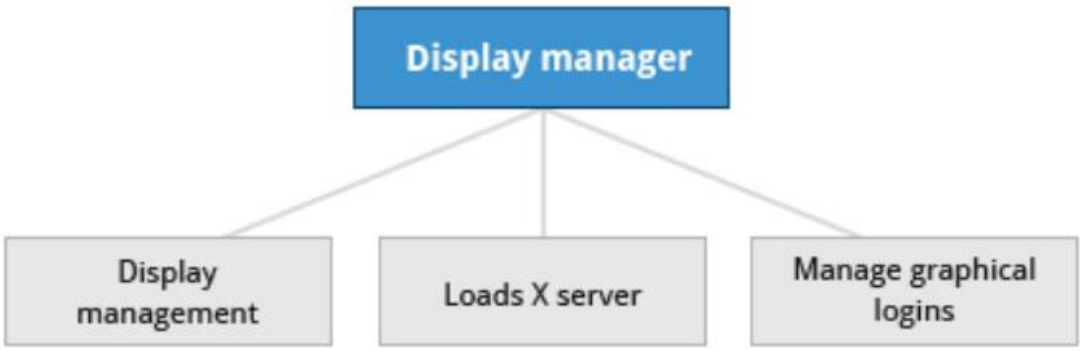
Graphical Interface

X Window System:

1. Generally, in a Linux desktop system, the X Window System is loaded as one of the final steps in the boot process. It is often just called X.
2. A service called the Display Manager keeps track of the displays being provided and loads the X server (so-called, because it provides graphical services to applications, sometimes called X clients).
3. The display manager also handles graphical logins and starts the appropriate desktop environment after a user logs in.



Display Manager

4. 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, window title-bars, and controls.
5. Although these can be mixed, generally a set of utilities, session manager, and window manager are used together as a unit, and together provide a seamless desktop environment.
6. If the display manager is not started by default in the default runlevel, you can start the graphical desktop different way, after logging on to a text-mode console, by running **startx** from the command line. Or, you can start the display manager (**gdm, lightdm, kdm, xdm,** etc.) manually from the command line. This differs from running **startx** as the display managers will project a sign in screen.

Desktop Environment

7. When you install a desktop environment, the X display manager starts at the end of the boot process. It is responsible for starting the graphics system, logging in the user, and starting the user's desktop environment. You can often select from a choice of desktop environments when logging in to the system.
8. The default display manager for GNOME is called **gdm**. Other popular display managers include **lightdm** (used on Ubuntu before version 18.04 LTS) and **kdm** (associated with KDE).

Suspending:

1. All modern computers support Suspend (or Sleep) Mode when you want to stop using your computer for a while.
2. Suspend Mode saves the current system state and allows you to resume your session more quickly while remaining on, but uses very little power in the sleeping state.
3. It works by keeping your system's applications, desktop, and so on, in system RAM, but turning off all of the other hardware.
4. This shortens the time for a full system start-up as well as conserves battery power.
5. To suspend the system, the procedure starts the same as that for shutdown or locking the screen.
6. The method is quite simple and universal in most recent GNOME-based distributions.
7. If you click on the Power icon and hold for a short time and release, you will get the double line icon displayed below, which you then click to suspend the system.
8. Some distributions, including Ubuntu, may still show a separate Suspend icon instead of using the above method.
9. To wake your system and resume your session, move the mouse or press any button on the keyboard. The system will wake up with the screen locked, just as if you had manually locked it; type in your password to resume.

Suspending the System

Summary:

1. GNOME is a popular desktop environment and graphical user interface that runs on top of the Linux operating system.
2. The default display manager for GNOME is called **gdm**.
3. The gdm display manager presents the user with the login screen, which prompts for the login username and password.
4. Logging out through the desktop environment kills all processes in your current X session and returns to the display manager login screen.
5. Linux enables users to switch between logged-in sessions.
6. Suspending puts the computer into sleep mode.
7. For each key task, there is generally a default application installed.
8. Every user created in the system will have a home directory.
9. The Places menu contains entries that allow you to access different parts of the computer and the network.
10. Most text editors are located in the Accessories submenu.
11. Each Linux distribution comes with its own set of desktop backgrounds.
12. GNOME comes with a set of different themes which can change the way your applications look.
13. You can control basic configuration options and desktop settings through the System Settings panel.
14. Linux always uses Coordinated Universal Time (UTC) for its own internal time-keeping. You can set the date and time settings from the System Settings window.

15. The Network Time Protocol is the most popular and reliable protocol for setting the local time via Internet servers.
16. The Displays panel allows you to change the resolution of your display and configure multiple screens.
17. Network Manager can present available wireless networks, allow the choice of a wireless or mobile broadband network, handle passwords, and set up VPNs.
18. **dpkg** and **RPM** are the most popular package management systems used on Linux distributions.
19. Debian distributions use **dpkg** and **apt**-based utilities for package management.
20. RPM was developed by Red Hat, and adopted by a number of other distributions, including the openSUSE, Mandriva, CentOS, Oracle Linux, and others.