

1-What is Linux.

Ans:-

- Linux is an Open Source Operating system which is free to use and Secure operating system.
- Most of the Companies uses Linux Operating System because it provide the Security to the user.
- It was created by Linus Torvalds in 1991 and is widely used across various computing devices, from personal computers to servers, smartphones, and embedded systems.
- Linux uses package managers to install, update, and manage software efficiently.
- Multiple users can access a Linux system simultaneously without affecting each other's processes.

2 - What is the difference between Hardlink and SoftLink?

Ans :-

a-HardLink

- A hard link is a direct reference to the data (or inode) of the original file. It essentially creates another file entry that points to the same data as the original file.
- Both the original file and the hard link share the same inode number.
- If you delete the original file, the data will still be accessible through the hard link.
- Since both the original file and the hard link are pointing to the same data, changes to the data affect both.
- A hard link cannot link to directories and cannot span across different file systems or partitions.

b-SoftLink

- A soft link (or symbolic link) is a pointer or shortcut to another file or directory. It contains the path to the target file, but it's a separate file with its own inode.
- A soft link is like a shortcut; it points to the location of the target file or directory.
- If the original file is deleted, the soft link becomes "broken" or "dangling" and no longer points to valid data.
- Soft links can link to both files and directories and can span across different file systems.

3- What is Kernel in Linux?

Ans:-

The **kernel** in Linux is the core part of the operating system that manages system resources and hardware-software interactions. It acts as a bridge between applications and the hardware, ensuring that software can efficiently use the underlying resources of a computer, such as the CPU, memory, and devices like storage or network interfaces.

4-How do you create a user account.

Ans :-

To create a new user account in a Linux system, you typically use the `useradd` or `adduser` commands, depending on the distribution.

a- Using useradd :-

The **useradd** command creates a new user without setting a password or home directory by default. You can customize it using additional options.

Syntax –

```
sudo useradd [options] username
```

Example(Creating a user)--

```
sudo useradd Pankaj
```

This will create a new user called **Pankaj**. However, this command alone doesn't set up a password or home directory.