

Week report 3

Summary of presentation

a. Exploring Desktop Environments

bulleted list of different desktop environments

- **LXQT**
- **Deepin**
- **Pantheon**
- **Raspberry Pi OS**

Definitions for the following terms:

- **GUI:** A graphical user interface is a form of user interface that allows users to communicate with the electronic systems via icons, windows and various other visual elements.
- **DE:** In computing, the desktop is an embodiment of the desktop metaphor made of bundle of programs running on top of a computer operating system that shares a common GUI, sometimes described as a graphical shell.

Bulleted list of the common elements of a desktop environment

- **GNOME**
- **KDE**

b. The bash Shell

What is a shell?

A shell is a layer of computer program which exposes an operating system's services to a human user or others.

List different shells

- Tcsh Shell
- Csh Shell
- Ksh Shell
- Zsh shell
- Fish shell

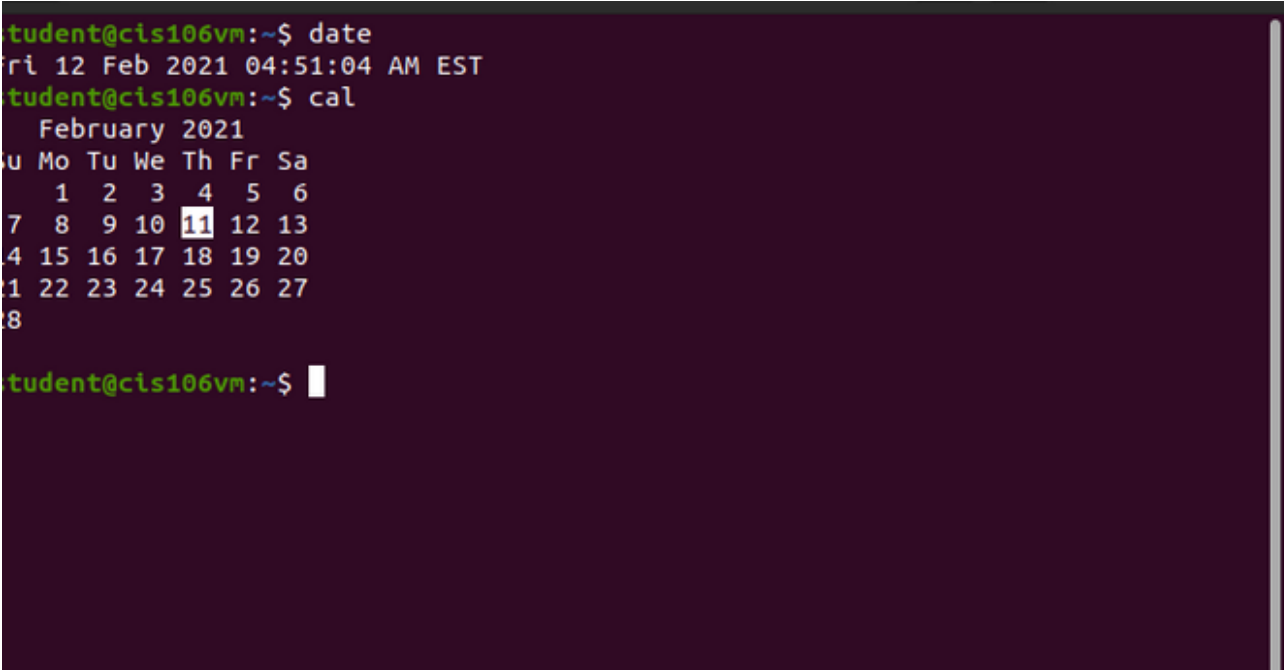
List some bash shortcuts

- **Ctrl+A:** Go to the beginning of the line.
- **Ctrl+E:** Go to the end of the line.
- **Alt+B:** Go left (back) one word.
- **Ctrl+B:** Go left (back) one character.
- **Alt+F:** Go right (forward) one word.

- **Ctrl+F**: Go right (forward) one character.

List basic commands and their usage

- **date**: displays the current time and date
- **cal**: calender of the current month
- **df**: the current amount of free space on our disk drives
- **free**: the amount of free memory
- **uname**: information about your system
- **clear**: clear the screen

A terminal window with a dark purple background. The prompt is 'tudent@cls106vm:~\$'. The first command 'date' is entered, and the output is 'Fri 12 Feb 2021 04:51:04 AM EST'. The second command 'cal' is entered, and the output is a calendar for February 2021. The calendar shows days of the week as 'Su Mo Tu We Th Fr Sa' and dates from 1 to 28. The date '11' is highlighted with a white box. The prompt 'tudent@cls106vm:~\$' is followed by a cursor.

```
tudent@cls106vm:~$ date
Fri 12 Feb 2021 04:51:04 AM EST
tudent@cls106vm:~$ cal
    February 2021
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
tudent@cls106vm:~$
```

```

student@cis106vm:~$ df
Filesystem      1K-blocks      Used Available Use% Mounted on
dev              1985932         0    1985932   0% /dev
tmpfs            403024         2860     400164   1% /run
dev/sda5         50824704 10946860    37266388  23% /
tmpfs            2015100         0     2015100   0% /dev/shm
tmpfs            5120           4        5116   1% /run/lock
tmpfs            2015100         0     2015100   0% /sys/fs/cgroup
dev/loop2        153344    153344         0 100% /snap/code/55
dev/loop3        147328    147328         0 100% /snap/code/52
dev/loop4        100352    100352         0 100% /snap/core/10583
dev/loop0        121344    121344         0 100% /snap/chromium/1444
dev/loop5         52352     52352         0 100% /snap/snap-store/518
dev/loop7         56832     56832         0 100% /snap/core18/1988
dev/loop6         56832     56832         0 100% /snap/core18/1944
dev/loop1        140544    140544         0 100% /snap/chromium/1479
dev/loop8        166784    166784         0 100% /snap/gnome-3-28-1804/145
dev/loop9         31872     31872         0 100% /snap/snapd/10707
dev/loop10       224256    224256         0 100% /snap/gnome-3-34-1804/66
dev/loop11        51072     51072         0 100% /snap/snap-store/467
dev/loop12        63616     63616         0 100% /snap/gtk-common-themes/1506
dev/loop13       100736    100736         0 100% /snap/core/10823
dev/loop14       261760    261760         0 100% /snap/gnome-3-34-1804/36
dev/loop15        31872     31872         0 100% /snap/snapd/11036
dev/loop16        66432     66432         0 100% /snap/gtk-common-themes/1514
dev/sda1         523248         4     523244   1% /boot/efi
tmpfs            403020         20     403000   1% /run/user/1000
dev/sr0          59558     59558         0 100% /media/student/VBox_GAs_6.1.16

student@cis106vm:~$ free
              total        used        free      shared  buff/cache   available
Mem:           4030204        847748        2062640          4268        1119816        2941568
Swap:            2097148             0         2097148

```

c. Managing Software

Command for updating ubuntu

`sudo apt update`

Command for installing software

`sudo apt install app-name -y`

Command for removing software

`sudo apt remove app-name -y`

Command for searching for software

apt search "app name"

Definition of the following terms:

- Package : archives that contains binaries of software,files and information about dependencies.
- Library: code can be used more than one function or program
- Repository : huge collection available for download

The screenshot of how to update ubuntu with its explanation

I Go it! Apt is cool ... but how do I use it?

- 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.

```
19:57:51 (adrian@G752VL2 ~)
sudo apt update; sudo apt upgrade -y
```

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

Here are some useful examples

Install several programs in a single command

```
sudo apt install firefox flameshot caffeine -y
```

Remove several programs in a single command

```
sudo apt remove firefox flameshot caffeine -y
```

Install and remove programs in a single command

```
sudo apt install firefox+ flameshot- caffeine- vlc+
```

Remove programs and all remaining traces

```
sudo apt purge firefox+ flameshot- caffeine- vlc+
```

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.

More useful options of Apt

To obtain information about a package

```
apt-cache showpkg firefox
```

Install packages without upgrading

```
sudo apt install firefox --no-upgrade
```

Only upgrade packages

```
sudo apt install firefox --only-upgrade
```

Clean your system

```
sudo apt clean; sudo apt autoclean; sudo apt autoremove
```

cheat sheet

LINUX WORKSHOP | UBUNTU SOFTWARE INSTALLATION CHEAT SHEET

APT

List installed software `apt list --installed`

Search for software `sudo apt search 'software name here'`

Install/Remove software `sudo apt install/remove 'package name here'`

Install and Remove software single command `sudo apt install package+ package-`

System update `sudo apt update; sudo apt upgrade -y; sudo apt full-upgrade -y`

Remove software and all remaining traces `sudo apt purge 'package name'`

Clean your system `sudo apt clean; sudo apt autoclean; sudo apt autoremove`

Add PPA `sudo add-apt-repository ppa:user/ppa-name`

Remove PPA `sudo add-apt-repository --remove ppa:user/ppa-name`

FLATPAK

Install Flatpak

1 `sudo apt install flatpak -y`

2 `sudo apt install gnome-software-plugin-flatpak`

3 `flatpak remote-add --if-not-exists flathub
https://flathub.org/repo/flathub.flatpakrepo`

4 `sudo reboot`

Searching for a flatpak `flatpak search 'software'`

Install/Remove for a flatpak `flatpak install/uninstall 'software'`

List all flatpak `flatpak list`

Update flatpak `flatpak update`

SNAP

Search for a snap `snap search 'software name here'`

Install/remove a snap `sudo snap install/remove 'software name here'`

List installed snaps `snap list`

Update snaps `sudo snap refresh`