BASICS
OF
LINUX

Linux is a free unix like O.S. originally developed by Linux Torvalds, a student of the university of Helsink; in the year 1991.

Currently Linux comes with a collection of s/w including desktop, server programs, networking suits, compilers 4 many more utilities, making it a complete O.S.

Linux is written 4 distributed under the GNU which mean, that it's source code is free distributed 4 available of general public.

Technically Linux is strictly an O.S kernel (kernel is a core of O.S).

History of Linux :-

* In 1991 student of university of Helsink;, finland named Linux Torvals created a small version of unix O.S is called

Minialine Unix (MINI XL)

* He had made this s/w as free distributed 4 upload it on the internet, 4 seek opinions from different developers about it mini developers come forward 4 give suggestion 4 that created Linux O.s

* Because of it's open source code any body can creates it's own version of Linux.

<u>The distributer of Linux O.S are</u> :-

* Red Hat

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* SUSE

* Debian

* Slackware

* Caldera.

The 1st version of Linux which come in open market is <u>Red Hat</u> 5.0 equivalent to Unix 2.5.5 in 1994.

Linux System 4 Features of Linux :-)

Various features of Linux are :-

Multitasking :-)

Linux is a Multitasking system, allowing multiple user to run multiple programs on the same system at the same time.

Multiuser :-)

It is a Multi-user O.S, allowing multiple users to use the computer 4 run programs at the same time.

Hardware Support :-)

Runs on a variety of Computer Architecture ARM, SPARC, Alpha, Power PC, M68k, MIPS 4 Intel.

Reliable :-)

A highly reliable 4 stable O.S, it can run for Month every years without have to be rebooted.

Multiple Processor Support :-)

It support the use of Multiple processor, Macro-processor can be added without disturbing the

existing H/w setup.

S/w Dependencies :-

Implements shared Libraries. For example :- If program A & B share a common piece of code then the common code is place in a separate file so that any program requiring this common routine. can refer this file rather than including the code in each program.

GUI :-

Linux provide the freedom to use any interface programming you choose.

KDE (K Desktop Environment), K does not have an expansion) GNOME} are two main graphics user interface aiming to make Linux easy for computer users to operate.

KDE :-

It is a powerful open source graphical desktop environment that combines ease of use, contemporary functionality & outstanding graphical design.

KDE desktop is similar to the Win'98 environment by including.

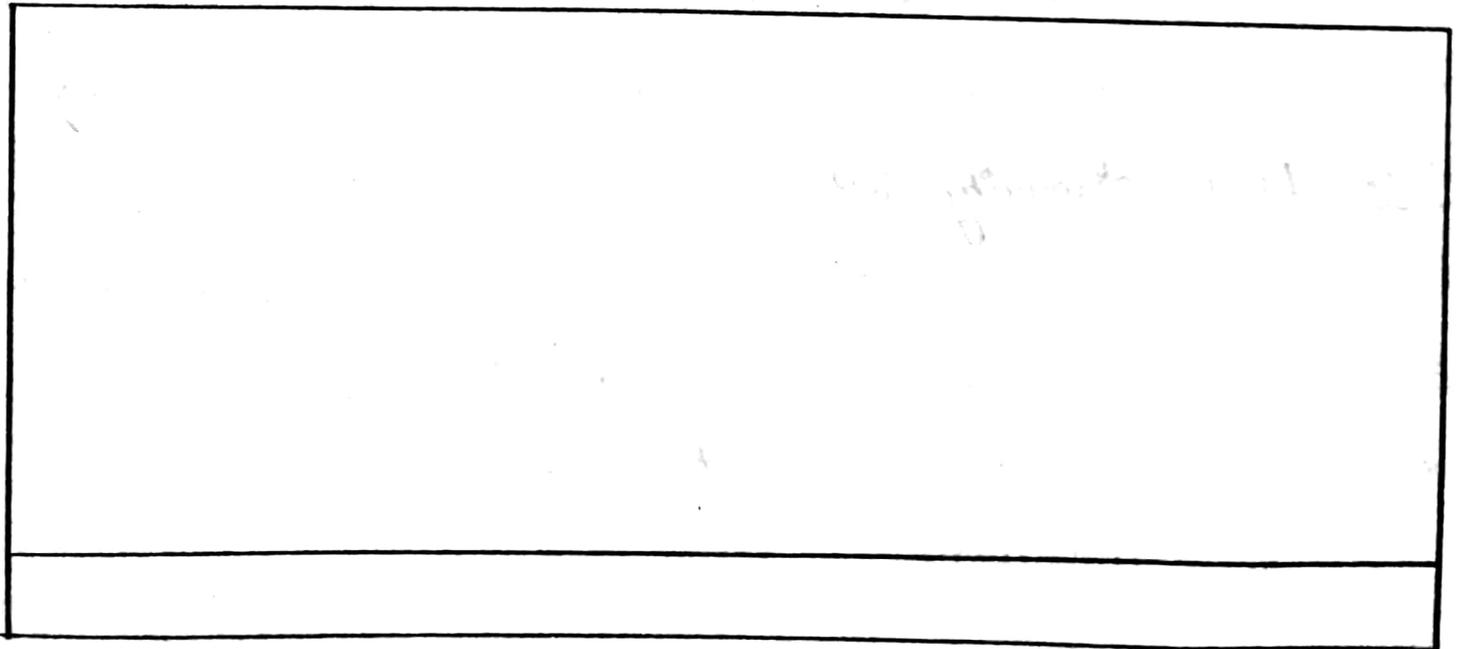* Standarise of means 4 tools bar, key bindings, colour scheme 4 many more.

*   desktop configuration.

* Easy file 4 Directories Management.

* KDE print for administration.

* Browser — Mozilla.

* Innumerable utilities 4 application.

* **KDE - Network** :- K mail , K Node , K newrostickers etc.

* **KDE - Graphics** :- Graphics application such as KDVI, K paint , K fox.

* **KDE - Utilities** :- K Edit , K Calc , K Hex Edit , K Notes.

* **KDE - Edu** :- Edu tainment related program.

* **KDE - Game** :- K Asteroids , K pat K Tenis.

* **KDE - Admin** :- Various tools to a System Administration

* **K office** :- Integrated office setup.

TCP/IP N/w Support :-

Linux supports most Internet protocols. TCP/IP is into the kernel itself. (TCP/IP is the communication protocol that binds the Internet).

High- level Security :-

It has many built in security feature to protect our system from unauthorised user. It stores the password in encrypted from which can not be decrypted.

WEB Server :-

It can be used to run web servers like Apache, serving various application protocol such as :- HTTP, FTP, SMTP.

Database Support :-

All the major brands like - Sybase, Informix & Oracle run well on Linux.

Programming Support :-

It provides programming supports for various language like → Fortran, Pascal, C, C++ & many web technologies.

Samba :-

It is a protocol use in Linux O.S, which makes windows 95, 98, NT 4.0 file system to be work in Linux O.S & vice-versa.

It also print files as a shareable both file system. Samba is equivalent to Microsofts Smb (Server Message Block) protocol, which makes file & print system as a shareable.

S/W Layers / Structure of Linux.

```
          Utilities &
          Application Program
              Shell
            ( Kernel )
```
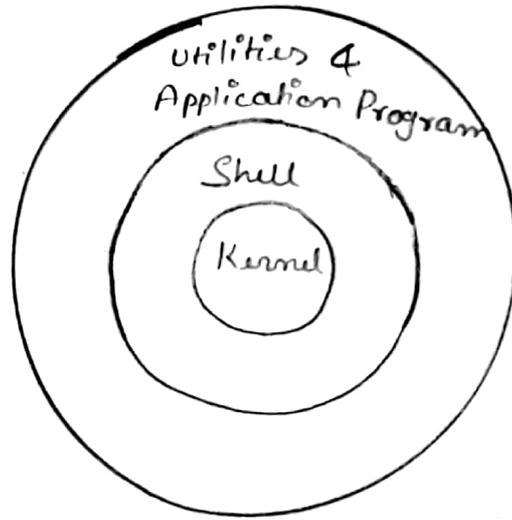
Kernel :-)

* Core of an O.S.

* Performs the critical faxes that are required to maintain the Linux environment.

* Runs all the programs.

* Master program that control all the resources of the computer.

* Keeps tracks of the peripherals devices attached to the computer.

* Automatically starts an interactive program called "Shell" for each user whenever they log in to the system.

Shell :-

* Acts as interface between user & the kernel accepts requests from the users passes them to kernel which then processes them & submits the requests to the H/w.

* It is a Command Interpreter as it interprets the command given by the user.

* In Linux, the command can be either typed in through command line or contained in a file called Shell

* Linux also a windows based shell interface known as

Utilities & Application Program :-

* Utilities are the s/w tools included with Linux.

* Application program included - word processors, Spreadsheet, Presentation Packages.