



OPERATING SYSTEM DESIGN

S Thenmozhi

Department of Computer Applications

OPERATING SYSTEM DESIGN

OS Structures & Kernel Programming

S Thenmozhi

Department of Computer Applications

```
$ ls -l /bin
-rwxr-xr-x 1 root sys 43234 Sep 26 2001
$
```

prompt *command* *options* *arguments*

- Shell
 - Read the command
 - Parse the command
- *Kernel: Execute the command*

- ls – list information about files and directories
- mkdir – create a new directory
- rmdir – remove a directory
- cd – change directory
- pwd – print the working directory

- touch – creates an empty file
- rm – removes file
- cat – displays the contents of the file
- cat > filename - Add contents to a file
- cat >> filename – Appends contents to the file
- cp – copy one file to another
- mv – move the contents to another
- wc – counting no of lines

- echo – display message on the screen
- clear – clear the screen
- date – know the date and time
- cal – monthly calendar
- who – who are users logged in
- whoami – tells the user of the computer
- passwd – change the password
- gedit – open the gedit

- exit – exit the shell
- man – help/manual for a command
- whatis – provides simple description of cmd
- tty – terminal type

OPERATING SYSTEMS DESIGN

Basic Commands

- `arch` – to know the OS bit version
- `uname -r` – to know the linux kernel version
or `cat /etc/os-release`
- `df -H` – to know the hard disk capacity
- `ifconfig` – ip address of the machine
- `echo $0` – shell in which you are working
- `cat /etc/shells` – displays all the shells currently available
- `free` - shows free, total and swap memory information in bytes
- `uptime` - how long your system is running and the number of users are currently logged in

- su – To switch to different any user
 - \$su <username>
- To switch to root user
 - \$su –
- To set password for root
 - \$sudo passwd root
- sudo – To run one command in super user mode
- users - displays currently logged in users.
- service – To check/start/stop a service
- /etc/init.d – contains callable scripts to configuration database for init process

OPERATING SYSTEMS DESIGN

Basic Administrative Commands

- To install any software

```
$sudo apt-get install hardinfo
```

- To install gcc

```
$sudo apt update
```

```
$sudo apt install build-essential
```

```
$sudo apt-get install manpages-dev (optional)
```

```
$gcc --version
```





THANK YOU

S Thenmozhi

Department of Computer Applications

thenmozhis@pes.edu

+91 80 6666 3333 Extn 393