@ip-172-31-8-170 bharat]# rmdir mumbai
[root@ip-172-31-8-170 bharat]# cd ..
[root@ip-172-31-8-170 ec2-user]# ls
bharat
[root@ip-172-31-8-170 ec2-user]# rmdir bharat
[root@ip-172-31-8-170 ec2-user]# ls
[root@ip-172-31-8-170 ec2-user]# pwd
/home/ec2-user
[root@ip-172-31-8-170 ec2-user]#
```

```
[root@ip-172-31-13-150 home]# cd /
```

```
[root@ip-172-31-13-150 /]# ls
```

```
bin dev home lib64 media opt root sbin sys usr
```

```
boot etc lib local mnt  proc run  srv  tmp  var
```

```
[root@ip-172-31-13-150 /]# cd ..
```


touch Command: -

-used for create the file.

touch

- 1.Access time & date
- 2.Modify time &date
- 3.change time & date

Create empty file

[...@...] \$ touch filename

Create multiple empty file

[...@...] \$ touch file1 file2 file3

Change all timestamp

1. [...@...] # touch -m filename (modify time)
2. [...@...] # touch -r filename (update time)
3. [...@...] # touch -t filename (with specific time)
4. [...@...] # touch -c filename (not empty file)
5. [...@...] # touch -a filename (change access & Modify time)
6. [root@ip-172-31-14-212 new]# stat file3
➤ stat command used for show timestamp of file and directory

ec2-user@ip-172-31-43-105:~

```
[ec2-user@ip-172-31-43-105 ~]$
[ec2-user@ip-172-31-43-105 ~]$ touch file1
[ec2-user@ip-172-31-43-105 ~]$ touch file1 file2 touch file3
[ec2-user@ip-172-31-43-105 ~]$ ls
file1 file2 file3 touch
[ec2-user@ip-172-31-43-105 ~]$
```

cat Command: -

It is used for create a file & view contents

cat command is used for copy the file

[...@...] # cat >filename

[...@...] # cat filename

cat >>filename

[...@...] # cat file1 file2 >>file3

```
[root@ip-172-31-43-105 ec2-user]# cat >file1
welcome to twksaa tech training
[root@ip-172-31-43-105 ec2-user]# cat >>file1
run by twf
[root@ip-172-31-43-105 ec2-user]# cat file1
welcome to twksaa tech training
run by twf
[root@ip-172-31-43-105 ec2-user]#
```

```
[root@ip-172-31-43-105 ec2-user]# touch file2
[root@ip-172-31-43-105 ec2-user]# cat >file2
this is a socail organization
[root@ip-172-31-43-105 ec2-user]# ls
file1 file2
[root@ip-172-31-43-105 ec2-user]# cat file1 file2 >file3
[root@ip-172-31-43-105 ec2-user]# cat file3
welcome to twksaa tech training
run by twf
this is a socail organization
[root@ip-172-31-43-105 ec2-user]#
```

vi Command: -

[...@...] # vi filename

```
[root@ip-172-31-43-105 ec2-user]#
[root@ip-172-31-43-105 ec2-user]# ls
file1 file2 file3
[root@ip-172-31-43-105 ec2-user]# vi twksaa
[root@ip-172-31-43-105 ec2-user]# cat twksaa
Good Morning
have a nice day
thank you for visit
twksaa tech training

[root@ip-172-31-43-105 ec2-user]# ls
file1 file2 file3 twksaa
[root@ip-172-31-43-105 ec2-user]#
```

Press i (from keyboard)
Write your contents
Press Esc (from keyboard)
: wq

: w - to save
: wq -to save & quit
: q -to quit
: q! -forcefully quit

nano Command: -

[...@...] # nano filename

```
[root@ip-172-31-43-105 ec2-user]# nano t3
[root@ip-172-31-43-105 ec2-user]# cat t3
welcome to twksaa tech training

[root@ip-172-31-43-105 ec2-user]# ls
file1 file2 file3 t3 twksaa
[root@ip-172-31-43-105 ec2-user]#
```

Ctrl +X then Press Y
(Where X & Y are capital)

Linux File Command



rmdir Command: - it is used to remove empty directory.

[...@...] # rmdir directory name

rmdir -p Command: - remove both parent and child directory.

[...@...] # rmdir -p directory name

rmdir -pv Command: - remove both parent and child directory with verbose content

[...@...] # rmdir -pv directory name

rm -rf Command: - remove non-empty file & directory forcefully

[...@...] # rm -rf directory Or file

rm -r Command: - remove empty directory

[...@...] # rm -r directory name

rm Command: - remove empty file

[...@...] # rm file name

rm -i Command: - remove a file interactively

[...@...] # rm -i file name

rm* Command: - remove file with some extension

[...@...] # rm -i file name

**"file & directory
Delete command"
TWKSAA**

mv Command: - used for **rename** file & directory.

```
[...@...] # mv old filename new filename  
[...@...] # mv old dire.name new  
dire.name  
[...@...] # mv file1 file2
```

mv Command: - used for **move** file & directory.

```
[...@...] # mv source filename destination name  
[...@...] # mv source directory destination  
directory  
[...@...] # mv file1 file2
```

mv Command: - used for **cut** file & directory.

```
[...@...] # mv file1 file2  
[...@...] # mv dire1 dire2
```

cat Command: - used for **copy** file & directory.

```
[...@...] # cat directory1 > directory2  
[...@...] # cat directory1 >> directory2  
[...@...] # cat directory1 directory2 >> directory3  
[...@...] # cat file1 > file2  
[...@...] # cat file1 >> file2  
[...@...] # cat file1 file2 >> file3
```

cp: - used for **copy** file & directory.

```
[...@...] # cp source filename destination name  
[...@...] # cp source directory destination  
directory  
[...@...] # cp file1 file2  
[...@...] # cp dire1 dire2
```

**“file & directory
Rename, move, cut & copy command”
TWKSAA**

cat Command: - used to display the content of a file. (Top-Bottom)

[...@...] \$ cat filename : To display the content of a file. (Top-Bottom)
[...@...] \$ cat > filename : To create a file.
[...@...] \$ cat oldfile > newfile : To copy content from older to new file.
[...@...] \$ cat [file1 file2 & so on] > [new filename] : To copy multiple files into one.
[...@...] # cat -n/cat -b [fileName] : To display line numbers.
[...@...] # cat -e [fileName] : To display \$ character at the end of each line.

```
[ec2-user@ip-172-31-40-148 ~]$  
[ec2-user@ip-172-31-40-148 ~]$  
[ec2-user@ip-172-31-40-148 ~]$ cat >file1  
welcome to twksaa tech training  
this organization run by twf  
this is one of the best tech  
service provider organization  
in India  
thanks for visit T3 organization.  
[ec2-user@ip-172-31-40-148 ~]$ cat file1 > twksaa  
[ec2-user@ip-172-31-40-148 ~]$ ls  
file1 twksaa  
[ec2-user@ip-172-31-40-148 ~]$ touch t3  
[ec2-user@ip-172-31-40-148 ~]$ ls  
file1 t3 twksaa  
[ec2-user@ip-172-31-40-148 ~]$ cat file1 twksaa >t3  
[ec2-user@ip-172-31-40-148 ~]$ cat t3  
welcome to twksaa tech training  
this organization run by twf  
this is one of the best tech  
service provider organization  
in India  
thanks for visit T3 organization.  
welcome to twksaa tech training  
this organization run by twf  
this is one of the best tech  
service provider organization  
in India  
thanks for visit T3 organization.  
[ec2-user@ip-172-31-40-148 ~]$
```

[...@...] \$ cat > filename
: To create a file.

[...@...] \$ cat oldfile > newfile
:To copy from older to new file.

[...@...] \$ cat [file1 file2 & so on] >
[new filename] : To copy multiple
files into one.

[...@...] \$ cat filename
: To display the content of a file. (Top-
Bottom)

```
[root@ip-172-31-40-148 ec2-user]#  
[root@ip-172-31-40-148 ec2-user]# cat -n t3  
1 welcome to twksaa tech training  
2 this organization run by twf  
3 this is one of the best tech  
4 service provider organization in India  
5 thanks for visit T3 organization.  
6 "t3"  
[root@ip-172-31-40-148 ec2-user]# cat -e t3  
welcome to twksaa tech training $  
this organization run by twf$  
this is one of the best tech $  
service provider organization in India$  
thanks for visit T3 organization.$  
"t3"$  
[root@ip-172-31-40-148 ec2-user]# cat t3 << EOF  
> bash: warning: here-document at line 18 delimited by end-of-file (wanted `EOF')  
welcome to twksaa tech training  
this organization run by twf  
this is one of the best tech
```

[...@...] # cat -n/cat -b [fileName]
: To display line numbers.

[...@...] # cat -e [fileName]
: To display \$ character at the end of
each line.

[...@...] # cat [fileName] <<EOF
:Used as page end marker.

tac Command: - used to display the content of a file. (Bottom-top)

[...@...] #tac filename : To display the content of a file. (Bottom-Top)

```
[root@ip-172-31-40-148 ec2-user]# ls
file1  t3  twksaa
[root@ip-172-31-40-148 ec2-user]# tac t3
"t3"
thanks for visit T3 organization.
service provider organization in India
this is one of the best tech
this organization run by twf
welcome to twksaa tech training
[root@ip-172-31-40-148 ec2-user]#
```

head Command:

- head filename (it reads first 10 lines)
- head -n 24 filename (it reads first 24 lines)

Note: - head -n +24 filename

where n= number of lines head -n 3 raj

```
[root@ip-172-31-40-148 ec2-user]#
[root@ip-172-31-40-148 ec2-user]# head t3
welcome to twksaa tech training
this organization run by twf
this is one of the best tech
service provider organization in India
thanks for visit T3 organization.
"t3"
[root@ip-172-31-40-148 ec2-user]#
```

tail Command: -

- tail filename (it reads last 10 lines)
- tail -n 6 filename (it reads last 6 lines)
- tail +24 filename (it reads from 24th line to bottom)

Where n= number of lines

```
[root@ip-172-31-40-148 ec2-user]#
[root@ip-172-31-40-148 ec2-user]# ls
file1  t3  twksaa
[root@ip-172-31-40-148 ec2-user]# tail t3
welcome to twksaa tech training
this organization run by twf
this is one of the best tech
service provider organization in India
thanks for visit T3 organization.
"t3"
[root@ip-172-31-40-148 ec2-user]#
```

less and more Command: - The less and more commands are both used for viewing text files in the terminal in Linux. Press the q key: to exit less & more

```
[root@ip-172-31-40-148 ec2-user]# less t3
[root@ip-172-31-40-148 ec2-user]# more t3
welcome to twksaa tech training
this organization run by twf
this is one of the best tech
service provider organization in India
thanks for visit T3 organization.
"t3"
[root@ip-172-31-40-148 ec2-user]#
```

echo Command: - used to display same as it same content. [...@...] # echo

wc Command: - used to count no of word and character [...@...]wc filename

ls Command: - used for show **list** of file & directory.

[...@...] # ls enter

ls -l Command: - show **all list** of file & directory.

[...@...] # ls -l enter

ls -lt Command: - show **all list** of file & directory with time.

[...@...] # pwd enter

ls -tr Command: - show **list** of file &

[...@...] # ls -tr enter

ls -a Command: - show **hidden** file &

[...@...] # ls -a enter

clear Command: - used for clear the screen

[...@...] # clear enter

```
[root@ip-172-31-40-148 ec2-user]# ls
dir1 file1 t3 twksaa
[root@ip-172-31-40-148 ec2-user]# ls -l
total 12
drwxr-xr-x 2 root    root      6 Feb 10 09:07 dir1
-rw-rw-r-- 1 ec2-user ec2-user 165 Feb 10 07:40 file1
-rw-rw-r-- 1 ec2-user ec2-user 177 Feb 10 07:58 t3
-rw-rw-r-- 1 ec2-user ec2-user 165 Feb 10 07:41 twksaa
[root@ip-172-31-40-148 ec2-user]# ls -lt
total 12
drwxr-xr-x 2 root    root      6 Feb 10 09:07 dir1
-rw-rw-r-- 1 ec2-user ec2-user 177 Feb 10 07:58 t3
-rw-rw-r-- 1 ec2-user ec2-user 165 Feb 10 07:41 twksaa
-rw-rw-r-- 1 ec2-user ec2-user 165 Feb 10 07:40 file1
[root@ip-172-31-40-148 ec2-user]# ls -a
. . . .bash_logout .bash_profile .bashrc dir1 file1 .file2 .ssh t3 twksaa
[root@ip-172-31-40-148 ec2-user]# clear
```

list command

[root@ip-172-31-5-58 twksaa]# history : this command will show all command what is used during current working day.

grep Command: - "Global Regular Expression Print" it is used print similar word. It is case sensitive.
it's process line by line

```
[...@...] # grep 'word name' filename      ex: - [...@...] # grep 'twksaa' t3
[...@...] # grep -i 'word name' filename  ex: - [...@...] $ grep -i twksaa t3
                                           (Ignore case sensitive)
[...@...] # grep -R                        ex: - [...@...] # grep -R -i 'twksaa'
(Search in present directory and subdirectory)
```

```
[root@ip-172-31-40-148 ec2-user]#
[root@ip-172-31-40-148 ec2-user]#
[root@ip-172-31-40-148 ec2-user]# grep twksaa t3
welcome to twksaa tech training
twksaa means techonoly provider org.
[root@ip-172-31-40-148 ec2-user]# grep -i twksaa t3
welcome to twksaa tech training
twksaa means techonoly provider org.
TWKSAA Tech Training.
[root@ip-172-31-40-148 ec2-user]# grep -i twksaa*
```

sed Command: - "stream editor" it is used to replace text or content without open a file.

```
[...@...] # sed filename      ex: - [...@...] # sed 's/this/he/' file2 (original file will not change)
[...@...] # sed -i filename    ex: - [...@...] # sed -i 's/this/he/' file2 (original file will be change)
[...@...] # sed -i '3d' filename ex: - [...@...] # (3rd line will be delete)
[...@...] # sed -i '$d' filename ex: - [...@...] # (last line will be delete)
[...@...] # sed -i '12,$d' filename ex: - [...@...] # (last 12 line will be deleted)
[...@...] # sed -i 'n,$d' filename ex: - [...@...] # (last nth line will be deleted)
```

Grep & sed command"
TWKSAA

File permission modify Command

Chmod command

Chown command

chgrp command

Chmod command

chmod command is used to change access mode of file and directory.

Access Mode		File	Directory	File Permission Function
r	4	-isplay content	dList content	Read
W	2	Modify	Remove	Write
x	1	execute	Enter into directory	Execute
		-rwxrwxrwx	drwxrwxrwx	

1	x	x-execute
2	w	w-write
4	r	r-read
3=2+1 (w+x)		wx
5=4+1 (r+x)		rx
6=4+2 (r+w)		rw
7=4+2+1(rwx)		rwx

- User(u)
- Group(g)
- Other(o)

- "+" used for add "rwx" permission in "ugo"
- "-" used for remove permission in "ugo"

1. [...@...] # chmod u+rwx filename
2. [...@...] # chmod o+rwx filename
- 3.[...@...] # chmod g+rwx filename
- 4.[...@...] # chmod u-rwx filename
5. [...@...] # chmod g-rwx filename
6. [...@...] # chmod o-rwx filename
7. [...@...] # chmod u+r filename
8. [...@...] # chmod o+w filename
- 9.[...@...] # chmod g+x filename
- 10.[...@...] # chmod u-r filename
11. [...@...] # chmod g-w filename
12. [...@...] # chmod o-x filename

1. [...@...] # chmod 777 filename
2. [...@...] # chmod 321 filename
- 3.[...@...] # chmod g+r filename
- 4.[...@...] # chmod u-rw filename
5. [...@...] # chmod g-rx filename
6. [...@...] # chmod o-wx filename
7. [...@...] # chmod u+r filename
8. [...@...] # chmod o+rw filename
- 9.[...@...] # chmod g+wx filename
- 10.[...@...] # chmod u-rx filename
11. [...@...] # chmod g-rw filename
12. [...@...] # chmod o-xr filename

How to Create user and Group in Linux

- **How to become root user**
[...@...] \$ sudo su
- **How to change user name**
[root@ipecc2-user]# sudo su username
[root@ipecc2-user]# sudo su raj
- **How come outside from rooter user**
[root@ec2-user]# exit
- **How to check who am I means I am root user or not**
[ec2-user@ ~]\$ whoami
- **How Create user in linux**
[...@...] \$ sudo useradd username
[ec2-user@ ~]\$ sudo useradd ashok
[ec2-user@ ~]\$ sudo su
[root@ ec2-user]# useradd raj
- **How can get user id**
[...@...] # id username
[...@...] # id raj
uid=1006(raj) gid=1006(raj) groups=1006(raj)
- **How to create a group**
[...@...] # groupadd groupname
[...@...] # groupadd developer
- **How to show all group**
[root@ip-172-31-6-167 home]# cat /etc/group
- **How shows all user**
[root@ip-172-31-6-167 home]# cat /etc/passwd
- **How to shows last 3 user**
[root@ip-172-31-6-167 home]# tail -3 /etc/passwd
- **How to add user into a group**
[root@ip-172-31-6-167 home]# usermod -aG groupname username
[root@ip-172-31-6-167 ec2-user]# usermod -aG developer raj
[root@ip-172-31-6-167 ec2-user]# id raj
uid=1006(raj) gid=1006(raj) groups=1006(raj),1007(developer)
- **Remove User from the group**
[root@ ec2-user]# gpasswd -d username groupname
[root@ip-172-31-6-167 ec2-user]# gpasswd -d raj developer
Removing user raj from group developer
[root@ip-172-31-6-167 ec2-user]# id raj
uid=1006(raj) gid=1006(raj) groups=1006(raj)
- **How to delete User**
[root@ipecc2-user]# userdel username
[root@ipecc2-user]# userdel raj
- **How to delete group**
[root@ipecc2-user]# groupdel groupname
[root@ipecc2-user]# groupdel developer
- **How to check user are belongs to a particular group**
[root@ipecc2-user]# lid -g groupname
[root@ipecc2-user]# lid -g developer



Chown command

chown command is used for change ownership of file and

- We can change user name also by using chown command

```
[...@...] # touch filename → create one file
```

```
[...@...] # touch file1
```

- We can see owner of the file by using

```
[...@...] # ls -l
```

- How to show all group

```
[root@ip-172-31-6-167 home]# cat /etc/group
```

- How shows all user

```
[root@ip-172-31-6-167 home]# cat /etc/passwd
```

- Changing owner of a file

```
[...@...] $ sudo chown username filename
```

```
[root...@...] # chown username filename
```

```
[...@...] # chown raj file1
```

- Changing owner of a directory

```
[...@...] $ sudo chown username directoryname
```

```
[root...@...] # chown username directoryname
```

```
[...@...] # chown ram dir1
```

- You can change the user ownership by using user-id also

- How to check user id

```
[...@...] # id username
```

```
[...@...] # chown u-id file1 (change ownership by user id)
```

- How to change the group of a file

```
[...@...] # chown :groupname filename
```

```
[...@...] # chown :developer raj
```

Chgrp command

chgrp command is used for change group of file and directory.

```
[...@...] $ sudo su
```

```
[...@...] # chgrp groupname filename
```

```
[...@...] # chgrp groupname directoryname
```

```
[...@...] # chgrp developer raj
```

```
[...@...] # chgrp devops dir1
```

useradd Command: to create user

groupadd Command: - to create group

gpasswd Command: - to add user into group add

gpasswd -a Command: - to add user into group add (Single user)

gpasswd -m Command: - to add user into group add (Multiple user)

ln Command: - hard link for backup

ln -s Command: - soft link for shortcut

tar Command: - used to combine multiple files into one

gzip Command: - it is compression tool used to reduce size of a file

comm Command: compress

tr Command: - translate

uniq Command: - used to remove repeated line

groupdel Command: - permanently remove a group

groupmod Command: - change group name

groups Command: - show group name

history Command: - display older commands from the shell command history

man Command: - display manual page for specified command

w Command: - tells about user who are login & what they doing.

passwd Command: - set password

su Command: - change user

exit Command: - come out from root

cat /etc/group Command: - show all group

gpasswd -d Command: - delete group

"User and Group add command"

TWKSAA

"This command tells that's allows users to install, remove & upgrade"



yum Command: "yellowlog updater modified" it is used for install software (yum not support ubuntu)

opt Command: - advance package tool

rpm Command: - red hat package manager

dpkg Command: - Debian package management

deb Command: -

chocolate Command: -

wget Command: - download file/software/package from internet through URL.

curl Command: download file/software/package from internet via URL.

find Command: -

locate Command: -

ping Command: - check internet connection

alias Command: - converts complex into simple ones

bzip2 Command: - compress file

cal Command: - display calendar

chsh Command: - change shell

df Command: - check disk space in system

export Command: - exports shell variables to other shells

uptime Command: - show how long system running

pkill Command: - kill a process

mpmap Command: - memory map of a process

free Command: - show memory status

top Command: - Display process activity of system

last Command: - Display user activity in the system

ps Command: - Display running process

du Command: - Display usage

init Command: - change server bootup

info Command: - display information

shutdown Command: - shutdown

"Package manager command"

TWKSAA



ifconfig Command: "Display and manipulate route and network interface configuration"

ip Command: - replacement of ifconfig command

traceroute Command: - network troubleshooting utility

tracepath Command: - find path

netstat Command: - Display connection of netstat (get information from kernel userspace)

ss Command: - replacement of netstat command

dig Command: - query DNS (domain information group)

route Command: show and manipulate Ip routing table

host Command: - performs DNS lookups display DNS for given IP

arp Command: - view or add contents (address resolution protocol)

Hostname Command: - network name

wconfig Command: - wireless network interface view wi-fi details

whois Command: - website

whoami Command: - display

Ifconfig cat/etc/os-release Command: - Os version

Hostname -i Command: - Ip will show

export Command: - exports shell variables to other shells

yum install httpd: -

yum update httpd: -

service httpd start: -

service httpd status: -

service httpd stop: -

yum list installed

chkconfig httpd on: -

which Command: - Display usage

yum remove httpd: -

"LINUX Networking command"

TWKSAA



What is RID Organization (RID संस्था क्या है)?

- **RID Organization** यानि **Research, Innovation and Discovery Organization** एक संस्था हैं जो TWF (TWKSAA WELFARE FOUNDATION) NGO द्वारा RUN किया जाता है। जिसका मुख्य उद्देश्य हैं आने वाले समय में सबसे पहले **NEW (RID, PMS & TLR)** की खोज, प्रकाशन एवं उपयोग भारत की इस पावन धरती से भारतीय संस्कृति, सभ्यता एवं भाषा में ही हो।
- देश, समाज, एवं लोगों की समस्याओं का समाधान **NEW (RID, PMS & TLR)** के माध्यम से किया जाये इसके लिए ही इस **RID Organization** की स्थापना 30.09.2023 किया गया है। जो TWF द्वारा संचालित किया जाता है।
- TWF (TWKSAA WELFARE FOUNDATION) NGO की स्थापना 26-10-2020 में बिहार की पावन धरती सासाराम में Er. RAJESH PRASAD एवं Er. SUNIL KUMAR द्वारा किया गया था जो की भारत सरकार द्वारा मान्यता प्राप्त संस्था हैं।
- Research, Innovation & Discovery में रुचि रखने वाले आप सभी विधार्थियों, शिक्षकों एवं बुद्धिजिवियों से मैं आवाहन करता हूँ की आप सभी इस **RID संस्था** से जुड़ें एवं अपने बुद्धि, विवेक एवं प्रतिभा से दुनियां को कुछ नई **(RID, PMS & TLR)** की खोजकर, बनाकर एवं अपनाकर लोगों की समस्याओं का समाधान करें।

MISSION, VISSION & MOTIVE OF “RID ORGANIZATION”

मिशन	हर एक ONE भारत के संग
विजन	TALENT WORLD KA SHRESHTM AB AAYEGA भारत में और भारत का TALENT भारत में
मकसद	NEW (RID, PMS, TLR)

MOTIVE OF RID ORGANIZATION NEW (RID, PMS, TLR)

NEW (RID)

R	I	D
Research	Innovation	Discovery

NEW (TLR)

T	L	R
Technology, Theory, Technique	Law	Rule

NEW (PMS)

P	M	S
Product, Project, Production	Machine	Service



Er. Rajesh Prasad (B.E, M.E)

Founder:

TWF & RID Organization



Linux के इस E-Book में अगर koe milati truti milati hai to kripaya hameen सूचित करें।

WhatsApp's No: 9892782728 or

Email Id: ridorg.in@gmail.com

