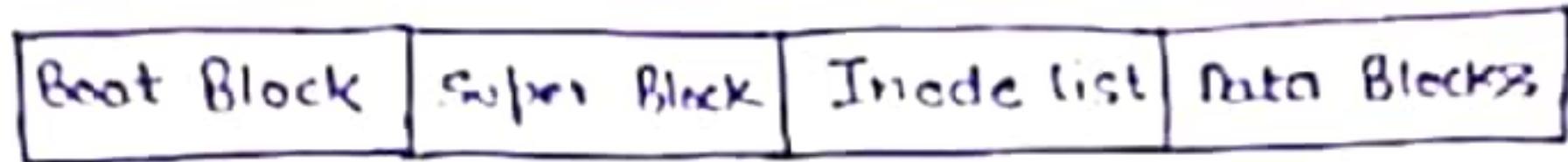


Answer-1

Unix File System layout :-

Boot Block :- Contains bootstrap code that is read into the machine to boot the operating system.

Super Block :- describes the state of a file system, how large it is, how many files it can store, where to find free space on the file system.

Inode List :- Is a list of inodes. The inode (index node) is a data structure in a Unix-style file system that describes a file-system object such as a file or a directory. Each inode stores the attributes and disk block locations of the object's data.

Data Blocks :- Store file data and administrative data.

Answer-2

chmod :- (change file access permissions)

This command is used to change the file permissions. These permissions are read, write and execute permission for the owner, group, and other.

Syntax :- `chmod [ugoa] [[+-=][mode]] file`

Example:- \$ ls -l

-rw-r--r-- user staff 39 Jun 21 15:37 file1

-rw-r--r-- user staff 35 Jun 21 15:32 file2

\$ chmod ugo+rw file1

\$ ls -l

-rw-rw-r-- user staff 39 Jun 21 15:37 file1

-rw-r--r-- user staff 35 Jun 21 15:32 file2

\$ chmod o-w file1

\$ ls -l

-rw-rw-r-- user staff 39 Jun 21 15:37 file1

-rw-r--r-- user staff 35 Jun 21 15:32 file2

\$ ls -l

-rw-r--r-- user staff 39 June 21 15:37 file1

-rw-r--r-- user staff 35 June 21 15:32 file2

\$ chmod 777 file1

\$ ls -l

-rwxrwxrwx user staff 39 June 21 15:37 file1

-rw-r--r-- user staff 35 June 21 15:32 file2

② chown : (change ownership of the file)

only the owner of the file has the rights to change the file ownership.

Syntax:- chown [owner][file]

\$ chown user2 file1

Answer = 3

process:- In Linux, a process is any active (running) instance of a program. But what is a program? well technically a program is any executable file held in storage on your machine. Anytime you run a program, you have created a process. At a basic level this is pretty easy to manage and that is what we are going to take a look at today.

You can instead press `Ctrl-Z` to send a suspend signal to any process running in the foreground, pausing it immediately. If you chose the pause option you'll be able to see the process with `ps ax`, but its status will be `T (Stopped)`.

Answer = 4

The architecture of a Unix kernel:-

Hardware layer - Hardware consists of all peripheral devices (RAM/HDD/CPU etc).

Kernel - It is the core component of operating system, interacts directly with hardware, provides low level services to upper layer components.

Shell - An interface to kernel, hiding complexity of kernel's function from users. The shell takes commands from the user and executes kernel's functions.

Utilities:- Utility programs that provide the user most of the functionalities of an operating system.

Responsibility:- Kernel is the core part of Linux. It is responsible for all major activities of this operating system. It consists of various modules and it interacts directly with the underlying hardware. Kernel provides the required abstraction to hide low level hardware details to system or application program.

Answer = 5

Parameter of comparison	Absolute	Relative path
(i) By definition	→ Specifies the location from the root directory	→ Related to the location from current directory.
(ii) Function of delimiting character.	→ Begins with a delimiting character.	→ Never begins with a delimiting character
(iii) Navigates to	→ content from other domains	→ content from the same domain
(iv) URL used	→ Uses absolute URL	→ Used relative URL
(v) Other names	→ Full-path or file path	→ Non-absolute path.