7 Introduction to Ubuntu Linux GUI

We have already learnt that Operating System allows user to use two modes of interaction command line interface and graphical user interface. In this chapter we will introduce you to the GNOME2 desktop and its different panels. We will also see how to customize the appearance of the GNOME desktop.

GNOME2 Desktop

Open source software is all about freedom and choices. Linux is no exception. It provides multiple choices for most components of the operating system. The desktop manager or simply the desktop is no exception. Linux provides several desktop managers, including GNOME, KDE, Unity, Xfce, LXDE, and many more. While the first three desktops require more powerful systems with better graphics capability, the last two desktops are light-weight and can run even on quite low-end machines. GNOME2 (GNOME version 2) was the default desktop for Ubuntu Linux until Ubuntu 10.10. Ubuntu 11.04 onwards use the Unity desktop. You can install different desktops as per your choice but GNOME2 provides a very good desktop environment for personal computer users.

When the GNOME2 desktop starts, we get a screen as shown in figure 7.1. There are three major components of the screen – the top panel (a horizontal bar at the top of the screen), the bottom panel (a horizontal bar at the bottom of the screen) and the desktop (the part of the screen between these panels). In general, left-clicking an item selects it. Active items in the panels (like menus, indicators and application launchers) execute the corresponding action on single-click, while desktop shortcuts and executable program files in the Nautilus file browser get executed only on double-click. Right-clicking on an item brings up a floating menu of options specific to that item. It is known as the context menu. Hovering over an item (keeping the mouse cursor over that item for a little longer period) often brings up a small window called "tool tip" explaining that item in brief.

The Top Panel

The top panel contains the menu bar with three menu items (Applications, Places and System), the application launchers, the notification area and some applets, including one for the system date and time, the "Me Menu" and the session menu. The desktop is initially empty, but the user can place frequently used files, folders and application launchers there for quick access. The bottom panel contains a "Show Desktop" icon, mini representations of applications that are running, the Desktop Switcher and the Trash icon. These elements are explained below.

The Applications Menu

This menu presents a category wise submenu of the applications installed in the system as shown in figure 7.2. One can run an application by selecting it from this menu hierarchy.
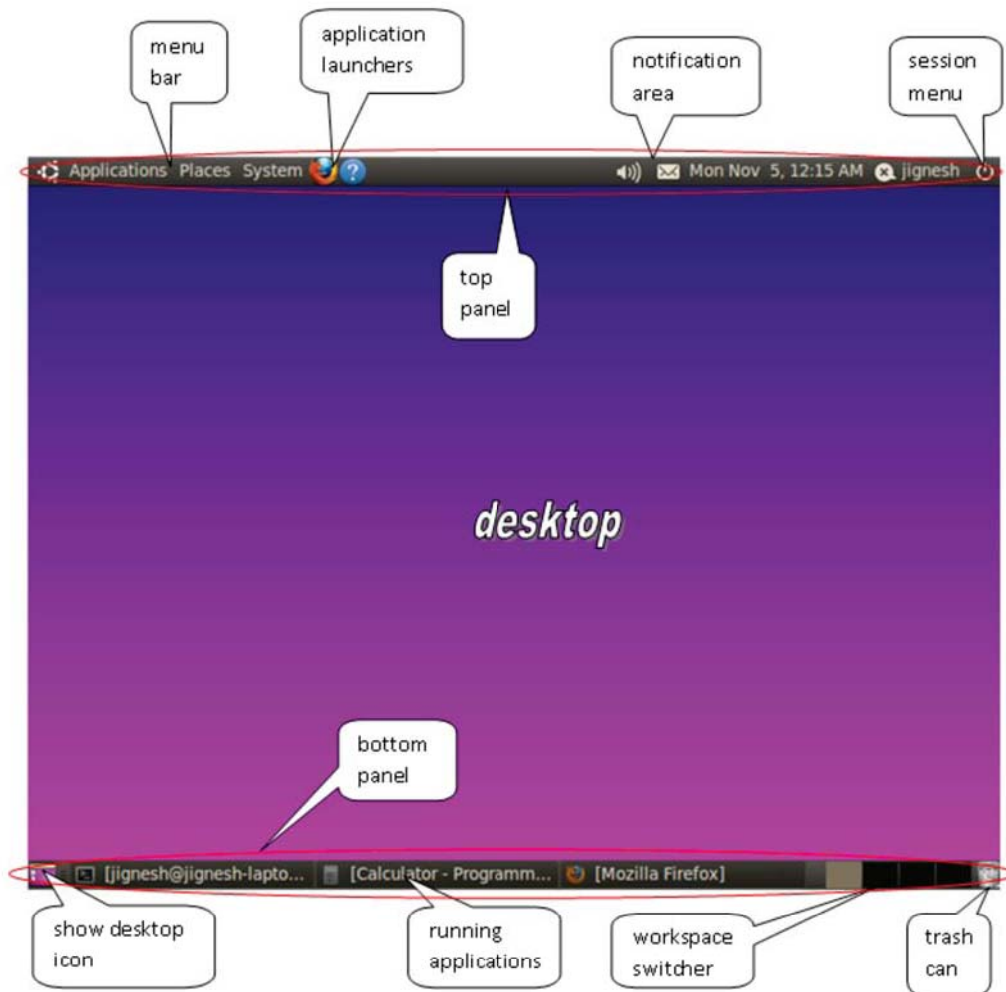
Computer Studies : 9
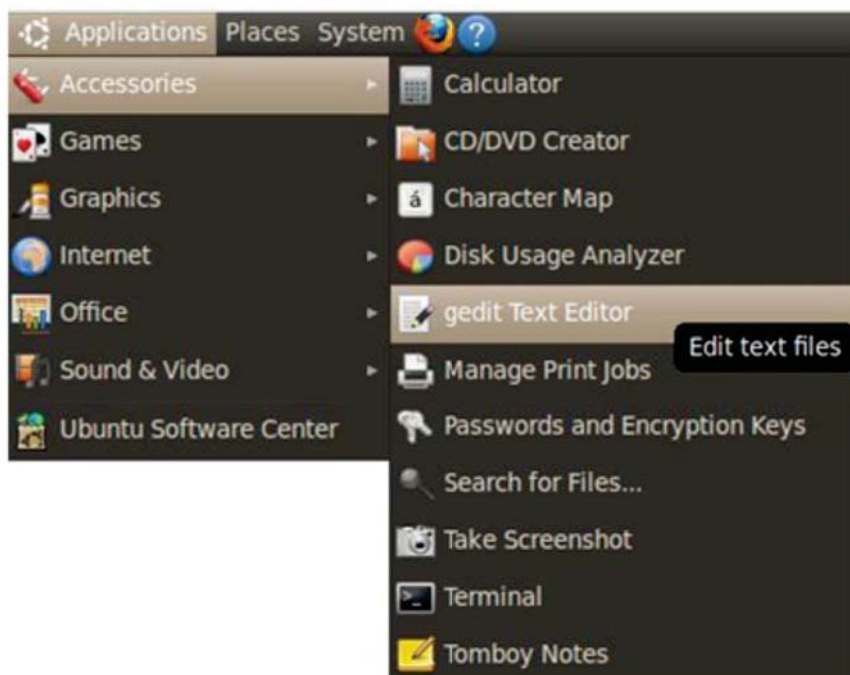
Figure 7.1 : GNOME2 Desktop

Figure 7.2 : Applications Menu

The categories and common preinstalled software are as mentioned :

- **Accessories :** Contains a calculator application for performing basic arithmetic as well as scientific calculations, CD/DVD Creator for writing to CD/DVD disks, Disk Usage Analyzer for analyzing the usage of disk space directory wise or file type wise, gedit text editor for creating and editing plain text files (without formatting), Manage Print Jobs to manage the jobs submitted for printing, Take Screenshot for capturing the current screen display in an image (picture) file, Terminal for using the CLI and Tomboy Notes for creating computer "notebooks" to note down your ideas and thoughts in an organized and searchable way.

- **Games :** Contains some computer games that you can play for relaxing.

- **Graphics :** Contains F-Spot Photo Manager for managing photographs taken using a digital camera or mobile phone camera, GIMP Image Editor for editing images (pictures), OpenOffice.org Draw for drawing and painting simple drawings and Simple Scan for scanning documents and pictures using a scanner.

- **Internet :** This category contains Empathy IM client for chatting with others on the Internet, Mozilla FireFox web browser for surfing the World Wide Web, Gwibber Social Client for social networking using sites like Facebook, Twitter and software to see and control another user's desktop screen from your machine and vice versa.

- **Office :** As the name suggests, this category gives access to the tools most commonly needed for office work. These include an online dictionary, an email client (Evolution) for accessing email and sharing your schedule (calendar) with your colleges, clients, etc., and the OpenOffice.org suit of free and open source office productivity applications that includes the Writer word processor, the Calc Spreadsheet program and the Impress presentation tool.

- **Sound and Video :** This category contains applications meant for entertainment. It also includes the Brasero Disk Burner for burning (writing) CD and DVD disks, Movie Player to play movies on the computer, Pitivi video editor for performing basic video editing tasks, Rhythmbox Music Player to play music and Sound Recorder to record your voice if you possess a microphone and, of course, a voice worth recording.

- **Ubuntu Software Center :** If you are not satisfied with the built-in applications provided, there are tens of thousands of applications (most of them free, but some paid as well) in the software repositories hosted and maintained by Canonical Ltd., its partners and affiliates, the Debian project (on which Ubuntu is based) and other communities and organizations. This option provides you access to host of application both for study and play.

Figure 7.3 : Places Menu

The Places Menu

This menu as shown in figure 7.3, allows you to access various storage devices in your computer as well as on other connected computers.
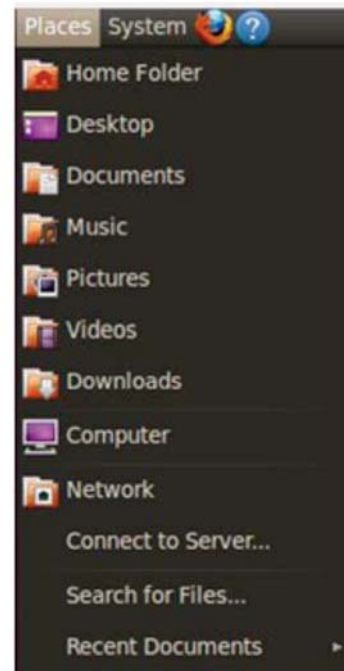
The submenus of Places menu are as mentioned :

- **Home Folder :** Opens the currently logged-in user's home directory in the Nautilus file browser. This browser has been described in detail in the next chapter.

- **Desktop :** Opens the user's "Desktop" folder in the Nautilus file browser. This is a folder inside the user's home directory. Any file placed here is displayed on the user's desktop and any file placed graphically on the user's desktop lands up here.

- **Documents :** This is again a folder inside the user's home directory meant for storing the user's personal documents.

- **Music :** This folder inside the user's home directory can be used to store music files.

- **Pictures :** This folder inside the user's home directory can be used to store pictures.

- **Videos :** This folder inside the user's home directory can be used to store video files.

- **Downloads :** Files downloaded from the Internet are saved in this folder by default, if required this setting can be changed easily.

- **Computer :** Shows all the fixed and removable storage devices present in the computer.

- **Network :** Shows all the other computers (running Ubuntu or Windows operating system) on the same network. If sharing is enabled on some of these computers, one can easily copy and transfer files to and from those computers.

- **Connect to Server... :** This option can be used to connect to a variety of powerful "server" computers running any Unix-like or Windows operating system. Large organizations use server computers to provide common services to all computers on the network.

- **Search for Files... :** This option can be used to search for a file by their name when a user forgets in which directory the file was saved.

- **Recent Documents :** Shows a list of files opened recently. From here one can reopen a recently used file quickly without having to navigate the directory structure. This facility is also useful in cases where one forgets where one saved a recent file or when one has multiple versions of the same file in different directories and wants to open the latest version.

- **Bookmarks :** The places menu also displays the bookmarks you have created in Nautilus. If there are only few of them, they are displayed directly in the Places menu; otherwise they are clubbed together in a Bookmarks menu. These bookmarks let you open frequently accessed directories quickly.

- **Removable Devices and Discovered Partitions :** If any hard disk partition apart from the one containing the Linux root file system is discovered during the boot process, the same is listed in the Places menu. Opening the partition automatically mounts it. Similarly, any removable device (CD/DVD/flash disk/external disk) we insert is mounted automatically and displayed in the Places menu.

The System Menu

This menu, shown in figure 7.4, allows the user to customize one's Ubuntu installation and carry out system administration. This menu has two submenus, namely Preferences and Administration; it also has three other options.
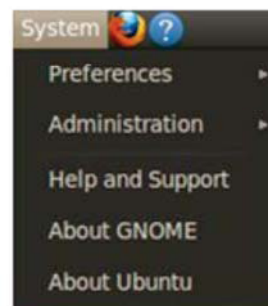

Figure 7.4 : System Menu

Preferences Menu

The Preferences submenu as shown in figure 7.5, provides various ways of customizing our system. Some options of preferences menu are discussed herewith.

- **About Me :** allows the currently logged-in user to view and modify their profile (personal information).

- **Appearance :** allows the user to change the desktop background image (the picture displayed in the desktop area, also known as wallpaper), set the default font and font sizes for various categories and select a theme. Choosing and applying a theme applies a harmonious setting of desktop wallpaper, fonts, colors and appearances of different elements of windows, etc.

Apart from the built-in themes, more themes are available online. There is a tab for Visual Effects. here, three levels of visual effects are provided – none, normal and extra. The default is none. Depending on the graphics capability of your system, the other two options may or may not be permitted. Setting a higher level enables a wide range of 2D and 3D visual effects.

- **Assistive Technologies :** provides special programs and settings to help physically challenged people use the computer.

- **Main Menu :** option allows us to decide which items appear in the menus and which items do not. Users with little more knowledge can also add or modify the menu items.

- **Monitors :** option can be used to set monitor options, particularly the display resolution – number of pixels in a row and the number of such rows.

- **Mouse Preferences :** option can be used to fine tune mouse settings.

- **Network Connections and Network Proxy :** options allow us to set network settings.

- **Power Management :** is used to set options that conserve power (and help save environment). These options cause the computer to turn off display or go into hibernate/sleep mode when not used for certain duration. You can also decide the action to be taken when a computer is running on battery backup (like a laptop computer running on battery or a desktop computer running on UPS) and the battery backup is critically low.

Figure 7.5 : Preferences Menu

- **Preferred Applications :** lets you to choose your favorite applications for common Internet and multimedia tasks. Considering that there are many choices of applications for common tasks in Linux, this menu item allows you to specify your preferences.

- **Remote Desktop :** allows you to share your desktop with someone else. When you share your desktop with someone, both you and that user see your desktop on a continually updated basis. When anyone of you move the mouse or press a key, the effect will be seen by both. This facility has many uses like allowing a worker to work on office computer from home, allowing a technician to take control of a user's computer for troubleshooting and for solving problems and providing training through live demonstration of computer operation. Of course, appropriate security measures are present to prevent unauthorized access to your computer.
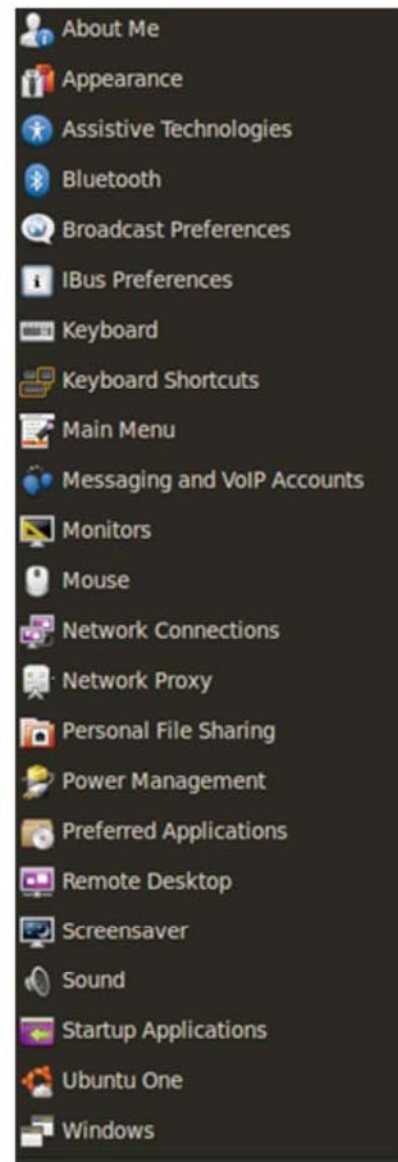
- **Screensaver :** is an application that springs into action when the user does not perform any action for certain duration. Generally it displays a constantly changing image on the screen. The original idea was to frequently change the display to prevent permanent damage to older monitors caused by the display of a bright pixel for an extended period of time. Even though modern monitors do not suffer from this problem, screensavers are still used for their visual appeal, to break the monotony and to draw the use's attention to the unused computer.

- **Sound :** allows the user to set volume level as well as other sound input/output related options.

- **Startup Applications :** controls which applications are automatically started when the computer starts. If you find that your computer takes too long to boot, you may check your startup applications and remove those that you can do without. But you need to be careful not to turn off some essential service.

- **Ubuntu One :** is Canonical's cloud (Internet) storage solution. It allows you to purchase music and store your files on Canonical's server computers. You may access them anywhere in the world from any Ubuntu computer, provided you have Internet connectivity.

- **Windows :** lets you set some basic options regarding the behavior of application windows. In particular, you may choose what action should be taken when you double-click the title bar of a window. The possibilities include maximizing the window, minimizing the window, maximizing the window vertically (so that it occupies the full screen height, but its width is not changed), maximizing the window horizontally (so that it occupies the full screen width, but its height is not changed), etc.

Administration Menu

The Administration submenu shown in figure 7.6 provides various tools for the control and management of the system. Important tools include disk utility (a graphical software that displays disks and disk partitions and allows the user to create, delete, edit and format disk partitions, mount and unmount file systems, etc.), Language Support (allows us to include support for various language, including Indian languages), Printing (to control print jobs), Software Sources (to set the repositories on the Internet from which to install software), Synaptic Package Manager (to install and uninstall software), Startup Disk Creator (to create a bootable flash disk/pen drive), Time and Date (to set the system date and time and time zone information), Update Manager (to get latest updated versions of the currently installed software) and Users and Groups (to manage the users and user groups on the computer).

Figure 7.6 : Administration Menu

- **Help and Support :** provides some basic documentation on how to start using Ubuntu.
- **About GNOME :** displays version and other information about the GNOME desktop in use.
- **About Ubuntu :** displays the Ubuntu version in use and some introductory material on it.

The Application Launchers

If you run some application frequently, you may find it tedious to navigate the hierarchical menu structure to reach and start the application every time. The part of the top panel between the menu and the notification area can be used to house application launchers for applications frequently used by you. These launchers are represented by small icons in the panel. Two launchers are already there by default – one for Mozilla Firefox web browser and another for Ubuntu's built-in help tool. There are two ways to add application launchers to the top panel. One is to locate the application in the Applications menu hierarchy, then right-clicking on it and selecting the option "Add this launcher to panel". Another way is to right-click in an empty area in the top panel, select the option "Add to panel…" and then select one of the predefined launchers from the list. The option "Application Launcher…" lets one select an application from the menu hierarchy, while the option "Custom Application Launcher" allows you to create your own launcher.

When you select the option "Custom Application Launcher", you get the dialog box shown in figure 7.7. There are three options for the type of the launcher – Application (a GUI application), Application in Terminal (a CLI application or a GUI application that needs to start initially in a terminal) and Location. To create a launcher for an application, you need to provide the executable program file corresponding to the application you want to run.
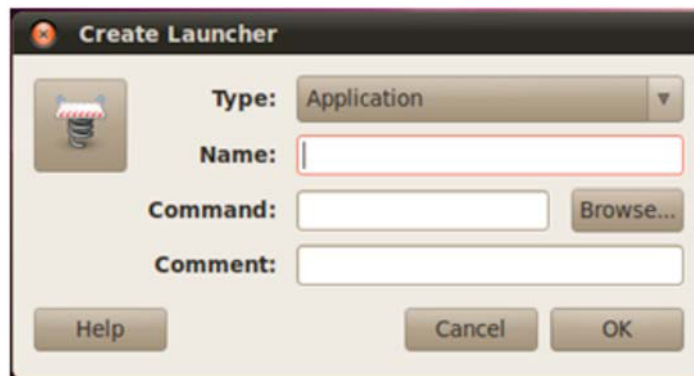

Figure 7.7 : Creating Custom Launcher

You may type it in the "Command" field or use the "Browse…" button to select the file. The browse button opens the standard file selection dialog box shown in figure 7.8, which can be operated in a manner analogous to using the Nautilus file browser described in the next chapter. To create a launcher for a location (a file) in the file system hierarchy, you select the file in the same way.

The "Name" and "Comment" fields are used to provide the name and description of for the launcher, with the latter being optional. The icon associated with the launcher can be changed by clicking

on the icon shown in the dialog box and selecting a new one. Most of the standard icons can be found in subdirectories of the directory /usr/share/icons. Alternatively, any small picture can be selected as the icon; we can even make our own icon using the GIMP image manipulation program discussed in the next chapter.

Figure 7.8 : File Selection Dialog Box

If you have populated your top panel with a large number of launchers, you may add one or more "separator" items available in the "Add to panel…" list to group and visually separate different sets of launchers. These items appear as vertical bars in the panel. The launchers can be easily rearranged using an operation known as "drag and drop". This maneuver is executed by positioning the mouse cursor on the item in question, pressing the left mouse button, then moving the mouse to the destination while keeping the left mouse button pressed and finally releasing the mouse button. To prevent accidental drag and drop of a launcher, a launcher can be "locked" to its position using the "Lock To Panel" option in the context menu that opens when you right-click the launcher. A checkmark besides the option text means the launcher is currently in the locked state. The launcher can be unlocked simply by opening and clicking on the same option again. "Remove From Panel" option available in the same context menu allows one to remove the launcher from the panel. Figure 7.9 shows the top panel after addition of some application launchers and separators.
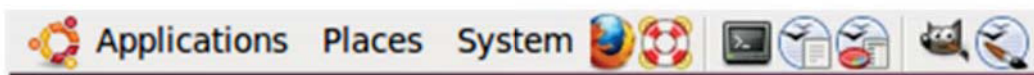

Figure 7.9 : Left View of Top Panel with Some Application Launchers

Figure 7.10 shows the right side of the top panel containing the indicator applets, the "Me Menu" and the session menu.
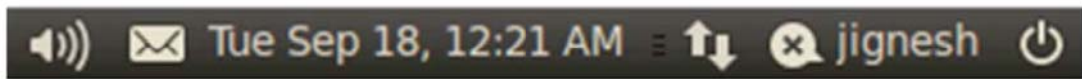
Figure 7.10 : Right View of Top Panel

Both these views may differ on your computers depending upon the settings of your machine. Let us discuss the components on the right view of top panel.

The Notification Area : This area has several indicator applets (small applications) by default. The sound applet with the speaker icon allows you to control the sound level from the system's speakers and also lets you quickly mute and unmute sound.

The envelop icon next to it represents the Evolution Personal Information Management (PIM) tool. Evolution provides an email client that downloads and stores one's emails on the local system so that they can be accessed even when not connected to the Internet. Among other things, it also provides Internet Messaging (IM or chat) facility and a facility to manage your calendar (schedule of activities to be performed).

The next indicator is the date/time applet that displays the current date and time. Clicking on it opens a calendar for the current month as shown in figure 7.11.

Figure 7.11 : Calendar Applet

To see the day of the week from past or future, one may use the small triangles on the two sides of the month name and year name to change the month and year respectively. The map at the bottom indicates which parts of the planet are currently receiving day light and which ones are in the dark. Clicking for a second time on the date/time indicator closes the calendar.

The next applet shows the status of the network interface(s) in the computer and also allows one to connect or disconnect specific network interfaces (particularly useful for wireless networks). Selecting "Edit Connections…" from the context menu that opens when we right-click on the network indicator opens the same interface that is used to edit network connections from the preferences

menu. The icon of the network indicator itself indicates the current network state (not connected/trying to connect/connected).

The "Me Menu": This menu, shown in figure 7.12, is identified by the currently logged in user's name. It is a quick access social networking and cloud access tool. The first few options (Available, Away, Busy, Invisible, and Offline) let you specify your status that will be shown to others on social networking platforms. Next two options allow you to set up access to your social networking accounts. Once these have been established, the indicator applet will notify you about new messages, chat requests, etc. that you receive on those sites. You can also send messages and chat requests.
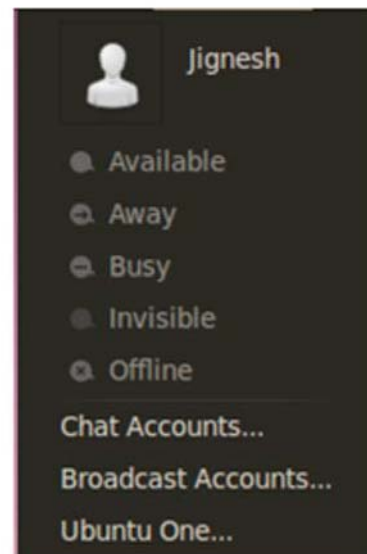
The last option in the Me Menu allows you to register the computer that you use with Canonical's free cloud based service Ubuntu One. The meaning of "cloud based" here is that all the files and folders you store in Ubuntu One are actually stored on Ubuntu's server computers, not on your computer; and can be accessed over the Internet from any computer anywhere in the world. These can also be shared with others. One must have an account with the Ubuntu One service to use it. If you do not have one, creating a free account is a simple process.

Figure 7.12 : Me Menu

Ubuntu also allows you to "sync" (synchronize) your contacts, browser bookmarks and files and folders on the local (current) computer with the same information stored on the server. The synchronization process automatically compares each and every item on the local computer with the corresponding item on the server computer and whenever it finds an item that has been added/modified/deleted more recently on one computer, it automatically applies the same operation to the other computer. At the end of the process, both the computers have identical and the latest record of the information. This way, if you synchronize from time to time, you always get the latest information irrespective of your geographical location and the current computer in use.

You may also synchronize one computer having a lot of data with the server, and then synchronize another fresh computer with the server. That would effectively transfer the data from one computer to another. Similarly, you may upload a file on the server from one computer and download and use the file on another computer anywhere in the world. This facility is a boon for people who have to travel a lot as there is no danger of forgetting to carry some important file with oneself. A lot of people keep a copy of their latest files on the cloud so that the same can be accessed from anywhere in the world or can be shared with others.

Ubuntu One also provides an online music store (currently not available in India) and the facility of instantly uploading and sharing photographs taken using an Android phone with friends and

relatives. Ubuntu One can be accessed from computers running Ubuntu, some other Linux/Unix operating systems and Microsoft Windows as well as Android and iOS mobile phones. The free account provides 5GB of storage. Additional storage, if needed, can be purchased. Advertisements and sale of storage space and music on this cloud service is one of the sources of revenue for Canonical.

The Session Menu

The rightmost item on the top panel is the session menu (see figure 7.13). This menu provides options for managing the user session. These include options to lock the system, log out of the system, switch to another user, put the system into sleep mode or hibernate mode and shut down the system. The "Guest Session" option opens a session meant for temporary or casual users. The guest user cannot make any permanent change to the system and all the changes made by the user in the temporary home directory (the concept of home directory is discussed in the previous chapter) created for them are lost when the session ends.
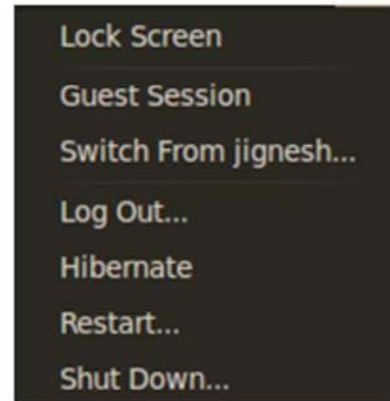

Figure 7.13 : Session Menu

The Bottom Panel

The bottom panel as shown figure 7.14 has the "Show Desktop" icon on the left side and the "Trash" icon on the right side. When the user clicks on the "Show Desktop" icon, all open windows are minimized, revealing the desktop. Clicking again on the same icon restores the windows to their previous state.

Figure 7.14 : Bottom Panel

The Trash Can (Trash) is provided for the user's safety. Any file or folder deleted by the user using the file browser is not deleted immediately; it is moved into the Trash Can. In case the user deletes some file or folder accidently or by mistake; the Trash folder provides an opportunity to bring the same back. At any time, the user may open the Trash by clicking its icon and see the deleted files and folders (see figure 7.15).

Right-clicking on any item in the Trash brings up a context menu that includes the options to open the item (to see what is there in it), cut or copy the item, copy or move the item to a selected directory, an option to delete the item permanently and a restore option that puts the item back in the directory from where it was deleted. There is also a button to empty the whole Trash near the top. Selecting this option deletes all items in the Trash permanently. Once an item is deleted permanently, it cannot be recovered. One important thing needs to be mentioned here though, only items deleted from the graphical file browser are moved to the Trash. Items deleted in other ways (from the terminal or some program, for example) are not moved to the Trash and are deleted permanently.
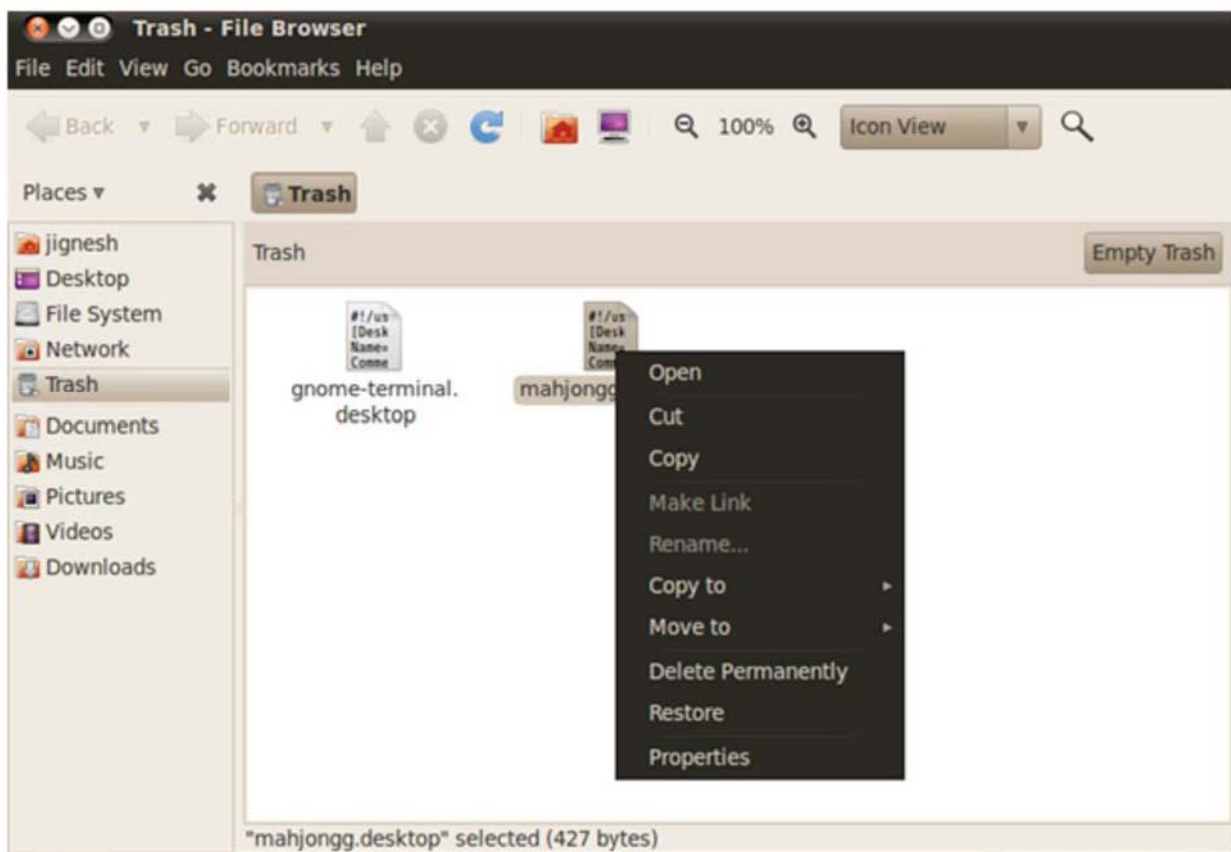
Figure 7.15 : View of Trash Folder

On the left side of the Trash icon is the Workspace Switcher. It displays a mini representation of each workspace in the panel. By default there are four workspaces in Ubuntu. The four workspaces are arranged in a 1 x 4 grid. It even tries to show how many and which windows are open in which workspace in such a small area. We may switch to any of the workspaces by clicking on its mini representation in the workspace switcher. We may also use the shortcut keys CTRL-ALT-arrow keys to switch between the workspaces.

The area between the "Show Desktop" icon and the workspace switcher in the bottom panel is initially empty. This area is used to display mini representations of all running applications, consisting of their icons and titles. As we open more and more applications, these shrink in size. We may switch to any application by clicking on its mini representation in the bottom panel. We may also use the key combination ALT-TAB to switch between running applications.
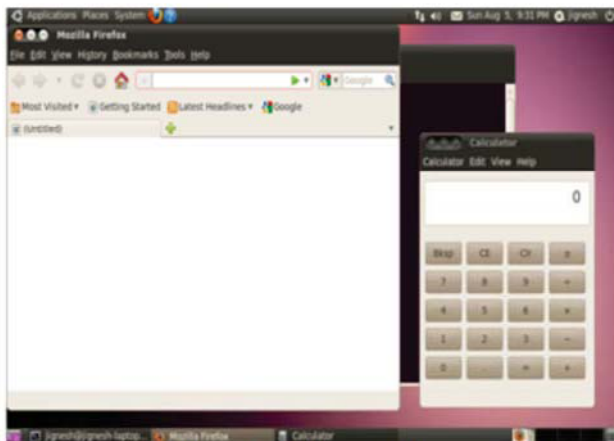
The Desktop

The desktop is the entire area between the top and bottom panels. A background picture is displayed on it. Any other item the user puts on the desktop will be placed in front of the background, obscuring that much portion of the background. Initially the desktop is empty, but the user may place frequently used files, directories as well as application launchers on the desktop for quick access.

In reality, all the items the user places on the desktop are actually stored in the subdirectory named "Desktop" in the user's home directory. Right clicking on any empty area of the desktop brings up a context menu that allows us to create folders, files and application launchers on the desktop. The process of creating an application launcher is same as the one for creating a custom launcher in the top panel described above. Alternatively, we may drag and drop files and folders from the Nautilus file browser onto the desktop or application launchers from the "Applications" menu or the top panel onto the desktop. The context menu also has an option to change the desktop background picture.

Whenever we insert a removable device, an icon for the same is displayed on the desktop. We may open it by double-clicking on it. When we right-click on the icon, we get a context menu item to unmount the device/safely remove the device/eject the media depending on the type of the device.

Customizing the Appearance of the GNOME Desktop

GNOME supports themes. A theme is a harmonious combination or bundle of various display settings. By changing the theme, we may switch from one set of settings to another. Switching the theme and background may result in substantially different look and feel (See figure 7.16).

a. The Ambience Theme
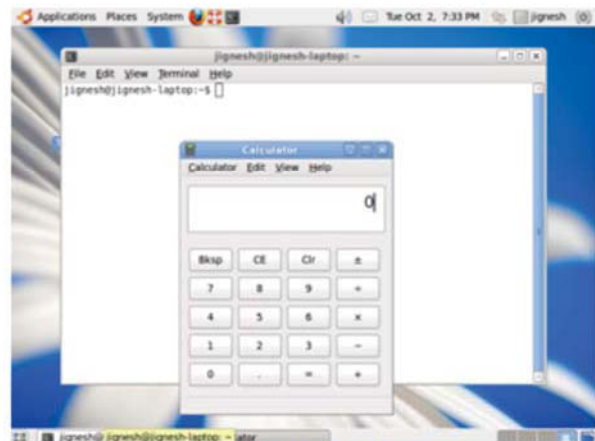
b. The Clearlooks Theme

c. The Dust Sand Theme

d. The High Contrast Inverse Theme

Figure 7.16 : Some Ubuntu GNOME Desktop Themes

The High Contrast Inverse theme is for the visually challenged having limited vision. The high contrast ratio and light-on-dark colour scheme make it easy to read text.

The Appearance option in the Preferences menu has four tabs – Theme, Background, Fonts and Visual Effects. The Theme tab allows us to choose a theme from a list of installed themes. More themes are available online. The Background tab lets us choose the background. We may choose a solid colour that fills the whole desktop area, or a gradual transition from one colour to another (horizontal gradient or vertical gradient) or a picture as the background (See figure 7.17).
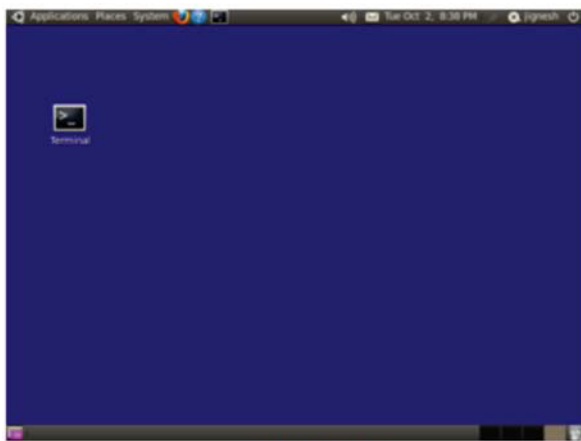
a. Solid Colour
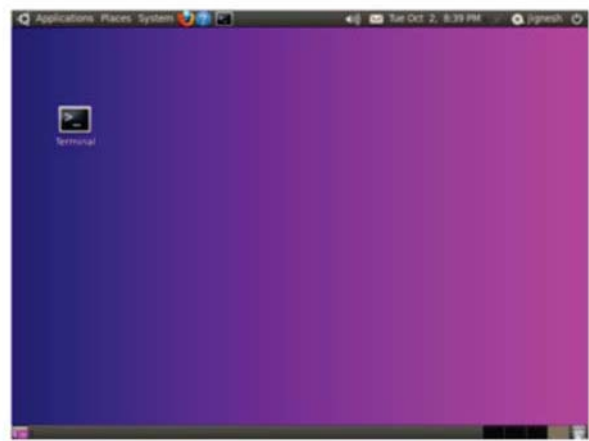
b. Horizontal Gradient

c. Vertical Gradient

d. Picture

Figure 7.17 : Different Background

The Fonts tab can be used to select the default fonts. To modify the fonts click on fonts tab as seen in figure 7.18.

The Visual Effects tab has three levels of special effects to choose from – None, Normal and Extra (in increasing order of visual eye-candy provided). The default is none. Setting a higher level enables a wide range of 2D and 3D visual effects. Depending on the graphics

Figure 7.18 : Fonts Tab

capability of your system, the Normal and Extra options may or may not work. If some option cannot work on your system, trying to set that option will result in the message shown in figure 7.19.
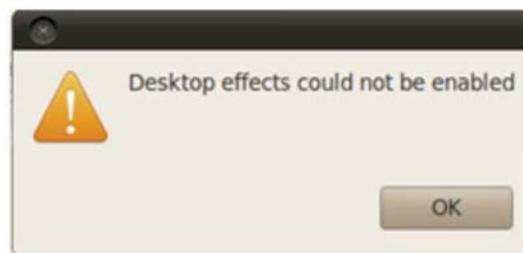

Figure 7.19 : Error Message

The list of some of the interesting special effects that you get is as mentioned below:

- **Desktop Wall** treats the workspaces as walls that the user can switch between
- **Desktop Cube and Rotate Cube** treat the workspaces as faces of a cube that the user can rotate, just like rolling a die
- **Magnifier** allows the user to magnify certain portion of the screen for better readeability, especially useful for demonstrations before a large audience using a multimedia projector
- **Enhanced Zoom Desktop** Allows the user to zoom in/out the desktop at the current location of the mouse pointer using the combination SUPER+mouse_scroll_wheel
- **Opacity** makes windows visible simply by hovering the mouse over (moving the mouse pointer over) any portion of the window

- **Window Previews** displays small preview window for an application when we hover the mouse over its mini representation in the bottom panel. The preview window shows the contents of the window

- **Blur Windows** makes windows translucent to show a light preview of what is behind them

- **Fading Windows** makes windows fade in (from an invisible state, become gradually more visible until fully visible) or fade out (from a fully visible state, become gradually less visible until invisible) when they are maximized or minimized respectively

- **Minimize Windows** makes windows decrease / increase their size in an animation when minimizing / unminimizing

- **Water Effect** displays effects as if the screen were a pond full of water and the mouse were a pebble thrown in

- **Wobbly Windows** makes the windows "wobble" (shake) when moved or maximized.

- **Animation** A combination of several window effects

Summary

In this chapter we discussed the GNOME2 desktop. We saw how to use the three major components of GNOME2 that is the top panel, the desktop and the bottom panel. We looked at the list of built-in software available under the Applications menu. We also learnt the use of the Places menu and the options available under the System menu. Finally we saw how to customize the appearance of the GNOME2 Desktop.

EXERCISE

1. What are the three major components of the GNOME2 desktop screen ?

2. Discuss the main components of the top panel in GNOME2.

3. List and discuss the menu items under the Places menu in Ubuntu using GNOME2.

4. List the menu items under the Administration submenu in Ubuntu using GNOME2.

5. What are application launchers ? Discuss the ways to put launchers in the top panel.

6. How can we create a custom application launcher ?

7. List and discuss the indicator applets installed by default in Ubuntu using GNOME2.

8. What is the "Me Menu" ? What is its use ?

9. Describe Ubuntu One. Discuss why Canonical might have started this service.

10. Explain the options in the session menu in detail.

11. What are the uses of the desktop ?

12. What are the contents of the bottom panel ?

13. What is Trash ? What benefit does it provide ? What is its major limitation ?

14. What is a theme ?

15. **Choose the most appropriate option from those given below :**

(1) Which of the following is NOT a Linux desktop manager ?

(a) KDE   (b) LXDE

(c) Unity   (d) Brasero

(2) Which of the following is a light-weight desktop manager ?

(a) KDE   (b) LXDE

(c) Unity   (d) GNOME2

(3) Right-clicking an item brings up -

(a) context menu   (b) global menu

(c) tool tip   (d) system menu

(4) Which of the following is not a menu in GNOME2's top panel under Ubuntu ?

(a) Applications   (b) Places

(c) Preferences   (d) System

(5) Which of the following is not a part of the top panel in Ubuntu with GNOME2 ?

(a) mini-representations of windows   (b) application launchers

(c) session menu   (d) notification area

(6) Which of the following is not a part of the bottom panel in Ubuntu with GNOME2 ?

(a) Show Desktop icon   (b) Trash icon

(c) desktop/workspace switcher   (d) notification area

(7) Which of the following is not an application category by default in the Applications menu ?

(a) games   (b) administration

(c) graphics   (d) office

(8) Which of the following applications is not available in the office category ?

(a) OpenOffice.org Writer   (b) OpenOffice.org Draw

(c) OpenOffice.org calc   (d) OpenOffice.org Impress

(9) Which of the following is not a folder inside the user's home directory ?

(a) Desktop   (b) Music

(c) Documents   (d) Computer

(10) Which of the following is a built-in application launcher in the top panel ?

    (a) OpenOffice.org Writer   (b) OpenOffice.org calc

    (c) Help   (d) All of these

(11) Launchers in the top panel can be separated by -

    (a) line   (b) vertical bar

    (c) horizontal bar   (d) separator

(12) Which menu is identified by the currently logged in user's name ?

    (a) the Me menu   (b) the User menu

    (c) the Personalize menu   (d) the session menu

(13) The cloud service from Ubuntu is known as -

    (a) Ubuntu One   (b) Ubuntu Music Store

    (c) Ubuntu Cloud   (d) Ubuntu Drive

(14) Files deleted from the Nautilus file browser go into -

    (a) Recycle Bin   (b) Recycle Can

    (c) Trash Can   (d) Trash Bin

(15) Which of the following is NOT a built-in theme for Ubuntu ?

    (a) Ambience   (b) ClearType

    (c) Dust Sand   (d) High Contrast Inverse

LABORATORY EXERCISE

Perform the following operations under Ubuntu and note down the steps used to perform them :

1. Create a launcher for the Terminal application in the top panel.

2. Create a launcher for the Calculator application on the Desktop.

3. Invoke the context menu on the desktop launcher created in step 2 above.

4. Start the Calculator application from the menu system.

5. Open your home directory from the menu system.

6. List the directories present by default under your home directory (excluding hidden directories explained in the next chapter).

7. List all storage devices currently available in your computer.

8. Open Network from the menu system and note if you can see other computers in your laboratory (the result depends on the laboratory setup).

9. Search for the file(s) containing the word "fstab" in its name in the file system. How many such files do you find ?

10. View a list of recently opened documents.

11. * Insert a removable device in the system and explore its contents.

12. * Safely remove/eject the media from the context menu of its desktop icon.

13. Apply different themes and backgrounds to your system and observe the results.

14. Change the default font sizes for different categories and observe the result.

15. Try to set Visual Effects to Normal and High. Observe the result.

16. Look at previews of available screen savers. Try a few that you like.

17. Set the title bar double click preference of windows to different values and observe the results.

18. Read the topic "New to Ubuntu ?" and its subtopics in the built-in help.

19. Note down the version of Ubuntu used on your system.

20. Add a separator to the top panel.

21. Add a custom launcher to the top panel for the GUI file browser program nautilus available in the bin directory inside the usr directory in the file system. Do not provide an icon and see what icon you get.

22. Move the nautilus launcher you created earlier around in the top panel.

23. Lock the position of the nautilus launcher you created earlier. Now try to move it around.

24. Swap the positions of the default launchers in the top panel.

25. Remove the nautilus launcher you created earlier.

26. Check the current system date, time and day of the week.

27. Find out the day of the week on 2nd October, 2012 and 15th August, 1947.

28. Find out the day of the week on the day you were born.

29. * Experiment with the options in the session menu.

30. Start a guest session. Open the home folder. Notice the title bar of the window. Create a document (empty file) in the home folder using the context menu. Logout, start a guest session again and see whether you still have the file.

31. Place a launcher on the desktop. See if you see it in the Desktop folder in your home directory. Delete the file in that folder (by selecting it and pressing the Delete key). Look at the desktop again.

32. Create an empty file in your home folder. Delete it. Locate it in Trash and restore it. Again delete the file; then empty the Trash.

33. Open different applications in different workspaces. Switch between the workspaces using the keyboard and the mouse.

34. Open different applications in the same workspace. Switch between the application using the keyboard and the mouse. If you have "Extra" effects enabled, find out the difference caused by them.

35. Cycle through the list of running applications in forward and reverse orders.

36. Note the position and order of the window buttons on your system.

NOTES TO TEACHERS

- Students are expected to undo the changes in preferences made by them before leaving the laboratory to the extent possible.

- Exercises marked with a * in the beginning may be demonstrated by the tutor rather than being performed by the students.

- The list of special effects under the subsection "Customizing the Appearance of the GNOME Desktop" are provided only for students to appreciate the power and visual attractiveness of Linux GUIs. They are not to be covered in examinations.

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