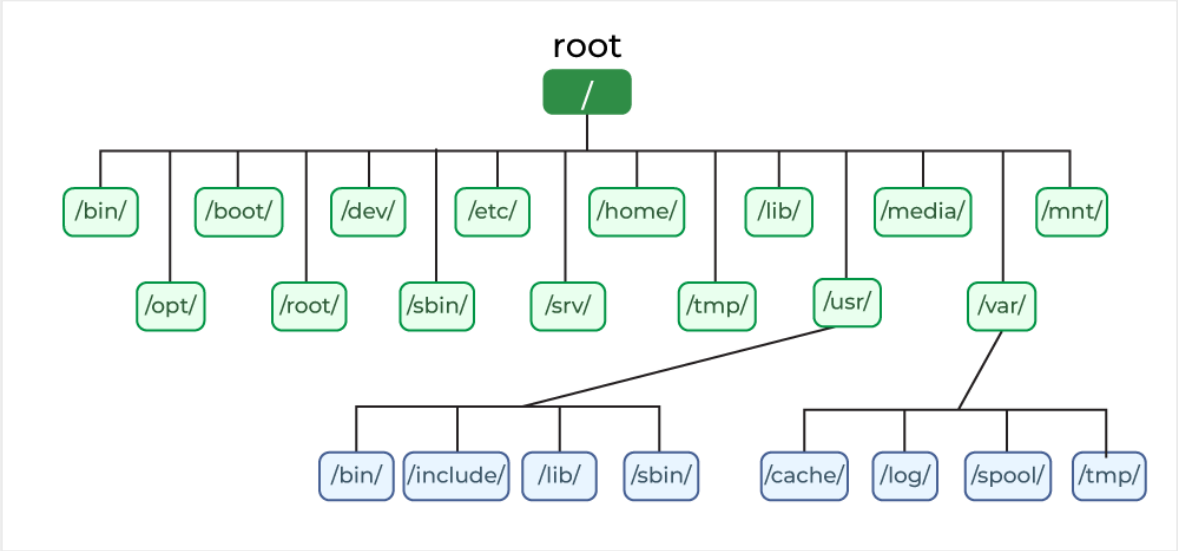
Overall, the Unix file system is a robust and flexible system that has been used for decades and continues to be the foundation for many modern operating systems.
Also, the Unix file system is known for its hierarchical directory structure, which allows files and directories to be organized in a tree-like fashion. Mastery of file system operations is crucial for anyone dealing with operating systems, especially in exam scenarios where you may be asked to navigate or manipulate Unix file structures. Supplementing your study with targeted resources, like the GATE CS and IT – 2025 course, will offer a clear and practical guide to understanding Unix file systems and their associated commands, helping you build both theoretical knowledge and hands-on experience



Unix File System

Directories or Files and their Description

NAME	DESCRIPTION
/	The slash / character alone denotes the root of the filesystem tree.
/bin	Stands for “binaries” and contains certain fundamental utilities, such as ls or cp, which are generally needed by all users.
/boot	Contains all the files that are required for successful booting process.

/dev	Stands for “devices”. Contains file representations of peripheral devices and pseudo-devices.
/etc	Contains system-wide configuration files and system databases. Originally also contained “dangerous maintenance utilities” such as init,but these have typically been moved to /sbin or elsewhere.
/home	Contains the home directories for the users.
/lib	Contains system libraries, and some critical files such as kernel modules or device drivers.
/media	Default mount point for removable devices, such as USB sticks, media players, etc.
/mnt	Stands for “mount”. Contains filesystem mount points. These are used, for example, if the system uses multiple hard disks or hard disk partitions. It is also often used for remote (network) filesystems, CD-ROM/DVD drives, and so on.
/proc	procfs virtual filesystem showing information about processes as files.

/root	The home directory for the superuser “root” – that is, the system administrator. This account’s home directory is usually on the initial filesystem, and hence not in /home (which may be a mount point for another filesystem) in case specific maintenance needs to be performed, during which other filesystems are not available. Such a case could occur, for example, if a hard disk drive suffers physical failures and cannot be properly mounted.
/tmp	A place for temporary files. Many systems clear this directory upon startup; it might have tmpfs mounted atop it, in which case its contents do not survive a reboot, or it might be explicitly cleared by a startup script at boot time.

/usr	Originally the directory holding user home directories,its use has changed. It now holds executables, libraries, and shared resources that are not system critical, like the X Window System, KDE, Perl, etc. However, on some Unix systems, some user accounts may still have a home directory that is a direct subdirectory of /usr, such as the default as in Minix. (on modern systems, these user accounts are often related to server or system use, and not directly used by a person).
/usr/bin	This directory stores all binary programs distributed with the operating system not residing in /bin, /sbin or (rarely) /etc.
/usr/include	Stores the development headers used throughout the system. Header files are mostly used by the #include directive in C/C++ programming language.
/usr/lib	Stores the required libraries and data files for programs stored within /usr or elsewhere.
/var	A short for “variable.” A place for files that may change often – especially in size, for example e-mail sent to users on the system, or process-ID lock files.
/var/log	Contains system log files.

/var/mail	The place where all the incoming mails are stored. Users (other than root) can access their own mail only. Often, this directory is a symbolic link to /var/spool/mail.
/var/spool	Spool directory. Contains print jobs, mail spools and other queued tasks.
/var/tmp	A place for temporary files which should be preserved between system reboots.

Types of Unix Files

The UNIX files system contains several different types of files