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TRICHY

INTRODUCTION TO

Freedom. Choices. Beautiful.

WHAT IS LINUX?

- Linux is an operating system. It is software on a computer that enables applications.

- The OS relays instruction from the processor.

- The processor perform the instructed task and send back results to the application via OS.

FOUNDER OF LINUX

- In sept 1991, while attending the university of Helsinki, Torvalds became curios about operating system,

- He began to work on his own operating system which became Linux Kernel.

LINUX TORVALDS

TYPES OF SOFTWARE IN LINUX

RED HAT LINUX

- One of the original linux distribution

•The commercial non free version is Red Hat Enterprise linux.

- Free version: Fedora Project.

DEBIAN GNU/LINUX

- A free software distribution. Popular for use on servers.

SUSE LINUX

- SuSE was recently purchased by Novell. This distribution is primarly available   for pay because it contain many commercial programs, although there's a stripped down free version that you can download.

MANDRAKE LINUX

- Mandrake is strongest linux on desktop. Originally based off on Red Hat Linux.

GENTOO LINUX

- Gentoo is a specially distribution meant for programmers.
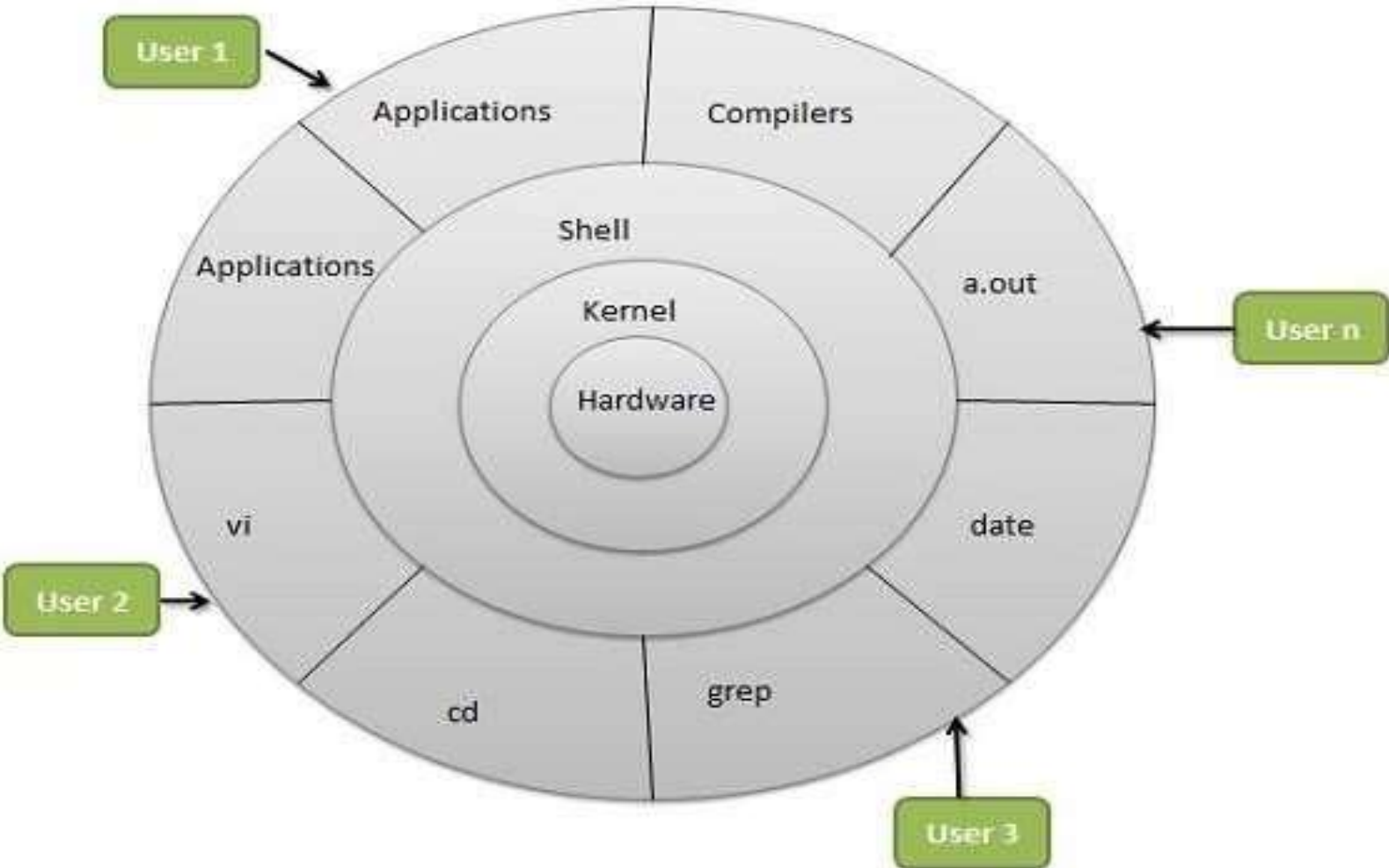
UBUNTU

- This is the third most popular desktop operating systems   after Microsoft Windows and Apple Mac OS. It is based on Debian Linux Distribution, and known as desktop environment.
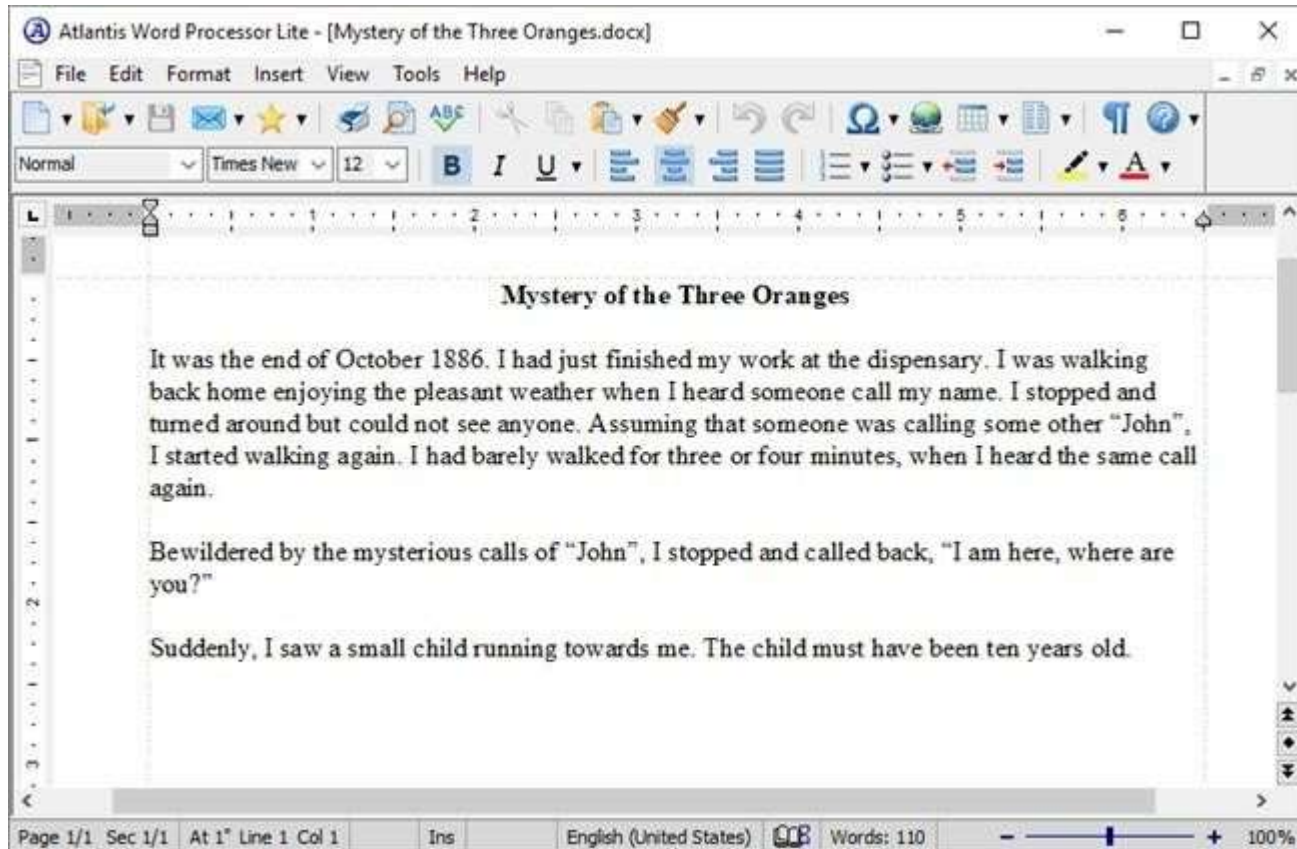
LINUX SYSTEM ARCHITECTURE

LAYERS OF LINUX

- Hardware layer – hardware consist of all peripheral devices (Ram, HDD, CPUetc).
- Kernal layer – core component of operating system, interacts directly with hardware, provides low level service to upper level components.
- Shell layer – an interface to kernel, hiding complexity of kernel function from users.
- Utilities - utility program giving user most of the functionalities of OS.

APPLICATIONS SUPPORTED BY LINUX

- For editing documents:
- ➤ Word Processor
- ➤ Spreadsheet
- ➤ Presentation
- ➤ Database Application
- For drawing open office draw is used
- For surfing firefox is used
- For audio the XMMS(X Multimedia Systems), which is used to play Digital sound files.
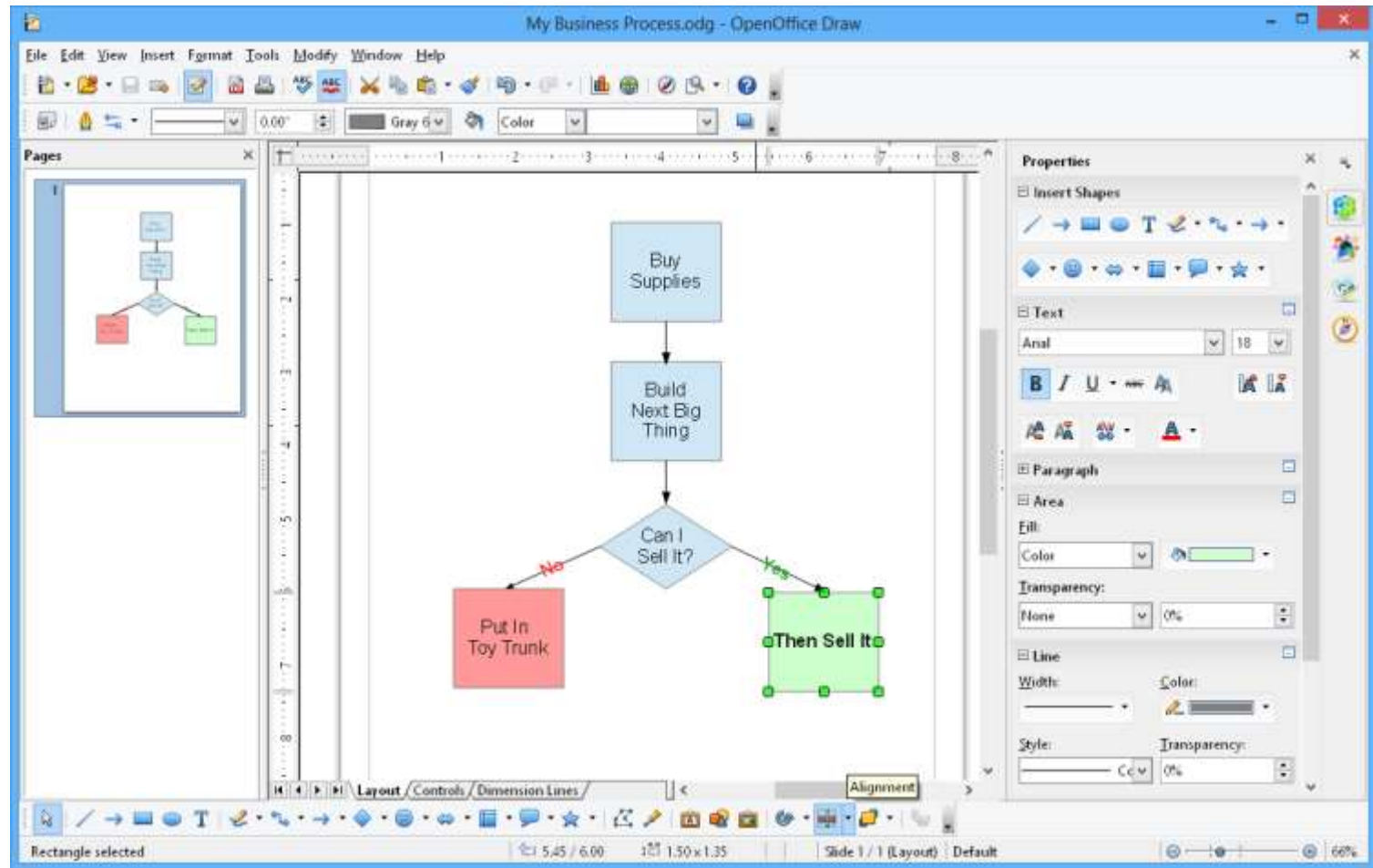- Sound juicer CD Ripper, Burn your own CD's

WORD PROCESSOR

SPREAD SHEET

Expense	Jan-18	Feb-18	Mar-18	Apr-18	May-18			
Phone	$ 46.0	$ 47.0	$ 56.0	$ 65.0	$ 58.0			
Insurance	$ 80.0	$ 80.0	$ 80.0	$ 80.0	$ 80.0			
Rent	$ 900.0	$ 900.0	$ 900.0	$ 900.0	$ 900.0			
Medicine	$ 120.0	$ 60.0	$ 87.0	$ 90.0	$ 55.0			
Electric Bill	$ 200.0	$ 180.0	$ 145.0	$ 170.0	$ 140.0			
Water Bill	$ 120.0	$ 100.0	$ 99.0	$ 110.0	$ 122.0			
Total	$ 1,466.0	$ 1,367.0	$ 1,367.0	$ 1,415.0	$ 1,355.0			

OPEN OFFICE DRAW

DIRECTORY ORIENTED COMMANDS

- Pwd – This command display the present working directory where you are currently in.
    Eg: $pwd
/home/jmc/akbar
- Ls – this command will list the content of directory
    Eg: $ ls
- Mkdir – this command will create a new directory
    Eg: $mkdir akbar
- Rmdir - this command will remove an existing directory .
    Eg: $rmdir akbar
- Cd – this command is used to change directory
    Eg: $cd /
- touch filename - this command will create a new file Eg:
  $touch hello.txt
- Rm filename – this command will delete a file
- Eg: $rm hello.txt

DIRECTORY ORIENTED COMMANDS

• Cp file 1 file 2 - this command copy the content of file1 into file 2

Eg: $cp hello.txt world.txt

•   Mv- this command is used to rename files and directories.

Eg: $mv hello.txt world.txt

• Cat – this will print the content of file

Eg: $cat hello.txt

Jamal mohamed college

•   Head – this command will print the first 10 lines of file

Eg: $ head hello.txt

Jamal

Mohamed

College

Autonomous

Trichy

Tamil nadu

South india

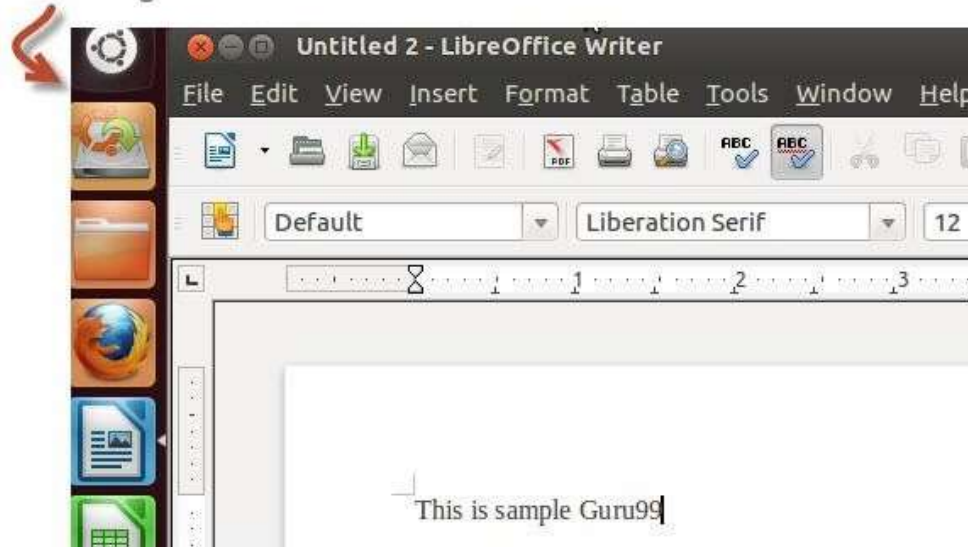•   Tail file name – this command will print the last 10 lines of file

Eg: $ tail hello.txt

PROCESS ORIENTED COMMANDS

- What is a process?

An instance of a program is called a process

When you launch Office to write some article

Untitled 2 - LibreOffice Writer

File Edit View Insert Format Table Tools Window Help

Default | Liberation Serif | 12

This is sample Guru99

Corresponding process is created

5606 ubuntu   20   0 225m 49m 28m S 0.3 10.0   0:07.22 soffice.bin

TYPES OF PROCESS

- FORE GROUND PROCESS – they run on the screen and need input from the user. Eg: office programs

- BACKGROUND PROCESS – they run in the background and usually do not need user input. Eg: Antivirus

COMMANDS IN PROCESS ORIENTED

- Fg – this will continue a program which was stopped and bring it to the foreground.

Eg: fg jobname

- Top – it tells the user about all running process on linux machine.
- Ps – process status, it is similar to task manager in windows machine.

Eg: ps ab

- Kill – this command is used to terminates running process on linux machine.

Eg: kill ab

- DF – disk space, it reports the free space (hard disk) on all file systems.
- Free – this command shows the free and used memory (Ram) on linux system

GENERAL PURPOSE COMMANDS

•Base name – Extract just a file name from a path

Eg: basename ./10001/cat.jpg

Output: cat.jpg

• Bc- calculator that reads from standard input

Eg: echo '100/3 | bc

Output: 33

• Cat – adding two files together

Eg: cat file1.txt file2.txt

Output: line from file1 line from file2

•Cd – change directory

Eg: cd some /path

Cd .. – parent directory

Cd/ - system root directory

Cd/tmp – tmp directory

GENERAL PURPOSE COMMANDS

- Cp- copy files

Eg: source.txt new.txt

- Curl – transfer a URL & interact with website

Eg: curl www.jmc.edu

- Cut- cut out selection portion of lines

eg: echo 'hello jamal' | cut – c 7

Output: j

- Date – print date strings

Eg: date

Output: Fri July 24 11:00:10 2020

- Echo – print argument to standard output

Eg: echo jamal

Output: jamal

GENERAL PURPOSE COMMANDS

- Grep – print line matching a pattern

Eg: grep 'jamal' file1.txt

Output: jamal college

Say jamal

•Head- print only a first few lines of text stream

Eg: head –n -5 file1.txt

- History- show the last executed commands

eg: history

•Hostname- print the name of the computer you are currently on

eg: hostname

Output: jamal.edu

- Kill – send a signal to a running process

Eg: kill 1234

GENERAL PURPOSE COMMANDS

- Ls- list directory contents

Eg: ls

•Man- show document for a command

Eg: man cat

•Mkdir- make a directory

Eg: mkdir jamal

•Mv- move or rename files

Eg: mv jmc.txt jamal.txt

•Pwd- print the name of the working directory

Eg: pwd

Output: /shell/users/bca/1088/cmds

•Rm- remove files Eg:

rm text1.txt, rm *

GENERAL PURPOSE COMMANDS

•Seq- print a sequence of numbers

Eg: seq 1 5

Output: 1 2 3 4 5

•Sleep- suspend execution for a period of time

Eg: sleep 10

•Sort- sort lines of text

Eg: sort lines.txt

Output: 100 S t z

•Touch- create an empty file

Eg: touch jmc.txt

•Tr- translate character in a text stream

Eg: echo jamal | tr 'a' 'e'

Output: jemel

•   Uniq- print only unique lines of text

Eg: uniq jmc.txt

Output: oranges apples kiwis