Chapter 4 :- Graphical interface

* Learning objective

-> By the end of this chapter, you should be able to:

- manage graphical interface sessions
- Perform basic operation using the graphical interface
- change the graphical desktop to suit your needs

* Graphical Desktop

-> You can use either a command Line interface (CLI) or graphical user interface (GUI) when using Linux.

-> To work at CLI, you have to remember which Programs and commands are used to Perform task, and how quickly and accurate obtain more information about their use and options.

-> on the other hand, using the GUI is often quick and easy.

-> It allows you to interact with your system through graphical icons and screens,

-> For repititive task, the cLI is is often more efficient, while GUI is easier to navigate if you do not remember all the details or do something only rarely.
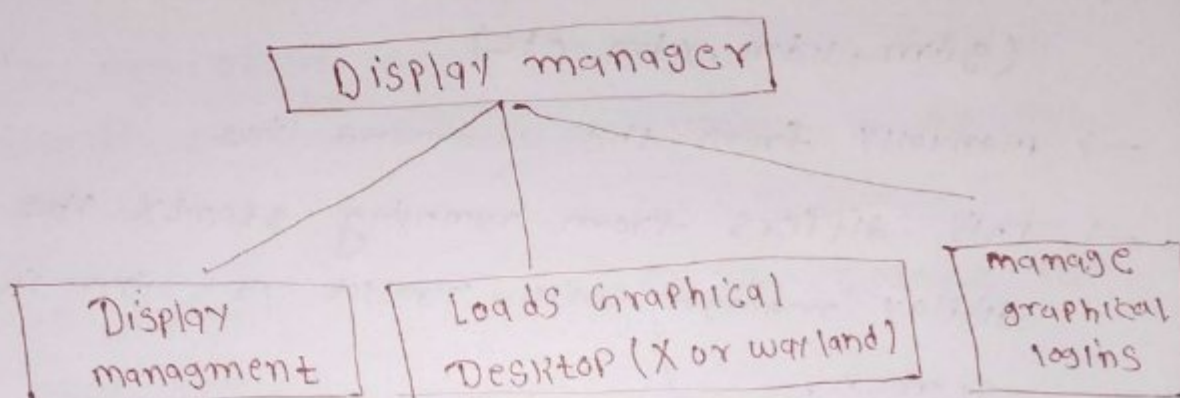
* X Windows System

→ Loading the graphical desktop is one of the final steps in boot process of Linux desktop.

→ Historically, this was known as the X windows system, often just called X.

→ A service called the Display manager keeps track of the display being provided and load X server (so-called, because it provides graphical service to applications, Sometime called X client)

→ The display manager also handles graphical login and starts the appropriate desktop environment after user logs in.

→ X is rather old software it dates back to the mid 1980's and, as such, has certain deficiencies on morden system (for example with security)

→ as it has been stretched rather far from its original Purpose.

-> A newer system known as wayland, is gradually supersending it and is the default display system of Fedora, RHEL and other distributions.

-> For the most part, it looks just like X to the user although under the hood it is quite different.

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┌─────────────────┐
│ Display manager │
└─────────────────┘
```

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┌──────────────┐  ┌──────────────────────┐  ┌───────────┐
│   Display    │  │  Loads Graphical     │  │  manage   │
│  managment   │  │  Desktop (X or       │  │ graphical │
│              │  │  wayland)            │  │  logins   │
└──────────────┘  └──────────────────────┘  └───────────┘
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* More About the graphical Desktop

-> A desktop environment consists of a session manager, which starts and maintains the components of the graphical session, and the window manager, which controls the Placement and movement of windows, windows titalbars, and controls.

-> Although this can be mixed, generally a set of utilities, session manager, and windows manager are used together as a unit and together Provide a seamless desktop environment.
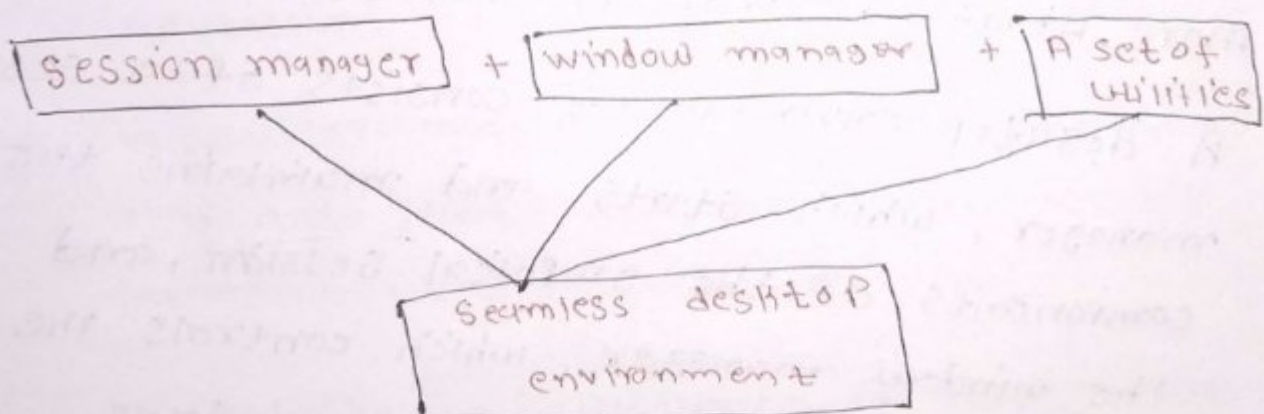
→ If the display manager is not started by default in the default runlevel, you can start the graphical desktop diffrent way,

→ After logging on to a text-mode console by running startx from the command line.

→ OR you can start the display manager (gdm, kdm, xdm etc)

→ manually from the command line

→ This differs from running startx the display manager will Project a sign in screen.

| session manager | + | window manager | + | A set of utilities |

↓   ↓   ↓

| Seamless desktop environment |

* GUI Startup

-> When you install a desktop environment, the display manager starts at the end of the boot process.

-> It is responsible for starting the user's the graphic system, logging in the user and starting the user's desktop environment.

-> you can often select from a a choice of desktop environment when logging in to the system.

-> The default display manager for GNome is called gdm.

-> Another popular display manager is KDM associated with KDE.

* GNOME Desktop Environment

→ GNOME is a Popular desktop environment with an easy-to-use graphical user interface.

→ It is bundled as the default desktop environment for most Linux distribution, including Red Hat Enterprise Linux (RHEL), Fedora, CentOS, SUSE Linux Enterprise, Ubunty and Debian.

→ GNOME has menu-based navigation and is sometimes an easy transition to accomplish for windows user.

→ However, the look and feel can be quite diffrent across distributions even if they are all using GNOME.

→ Another Common desktop environment very important in the history of Linux and also widely used is KDE

→ which has often been used in conjuction with SUSE and openSUSE.

→ Other alternatives for desktop environment include Unity (Present on older ubunty but Still based on GNOME), XFCE and LXDE.

→ As Previously mentioned, most desktop environme follow similar structure to GNOME, and we will restrict ourself mostly to it to keep things less complex.

* Graphical Desktop Background

→ Each Linux distribution comes with it's own set of desktop backgrounds.

-) You can change the default by choosing new wallpaper, OR selecting a customc Picture to be set as the desktop background.

→ If you do not want to use an image as the background, you can select a color to be displayed on the desktop instead.

→ In addition, you can also change the desktop theme, which changes the look and feel for Linux system

-) The theme also defines the appearance of application windows.

* Customizing the Desktop Background

→ To change the background, you can right-click anywhere on the desktop to choose change background.

* gnome-tweaks

→ most common settings, both Personal and System-wide are to be found by clicking in the upper-hand corner on either gear or other obvious icon, depending on your linux distribution.

→ However, there are many settings which many users would like to modify which are not thereby accessible

→ The defualt setting utility is unfortunately rather limited in morden Gnome-based distribution.

→ Unfortunately the quest for simplicity has made it difficult to adapt your System to your tastes and needs.

→ Fortunately, there is a standard utility, gnome-tweaks. which exposes many more setting options.

→ It also permits you to easily install extensions by external Parties.

→ Not all Linux distribution install this tool by default, but it always avaible (older distribution used the name gnome-tweaks-tool).

-> You may have to run it by hitting Alt-F2 and then typing in the name.

-> You may want to add it to your favorites list, as we shall discuss.

-> Some recent distribution have taken most of functionality out of this tool and placed it in a new one called gnome-extensions app.