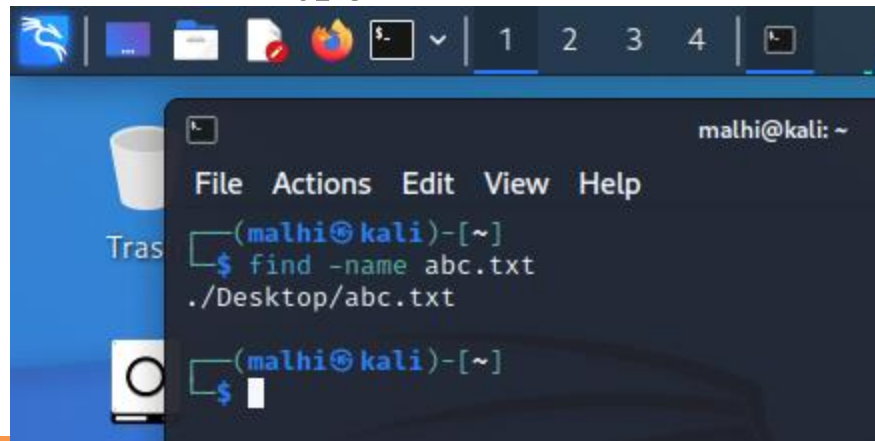


Searching the File System

- Use command- **find**
 - It search for files in a directory hierarchy under Linux and all other UNIX like operating systems.
 - Examples:
 - `find . -name thisfile.txt. ...`
 - `find /home -name *.jpg. Look for all`



```
(malhi@kali)-[~]  
$ find -name abc.txt  
./Desktop/abc.txt  
  
(malhi@kali)-[~]  
$
```

Searching the File System contd..

Use command- **grep**

- **Grep** is an acronym that stands for **G**lobal **R**egular **E**xpression **P**rint.


The grep command searches through the file, looking for matches to the pattern specified.

Grep is case-sensitive.

Example:

grep myname biodata

- Here biodata is file and myname is specific pattern for searching in biodata file

A screenshot of a Kali Linux terminal window. The prompt is (malhi@kali)-[~]. The user enters 'cd Desktop'. The prompt changes to (malhi@kali)-[~/Desktop]. The user enters 'grep System abc.txt'. The output is 'System Administration'. The prompt returns to (malhi@kali)-[~/Desktop]. The user enters '\$' and a cursor is visible.

```
(malhi@kali)-[~]  
$ cd Desktop  
  
(malhi@kali)-[~/Desktop]  
$ grep System abc.txt  
System Administration  
  
(malhi@kali)-[~/Desktop]  
$
```

Use of grep

Execute the following command to use `grep` to search for every line that contains the word `GNU`:

```
$ grep "GNU" GPL-3
```

Copy

Run

The first argument, `GNU`, is the pattern you're searching for, while the second argument, `GPL-3`, is the input file you wish to search.

The resulting output will be every line containing the pattern text:

Output

```
GNU GENERAL PUBLIC LICENSE
The GNU General Public License is a free, copyleft license for
the GNU General Public License is intended to guarantee your freedom to
GNU General Public License for most of our software; it applies also to
Developers that use the GNU GPL protect your rights with two steps:
"This License" refers to version 3 of the GNU General Public License.
13. Use with the GNU Affero General Public License.
under version 3 of the GNU Affero General Public License into a single
...
...
```

On some systems, the pattern yo

```
(malhi@kali)-[~/Desktop]
```

```
$ grep "System" abc.txt
```

```
System Administration
```

```
System Administration
```

```
System Administration Lovely Professional University
```

```
System Administration
```

```
System Administration
```

Use of grep contd..

Search for each instance of the word `license` (with upper, lower, or mixed cases) in the same file as before with the following command:

```
$ grep -i "license" GPL-3
```

Copy

Run

The results contain: `LICENSE`, `license`, and `License`:

Output

```
GNU GENERAL PUBLIC LICENSE
of this license document, but changing it is not allowed.
The GNU General Public License is a free, copyleft license for
The licenses for most software and other practical works are designed
the GNU General Public License is intended to guarantee your freedom to
GNU General Public License for most of our software; it applies also to
price. Our General Public Licenses are designed to make sure that you
(1) assert copyright on the software, and (2) offer you this License
"This License" refers to version 3 of the GNU General Public License.
"The Program" refers to any copyrightable work licensed under this
...
...
```

Kill command

- The **killall** is a Linux only command. It kills processes by names.
 - Examples:
 - `killall {Process-Name-Here}`
 - `killall -9 {Process-Name-Here}`
 - `killall -15 {Process-Name-Here}`
 - **kill the process using a PID (Process ID)**
 - `# kill 3486`
- PID can be searched using pgrep command**

Path Variable

- It displays or set a search path for executable files at the command line.
- Syntax `PATH pathname [;pathname] [;pathname] [;pathname]...` `PATH`
`PATH ;` Key `pathname` : drive letter and/or folder ; `:` the command '`PATH ;`' will clear the path `PATH` without parameters will display the current path.
- The `%PATH%` environment variable contains a list of folders.
- The `PATH` variable is **an environment variable containing an ordered list of paths** that Linux will search for executables when running a command.
 - For example, if we want to print *Hello, world!* in Bash, the command *echo* can be used rather than */bin/echo*, so long as */bin* is in *PATH*:

Adding/Deleting a Path

- Using the export command, new path can be added.

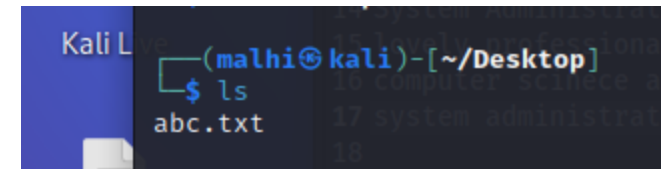
- Activity
- Add to the path in Windows

Other Shell Commands:

- ls
- cat
- man
- cd
- touch
- cp
- mv
- rmdir
- mkdir
- rm
- chmod
- pwd
- ps
- kill

ls command

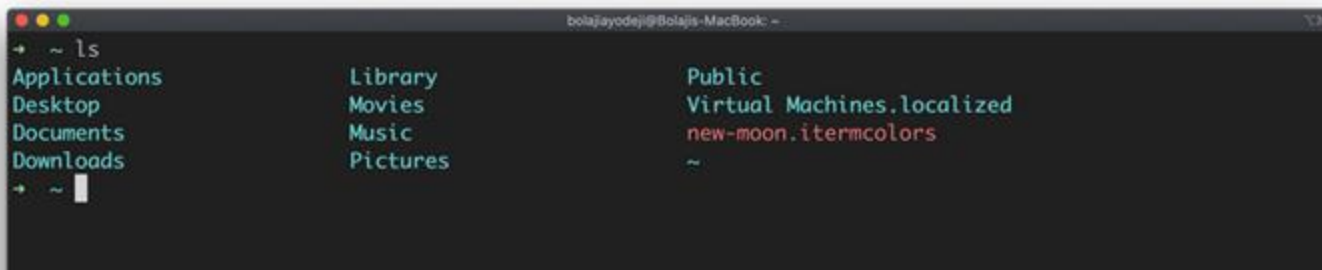
- The ls command is used to list files or directories in Linux and other Unix-based operating systems.
- Use of ls command as below:



```
Kali L (malhi@kali)-[~/Desktop]  
$ ls  
abc.txt
```

List files in the current working directory

Type the `ls` command to list the contents of the current working directory:



```
bolajayodeji@Bolajis-MacBook: ~  
→ ~ ls  
Applications      Library            Public  
Desktop            Movies             Virtual Machines.localized  
Documents          Music              new-moon.itermcolors  
Downloads          Pictures           ~  
→ ~
```



-
- A screenshot of a Kali Linux desktop environment. The background is dark blue with various icons on the left sidebar, including a terminal icon at the top, followed by system icons like a house, a CD/DVD, and a folder. The main window is a terminal with a black background and green text. The prompt shows the user is in the directory ~/Desktop. The command executed is 'cat abc.txt'. The output of the command lists several lines of text, which are repeated multiple times: 'Lovely Professional University', 'Computer Science and Engineering', and 'System Administration'. The text is displayed in a monospaced font.

man command

- The man command is a **built-in manual for using Linux commands**.
- Displays the user manual of any command that we can run on the terminal. It provides a detailed view of the command which includes NAME, SYNOPSIS, DESCRIPTION, OPTIONS, EXIT STATUS, RETURN VALUES, ERRORS, FILES, VERSIONS, EXAMPLES, AUTHORS.
- Basic Symbol

```
man [option] [section number] [command name]
```

- **option** – the search result output.
- **section number** – the section in which to look for the man page.
- **command name** – the name of the command which man page you want to see.

cd command

- It changes your current directory location.
- By default, your Unix login session begins in your home directory.
- To switch to a subdirectory (of the current directory) named myfiles, enter:
 - `cd myfiles`
- To switch to a directory named `/home/dvader/empire_docs`, enter:
 - `cd /home/dvader/empire_docs`

Touch

The **touch** command's primary function is to modify a timestamp.

Option	Description
-a	Changes the access time.
-c --no-create	Avoids creating a new file.
-d=<string> --date=<string>	Changes a timestamp using a date string.
-f	No effect. In older BSD's the option forces changes.
-h --no-dereference	Changes a symbolic link's timestamp.
-m	Changes the modification time.
-r=<file> --reference=<file>	Changes a timestamp to the referenced file's timestamp.
-t <stamp>	Modifies a timestamp, where the stamp is the date/time format.
--help	Opens the help menu.
-v --version	Prints the program version.

cp

- This command copies a file, preserving the original and creating an identical copy.
 - cp -i oldfile newfile

mv

mv stands for move.

mv is used to move one or more files or directories from one place to another in a file system like UNIX.

Use it as:

mv [Option] source destination

chmod

- This command changes the permission information associated with a file.

Mkdir

- The mkdir command is used to create (or make) a directory.
- Example:
- # mkdir LPUCSE

rmdir

- The rmdir directory is used to remove directories, but only those that are empty (i.e., contain no files or subdirectories). In order to delete a directory with actual contents, you must use the **rm -R** command.
- Example
- To remove an empty directory:
- # rmdir /mike

Rm

Use the rm command to remove files you no longer need.

Example

Removing one file at a time

```
$ rm CSEA.txt
```

Pwd

Simply type pwd into your terminal, and the command will output the absolute path of your print working directory.

The pwd command writes to standard output the full path name of your current directory (from the root directory). All directories are separated by a / (slash). The root directory is represented by the first /, and the last directory named is your current directory.

The ps command, short for Process Status, is a command line utility that is used to display or view information related to the processes running in a Linux system.

ps

The ps command, short for **Process Status**, is a command line utility that is used to display or view information related to the processes running in a Linux system.

kill

kill command in Linux (located in /bin/kill), is a built-in command which is used to **terminate processes manually**.