

RHCSA

(Red hat Certified System Administrator)

Linux

- Linux began in 1991, when "Linus Torvalds", who was a computer science student at the university of "Helsinki in Finland"

Open Source

An Open-Source project is a Software project that has its source code made "accessible for the public to view and edit".

Closed - Source

A closed-source project is a Software project that has its source code "NOT" made accessible for the public to view and edit".

Operating Systems

An Operating System is a Software program that manages a computer's resources such as memory and disk space.

Software & hardware Communicate with each other

A22HST

Part - Kernel (High Level Introduction)

A kernel is the core of any operating system.

It is the part of the OS that organizes access to system resources like CPU, memory, and disk.

* Linus is coded in the C programming language.

"Octal": In C, octal number is represented by preceding with "0".
The value can be written as 012345678.

Upstream

An upstream in open source is the source repository and project where contributions happen and releases are made.

- The contribution flow from upstream to downstream.

Example: Fedora, openSUSE, Ubuntu, CentOS

"Downstream": Subscription based

"The version of Redhat is update in every 3 years"

* Redhat Enterprise Linus is downstream

Linus Distribution

Linus is open source, many people and organization have modified the Linus kernel along with other component of the Linus operating system to develop and customize their own flavor of Linus that suits their needs.

Virtual machine

A virtual machine is a computer running from within another computer (host).

- A virtual machine shares the host resources and behaves exactly like a standalone physical machine.

Terminal Emulator

It is a program that emulates (mimics) a physical Terminal (console).

- The terminal interacts with the shell [command line interface].

- Shell

- It is a Command Line Interpreter.
- It is a program that processes and executes commands.

System Load

- It is the amount of work the CPU performs at a given time.

Load Average

- It is the average system load calculated over a given period of 1, 5, and 15 minutes.

Root

The root user is a superuser who is allowed to do anything on the system.

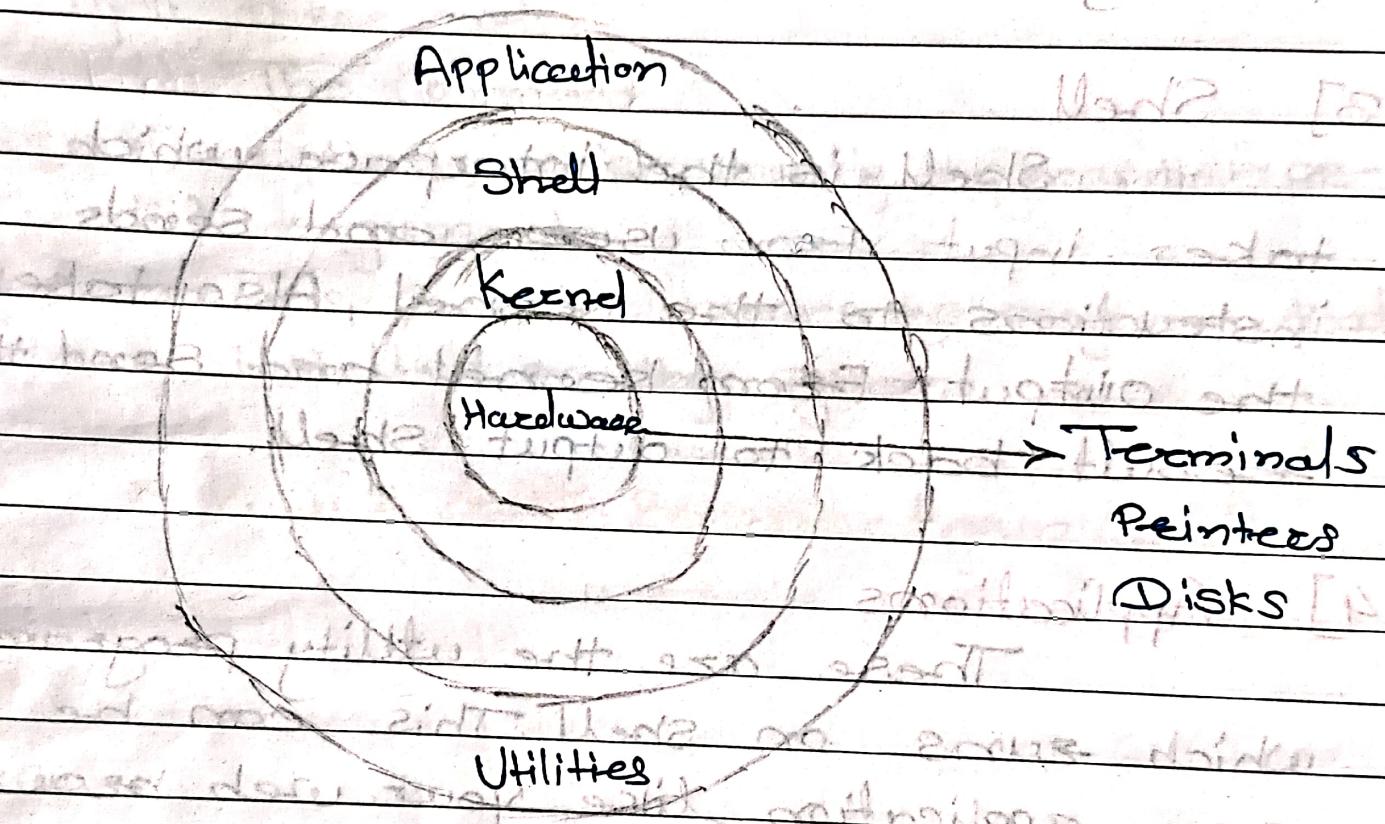
/ is root Device

/root is root directory

Directory

Directory is a file that contains other files.

Linus Architecture



II Hardware

Hardware consists of all physical devices attached to the System for example : Hard Disk drive , RAM , Motherboard , CPU , etc

2] kernel

Kernel is the core component for any (linuz) operating system which directly interacts with the hardware.

3] Shell

Shell is the interface which takes input from user and sends instructions to the kernel. Also takes the output from kernel and send the result back to output shell.

4] Applications

These are the utility programs which runs on shell. This can be any application like your web browser, media player, text editor etc.

Basic Command Syntax

- Bash is a program that interprets commands typed in by the user.
- Each string typed into the shell can have upto three parts
 - i) The Command
 - ii) Options (which usually begin with - or --)
 - iii) arguments
- Commands are the names of programs that are installed on the system.