

## Notes Lab 3

### Answers to the following questions:

- **What is a graphical user interface (GUI)?:**

A graphical user interface is a set of programs that allows a user to interact with the computer system via icons, windows and various other visual elements.

- **What is a desktop environment?:**

A desktop environment is an implementation of the desktop metaphor made of a bundle of programs running on top of a computer operating system, which shares a common GUI, sometimes described as a graphical shell.

- **What is the command line interface (CLI)?:**

It is the way how the user interacts with the computer by inputting commands.

- **How do I access the command line interface (CLI)?:**

There are two ways to access the CLI:

- \* Terminal Emulator
- \* Linux Console

- **What is a virtual console?:**

A virtual console is a terminal session that runs in Linux system memory.

- **What is a terminal emulator?:**

A terminal emulator is a program allows you to access the Linux CLI when using the GUI.

Some terminal emulators are:

```
GNOME Terminal (included in Ubuntu), Konsole, Terminology, RXVT-Unicode,  
TILIX, Kitty
```

- **What is bash?:**

The GNU bash shell is a program that provides interactive access to the Linux system. It runs as a regular program and is started whenever a user logs in.

Other shells:

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Tcsh shell, Csh shell, Ksh shell, Zsh shell, Fish shell
```

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- **What is the shell prompt?:**

A shell prompt is a command line represented by `username@machinename`.

Example:

```
Terminal: username@machinename: ~$ bash --version
```

**Definition, usage, and examples of the following commands:**

- **clear:** Clears the terminal window/screen.
- **echo:** Prints/displays text to the screen.
- **date:** Displays current date and time (can be used for other tasks as well. See man page)
- **free:** Displays the amount of RAM/Memory used and free.
- **uname:** Shows basic information about your system such as: kernel, OS, architecture, etc...
- **history:** Display a history of every command you run so far.
- **man:** Shows/displays the manual page for a given command.
- **tldr:** Similar to cheat but it is available via APT and keeps a local cache.
- **cheat:** A collection of cheat sheets.
- **hostname:** Shows the system's hostname (computer name).
- **df:** Displays the amount of disk space available/used on entire file systems/partitions.
- **du:** Displays the amount of space used by specific files or directories.
- **figlet:** Displays text in large ASCII letters.