Application Laboratory
Lecture 03

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Shutdown and Reboot

- Shutdown –h now
- Shutdown –r now
- In some Linux systems; poweroff, reboot

The vi editor

$ vi <filename> — Open or edit a file.

i — Switch to Insert mode.

Esc — Switch to Command mode.

:w — Save and continue editing.

:wq or ZZ — Save and quit/exit vi.

:q! — Quit vi and do not save changes.

yy — Yank (copy) a line of text.

p — Paste a line of yanked text below the current line.

p — Paste a line of yanked text below the current line.

o — Open a new line under the current line.

O — Open a new line above the current line.

A — Append to the end of the line.

a — Append after the cursor’s current position.

I — Insert text at the beginning of the current line.

b — Go to the beginning of the word.

e — Go to the end of the word.

x — Delete a single character.

dd — Delete an entire line.

Xdd — Delete X number of lines.

Xyy — Yank X number of lines.

G — Go to the last line in a file.

XG — Go to line X in a file.

gg — Go to the first line in a file.

:num — Display the current line’s line number.

h — Move left one character.

j — Move down one line.

k — Move up one line.

l — Move right one character.

Ref:

The Blog by Ken Hess

https://www.redhat.com/en/blog/introduction-vi-editor

- Please note that reading is important. That is one reason why a blog is given in the previous page.

Runlevels

- A **runlevel** is a mode of operation in the computer operating systems that implements Unix System V-style initialization. Conventionally, **seven runlevels** exist, numbered from zero to six. *S* is sometimes used as a synonym for one of the levels.

- Only one runlevel is executed on startup; run levels are not executed one after another (i.e. only runlevel 2, 3, or 4 is executed, not more of them sequentially or in any other order).

- A runlevel defines the state of the machine after boot. That would also mean how much of the services/daemons are up and running.

Linux Standard Base specification [edit]

Systems conforming to the Linux Standard Base (LSB) need not provide the exact run levels given here or give them the meanings described here, and may map any level described here to a different level which provides the equivalent functionality.[1]

LSB 4.1.0

ID	Name	Description
0	Off	Turns off the device.
1	Single-user mode	Mode for administrative tasks.[2][b]
2	Multi-user mode	Does not configure network interfaces and does not export networks services.[c]
3	Multi-user mode with networking	Starts the system normally.[1]
4	Not used/user-definable	For special purposes.
5	Full mode	Same as runlevel 3 + display manager.
6	Reboot	Reboots the device.

What is the **Linux Standard Base?**

- The **Linux Standard Base** (**LSB**) was a joint project by several Linux distributions[*which?*] under the organizational structure of the Linux Foundation to standardize the software system structure, including the Filesystem Hierarchy Standard. LSB was based on the POSIX specification, the Single UNIX Specification (SUS), and several other open standards, but extended them in certain areas.

- Slackware Linux uses runlevel 1 for maintenance, as on other Linux distributions; runlevels 2, 3 and 5 identically configured for a console (with all services active); and runlevel 4 adds the X Window System.

Slackware Linux runlevels[3]

ID	Description
0	Off
1	Single-user mode
2	Unused but configured the same as runlevel 3
3	Multi-user mode without display manager
4	Multi-user mode with display manager (X11 or a session manager)
5	Full mode
6	Reboot

Gentoo Linux [edit]

Gentoo Linux runlevels[4]

ID	Description
0	Off
1 or **S**	Single-user mode
2	Multi-user mode without networking.
3	Multi-user mode
4	Aliased for runlevel 3
5	Full mode
6	Reboot

Debian GNU/Linux [edit]

Debian GNU/Linux runlevels[5]

ID	Description
0	Off
1	Recovery mode
2,3,4	Partial mode
5	Full mode
6	Reboot

Comparison of Linux Commandline & MsDOS

- Md vs mkdir
- Del, dir commands

Network Commands, Linux vs MsDOS

- Ipconfig/ifconfig
- Ping
- Tracert/traceroute

Browsers on Linux

- (Mozilla) Firefox, Google Chrome, Chromium, Brave, and Opera all can run on Ubuntu

- Can Microsoft Edge or Internet Explorer run on any version of Linux?