Directories in Ubuntu VM

In an **Ubuntu VM** (or any typical Ubuntu Linux system), the file system is structured into a hierarchy of directories, starting from the root directory (/). Each directory serves a specific purpose and contains specific types of files or subdirectories. Here's an overview of the main directories you'll encounter on an Ubuntu VM:

Important Directories in Ubuntu:

/ (Root Directory):

The root directory is the base of the Linux filesystem. All other directories are contained within the root directory. It holds all system and user data.

/bin (Binaries):

This directory contains essential user command binaries like ls, cp, mv, rm, etc. These are the basic commands you use in the terminal.

/boot:

Contains the files needed to boot the system, including the Linux kernel and bootloader configuration files (e.g., GRUB).

/dev (Devices):

Contains device files. Devices such as hard drives, terminals, and other peripherals are represented here as files (e.g., sda1 for a disk partition).

/etc (Configuration Files):

Contains configuration files for the system. These are typically text files used by different system programs and services. For example, /etc/passwd holds user information, and /etc/network/interfaces contains network configuration.

/home:

This is where the personal directories for users are stored. Each user has their own folder under /home, such as /home/username, where their personal files, settings, and documents are kept.

/lib:

Contains essential shared libraries needed by binaries in /bin and /sbin. These are like system versions of .dll files in Windows.

/media:

Contains subdirectories for removable media like USB drives and CDs, automatically mounted here.

/mnt:

A generic mount point for filesystems. System administrators can use this to temporarily mount storage devices like external drives.

/opt:

Optional or third-party software can be installed here. It is typically used for software packages that are not part of the default system installation.

/proc:

A virtual filesystem that contains runtime system information (like system memory, CPU info, etc.). It's dynamically generated by the kernel and contains useful data such as /proc/cpuinfo and /proc/meminfo.

/root:

The home directory of the root (administrative) user. This is separate from /home for other users.

/run:

Stores volatile runtime data for the system. Files here are created at boot and removed at shutdown.

/sbin (System Binaries):

Contains essential system binaries that require administrative privileges to execute (like shutdown, reboot, fdisk, etc.).

/srv:

Contains files for services provided by the system, like web server data (e.g., websites served by Apache or Nginx) or FTP files.

/tmp:

Temporary files are stored here. This directory is cleared upon system reboot.

/usr (User Binaries and Libraries):

Contains user programs and data. You'll find large software packages and files here. Subdirectories include:

- /usr/bin: More user commands.
- /usr/lib: Libraries for the user binaries.
- /usr/local: Locally installed software (not from the package manager).
- /usr/share: Shared data, like icons and documentation.

/var (Variable Data):

Contains variable data files like logs, databases, and temporary files. Common subdirectories include:

- /var/log: System logs.
- /var/tmp: Temporary files preserved between reboots.
- /var/www: Web server files (e.g., for Apache or Nginx).