

## Unit- 4

### Operation of Computer System and Hardware for Professional work

*Working with operating system (Desktop, file and folder management, user account and password protection).*

#### Why is Microsoft Windows called Windows?

Before the release of Microsoft Windows, Microsoft users were used to the single-task **command line** operating system MS-DOS. Because Microsoft names most of its products with one word, it needed a word that best described its new GUI operating system. Microsoft chose "Windows" because of the multiple windows that allow different tasks and programs to be run at the same time. Because you cannot trademark a common name like "Windows" it is officially known as "Microsoft Windows". The first version of Microsoft Windows was version 1.0, released in 1985.

#### file and folder

All the data on your hard drive consists of files and folders. The basic difference between the two is that files store data, while folders store files and other folders. The folders, often referred to as directories, are used to organize files on your computer. The folders themselves take up virtually no space on the hard drive. Files, on the other hand, can range from a few bytes to several gigabytes. They can be documents, programs, libraries, and other compilations of data.

#### File

A file is a collection of data stored in one unit, identified by a filename. It can be a document, picture, audio or video stream, data library, application, or other collection of data. The following is a brief description of each file type.

A collection of data or information that has a name, called the filename. Almost all information stored in a computer must be in a file. There are many different types of files: *datafiles*, *text files*, *program files*, *directoryfiles*, and so on. Different types of files store different types of information. For example, program files store programs, whereas text files store text.

Documents include text files, such as a Word documents, RTF (Rich Text Format) documents, PDFs, Web pages, and others. Pictures include JPEGs, GIFs, BMPs, and layered image files, such as Photoshop documents (PSDs). Audio files include MP3s, AACs, WAVs, AIFs, and several others. Video files can be encoded in MPEG, MOV, WMV, or DV formats, just to name a few.

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A library file is a unit of data that is referenced by a specific program or the operating system itself. These include plug-ins, components, scripts, and many others. An application is a program, or executable file. Programs such as Microsoft Internet Explorer and Apple iTunes are both applications, but are also files.

Files can be opened, saved, deleted, and moved to different folders. They can also be transferred across network connections or downloaded from the Internet. A file's type can be determined by viewing the file's icon or by reading the file extension. If the file type is associated with a specific application, double-clicking the file will typically open the file within the program.

#### Folder and file management

**.Use My Documents.** For many reasons, it's smart to take advantage of My Documents feature in Microsoft Windows. To open My Documents in Windows, click **Start**, and then click **My Documents**. My Documents provides an easy way for you to store your personal documents. By using My Documents, you will be better able to:

•**Find files.** Windows provides easy access to the My Documents folder (and its subfolders) in many places: through the Start menu, the task pane in Windows Explorer, common File Open and File Save dialog boxes, and other places.

**Note** Windows Explorer displays the structure of files and folders on your computer. To open Windows Explorer, click **Start**, point to **All Programs**, point to **Accessories**, and then click **Windows Explorer**.

•**Back up files.** Keeping all your files in one place is an essential first step in developing a practical backup strategy. Learn how to backup your files and folders.

•**Keep files separate from programs.** By separating document files and program files you reduce the risk of accidentally deleting your documents when you install or upgrade programs.

2.**Adopt consistent methods for file and folder naming.** Develop a naming scheme for the kinds of files you create most often and then stick to it.

3.**Keep names short.** Even though Windows allows you to use long file names, it does not necessarily mean you should. Long names produce cluttered displays. Brevity promotes clarity.

Let your folders do some of the naming. For example, rather than create a file called Great American Novel Chapter One First Effort.doc, you can build a structure like:

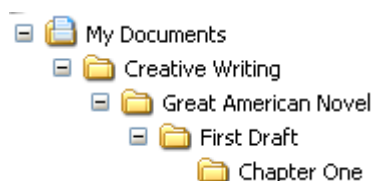


Figure 1: Suggestion of how you can keep folder names short

4.**Separate ongoing and completed work.** To keep the My Documents folder from becoming too unwieldy, use it only for files you're working on. This reduces the number of files you need to search through and the amount of data you need to back up. Every month or so, move the files you're no longer working on to a different folder or location—preferably not in My Documents. You can archive them on a folder on your desktop (you could even label it Archives) or move them to a backup tape or recordable CD. Your My Documents folder, which you should back up frequently, remains relatively small.

5.**Store like with like.** Restricting folders to a single document type (or predominantly one type) allows you to take advantage of folder templates in Windows Explorer. This makes it easier for you to find files. For example, with all your graphics in a single folder, it's easy to use the Filmstrip view and slide show feature in Windows Explorer to find the right picture for your newsletter.

6.**Avoid big folder structures.** If you need to put so many subfolders in a folder that you can't see all of them at a glance, consider creating an alphabetic menu. An example is shown in Figure 2.

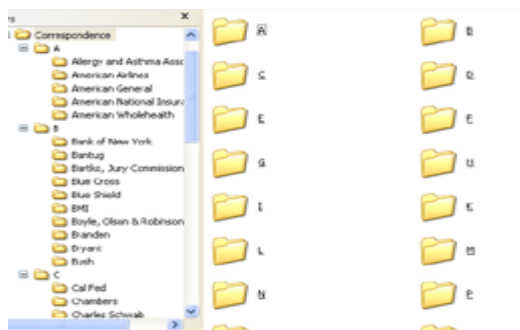


Figure 2: Example of how you can avoid big file structures by using an alphabetic menu

7.**Use shortcuts and shortcut links instead of multiple copies.** If you need to get to the same file from multiple locations, don't create copies of the file. Create shortcuts to it instead. To create a shortcut, right-click on the file and click **Create Shortcut**. You can drop-and-drag the shortcut to other locations.

## Reader Tips

1.**Use abbreviations.** Keep file names short by using common abbreviations, such as "MTG" for meeting or "ACTG" for accounting. This makes the file names more descriptive and you can more easily find files through Search if it's necessary.

2. **Use thumbnails.** Search through folders in the Thumbnail view. They're easier to see and you can put a picture or clip art on the folder so that it's more easily recognizable. For example, a folder that contains information about a product can have a picture of the product—or something else that reminds you of the folder contents.

To view your folder list in Thumbnail view, on the My Documents folder, in the toolbar click **View** and then select **Thumbnail**.

To put a picture on the folder, right-click the folder and click Properties. In the **Properties** dialog box, click the **Customize** tab. In the Folder pictures area, click **Choose Picture**.

3. **Use common names.** To make it easier to search for documents, name your files and folders with easily found names, such as model numbers, project names, or the project lead in the title.

4. **Don't save unnecessary files.** Be selective about the files you keep. You probably don't need to keep them all. With e-mail, for example, you rarely need to keep everything you receive.

5. **Use My Recent Documents.** To find a file a just worked on, use My Recent Documents in the Start menu.

6. **Put My Documents on the desktop.** Put a shortcut to My Documents on the desktop. You can save several clicks of the mouse to get where you want to be sooner.

7. **Organize files by dates.** Use a date in the document name. Such as jeb100201, which would mean October 2, 2001. This puts all the Jeb materials together and sorted by date.

8. **Color code your folders.** I have a third party program which allows me to "color" certain folders in My Documents that I use every day. This allows me quick access to open or save a document.

## Folder

A **folder**, also called a directory, is a special type of file on your computer's file system which contains other files and folders. When you are browsing the files on your computer using a File Manager, such as Windows Explorer, the icon for a folder will typically look similar to the image at the right. A folder can contain any type of file, including other folders.

## Why are folders important?

Folders help you keep your files organized and separate. If you had no folders on your computer, your documents, programs, and operating system files would all be located in the same place. Folders also allow you to have more than one file with the same file name. For instance, you can have a file called **Resume.doc** in your **My Documents** folder, and another file called **Resume.doc** in a different folder called **Resume templates**. If all your files were in a single place, every file would need a unique file name.

## Windows Desktop

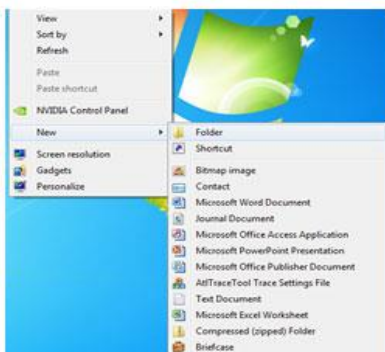
1. Navigate to the Windows Desktop.
2. Right-click with your mouse on any blank portion of the Desktop.

In the menu that appears (like that shown in the picture to the right), click **New** and then **Folder**.

3. A new folder will appear. Type the name of the folder you want to use and then press Enter.

## Create a new folder using a shortcut key

While in Windows Explorer you can press **Ctrl+Shift+N** to create a new folder without using the mouse.



- Select the file or folder you want to encrypt.
- Right-click the file or folder and select Properties.
- On the General tab, click the Advanced button.
- Check the box for the "Encrypt contents to secure data" option.
- Click Apply and then OK.

### **Mobile computing and applications**

Mobile computing is to describe technologies that enable people to access network services anyplace, anytime, and anywhere, with portable and wireless computing and communication devices.

Mobile Computing is a generic term describing the application of small, portable, and wireless computing and communication devices. This includes devices like laptops with wireless LAN technology, mobile phones, wearable computers and Personal Digital Assistants (PDAs) with Bluetooth or IRDA interfaces, and USB flash drives.

#### **Applications of mobile computing**

##### **1. Vehicles**

- transmission of news, road condition, weather, music via DAB
- personal communication using GSM
- position via GPS
- local ad-hoc network with vehicles close-by to prevent accidents, guidance system, redundancy
- vehicle data (e.g., from busses, high-speed trains) can be transmitted in advance for maintenance

##### **2. Medical**

- Nurses/Doctors in Medical offices are now using Wireless Tablet PCs/WLAN to collect and share patient information.

##### **3. Sales**

- Sales representatives are using Tablet PCs with Smart phones for presentation, transmitting/access information among office, hotel, and customer location.

##### **4. Emergencies**

- Early transmission of patient data to the hospital, current status, first diagnosis
- Provide mobile infrastructure in dealing with Natural Disaster (earthquake, hurricane, fire), terrorist attacks, war, ...