

# 24.26Apr.Linux File Types

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1. File Permission
  1. Type of Files
  2. chown
2. User Management
  - a. Create
  - b. Delete
  - c. List
3. Manage TAR File

## Normal File Types

- Ordinary File( .txt, .java, .py ,etc)
- d Folder/Directory

## Special File Types

- c Character Device File
- s Socket File
- p Named Pipeline File
- b Block Device File

## Link File Types(Shortcut)

Hard Link File

Soft Link File

```
$ touch file1.txt
```

```
$ ln -s file1.txt /home/kali/file1.txt
```

```
$ ls -l | grep "^l"
```

1. Character File
  - Its available in /dev folder

```
$ ls -la /dev | grep ^c
```

OR

```
$ cd /dev
```

```
$ ls -la
```

```
$ ls -la | grep ^c
```
  - Allow user/application to communicate directly with the hardware device.
  - It's not allow programs to read/write single character at a time.
2. Socket File
  - Server : Python, C, Java ( netcat = nc)
  - Client :
  - That provide IPC, but they can transfer data & information between processes running on different Environments(different machines on a network)
3. Named Pipeline
  - Starting with p Character
  - Can be created using mkfifo command line utility
  - Allow IPC(Inter Process Communication) by Connecting the output of 1 process to the input of another.
  - Ex: Create Named Pipeline/ Linux Pipeline File

```
$ mkfifo pipe1
```

```
$ ls -al | grep ^p
```
  - \$ mkfifo or mkfifo or mknod

- Ex: Pass data in Empty Pipe Named File

**Terminal 1** \$ tail -f pipe1

**Terminal 2** \$ echo Welcome > pipe1

#### 4. Block File

- These are device files that provide buffered access to system hardware components.
- Transfer large block of file with a given time.
- Communication with Device Drivers through File System.

\$ ls -la /dev/ | grep "^b"