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Course: cis106

## Week Report 3

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### a. Exploring Desktop Environments

- Different desktop environments
  - GNOME
  - KDE
  - BUDGIE
  - PANTHEON
  - Fluxbox
- **GUI:** (graphical user interface) a set of programs that allows a user to interact with the computer system by using icons, windows, and other visual elements.
- **DE:** (Desktop environment) an implementation of the desktop metaphor made of a bundle of programs running on top of a computer operating system. Shares a common GUI called graphical shell.
- Elements of a Desktop Environment:
  - Desktop Settings
  - Display Manager
  - File Manager
  - Icons
  - Favorites Bar
  - Launcher
  - Menus
  - Panels
  - System tray
  - Widgets
  - Window Manager

### b. The bash Shell

- What is a shell?
  - a program that provides interactive access to the linux system. Runs as a regular program and starts whenever a user logs into a terminal.
- Different shells:
  - Tcsh Shell

- Csh Shell
- Ksh Shell
- Zsh Shell
- Fish Shell
- Bash shortcuts
  - Ctrl + A (go to start of the command line)
  - Ctrl + E (go to end of the command line)
  - Ctrl + K (delete the cursor to the end of the command line)
  - Ctrl + U (delete from cursor to the start of the command line)
  - Ctrl + W (delete from cursor to the start of word)
- Basic commands and their usage:
  - date: displays the current data and time
  - cal: displays a calendar of the current month

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Activities  Terminal  Oct 2 20:55
falarcon@cis106vm: ~

falarcon@cis106vm:~$ date
Sun Oct  2 08:54:26 PM EDT 2022
falarcon@cis106vm:~$ cal
Command 'cal' not found, but can be installed with:
sudo apt install ncal
falarcon@cis106vm:~$ ^C
falarcon@cis106vm:~$ sudo apt install ncal
[sudo] password for falarcon:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  apport-symptoms guile-2.2-libs libgnome-games-support-1-3
  libgnome-games-support-common libqqwing2v5 python3-systemd
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
  ncal
0 upgraded, 1 newly installed, 0 to remove and 31 not upgraded.
Need to get 20.2 kB of archives.
After this operation, 69.6 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu jammy/universe amd64 ncal amd64 12.1.7+nmu3ubuntu2 [20.2 kB]
Fetched 20.2 kB in 0s (170 kB/s)
Selecting previously unselected package ncal.
(Reading database ... 220489 files and directories currently installed.)
Preparing to unpack .../ncal_12.1.7+nmu3ubuntu2_amd64.deb ...
Unpacking ncal (12.1.7+nmu3ubuntu2) ...
Setting up ncal (12.1.7+nmu3ubuntu2) ...
Processing triggers for man-db (2.10.2-1) ...
falarcon@cis106vm:~$ cal
      October 2022
Su Mo Tu We Th Fr Sa
                1
 2  3  4  5  6  7  8
 9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
falarcon@cis106vm:~$

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- df: displays the current amount of free space on our disk drives
- free: displays the amount of free memory
- uname: displays information about your system
- clear: clears the screen

## c. Managing Software

- Command for updating ubuntu

• To update any Debian distro:

Update is used to download package information from all configured sources.

By terminating every command with a ; you can run multiple commands in a single line.

The -y option passes a yes answer to any question. Without this option apt will ask you if you want to install the upgrade. Using -y is optional and you should use it only if you are 100% sure about the upgrade.

Managing software and updates requires root privileges. Sudo allows you to run any command as the root user.

Apt is the program that we are using to manage software and updates.

upgrade is used to install available upgrades of all packages currently installed on the system from the sources configured via sources.list

- Command for installing software

Formula

`sudo + apt + install + Package name`

- Command for removing software

Remove several programs in a single command

`sudo apt remove firefox flameshot caffeine -y`

- Command for searching for software

## How to search for software with Apt

Search for all programs that matches the text in quotes

`apt search "web browser"`

Search for information about a given package including dependencies.

`apt-cache search firefox`

Search a package name only.

`apt search -n firefox`

- Apt works using the list of repositories in the `/etc/apt/sources.list`
- You can add more repositories (or remove them) using the command `sudo apt edit-sources`
- **Edit-sources** opens the `sources.list` file using your default text editor. If more than one CLI text editor is available, edit-sources allows you to choose.

- Definitions
  - Package: archives that contain binaries of software, configuration files, and information about dependencies.
  - Library: reusable code that can be used by more than one function or program.
  - Repository: a large collection of software available for download.