CHAPTER THREE

ICT FILE AND FOLDER MANAGEMENT

INTRODUCTION

Hard disk drives have become very large in recent years and are capable of holding millions of data files created by computer applications installed on the computer. As a result, a method of organising these files is essential. Windows uses folders to achieve this. File management is about arranging your work on a computer in a way that makes it accessible and easy to use. While working with your computer programs, you create and save files, such as letters, drawings, or budgets in an organized way. You use folders to group related files, as with paper folders in a file cabinet. In this chapter you will be able to use different types of storage media to store information following the structure of files, folders and directories.

File management

- File management is a way that an operating system use to organize and keep track of files.

KEY WORDS:

- **FILE**
- **FOLDER**

FOLDERS

- A **folder** is a storage location for files and sub-folders. It's also known as a **directory**.
- Files can be stored in folders. Folders can be stored within other folders and these are referred to as **sub-folders.**
- Folders help in storing and organizing files in the computer.

Common operations in relation to files & folders

Creating a folder

i. Right click in any empty or free part of the desktop
ii. From the drop down menu, select new.
iii. Then choose folder.
iv. Give the folder an appropriate name.

Renaming a file/folder

i. Right click the file/folder
ii. Select the rename option
iii. Give the file/ folder a new name

Other operations you need to know are

- How to move a file or folder
- How to delete a file or folder
- How to restore a file from recycle bin (deleted file)
- How to bypass recycle bin

Advantages of keeping files in folders

- Files in folders can easily be compressed and sent via e-mail.
- Files can easily be protected by providing security on a folder.
- Files can easily be shared on a network.
- Files in a folder can easily be copied from one location to another.
- Folders allows better organization of files. Eg according to type.

COMPUTER FILE

- A file is a collection of data stored in one unit, identified by a filename.
- A file can be a document, picture, audio or video stream, executable file (software), or other collection of data.

FILE NAME

- A **file name** is the complete title of a file and file extension. For example, "**readme.txt**" is a complete or full file name.

NOTE

- Each file has a file name
- Each file name has two parts, ie:-
  i. **File name or document name**
  ii. **File extension**
- In a file name, the first portion for example, "readme" is the name of the file and ".txt" is the file name extension of that file.
- By default the computer allocates a name to a file which you can change.

Tips for file naming

- Special characters such as ~ ! @ # $ % ^ & * ( ) ` ; < > ? , [ ] { } ' " and | should be avoided.

FILE EXTENSIONS

- A file extension is the last part of a file name after the dot, containing characters based on the program used to create the file.
- Most file extensions are three characters long, but they can be shorter or longer as well.

USES OF FILE EXTENSIONS

- The file extension helps to identify the file type.
- The file extension is used by the operating system to select the best application to open the file.

The table below shows examples of some file extensions

Application program	File extension
Files created by Microsoft Word	.doc / .docx
Files created by Microsoft PowerPoint	.ppt / .pptx
Files created by Microsoft Excel	.xls
Files created by Microsoft Access	.mdb
Graphics Interchange Format, a digital image file format	.GIF
A graphics file commonly used for photos and illustrations	.JPG/.JPEG
Text files associated with the Notepad program	.txt

File Short Cut

- What is a file short cut? A file **shortcut** is a link on the user interface that points to a file located in a different directory or folder from where the shortcut is located.
- Shortcuts are very commonly placed on a desktop.

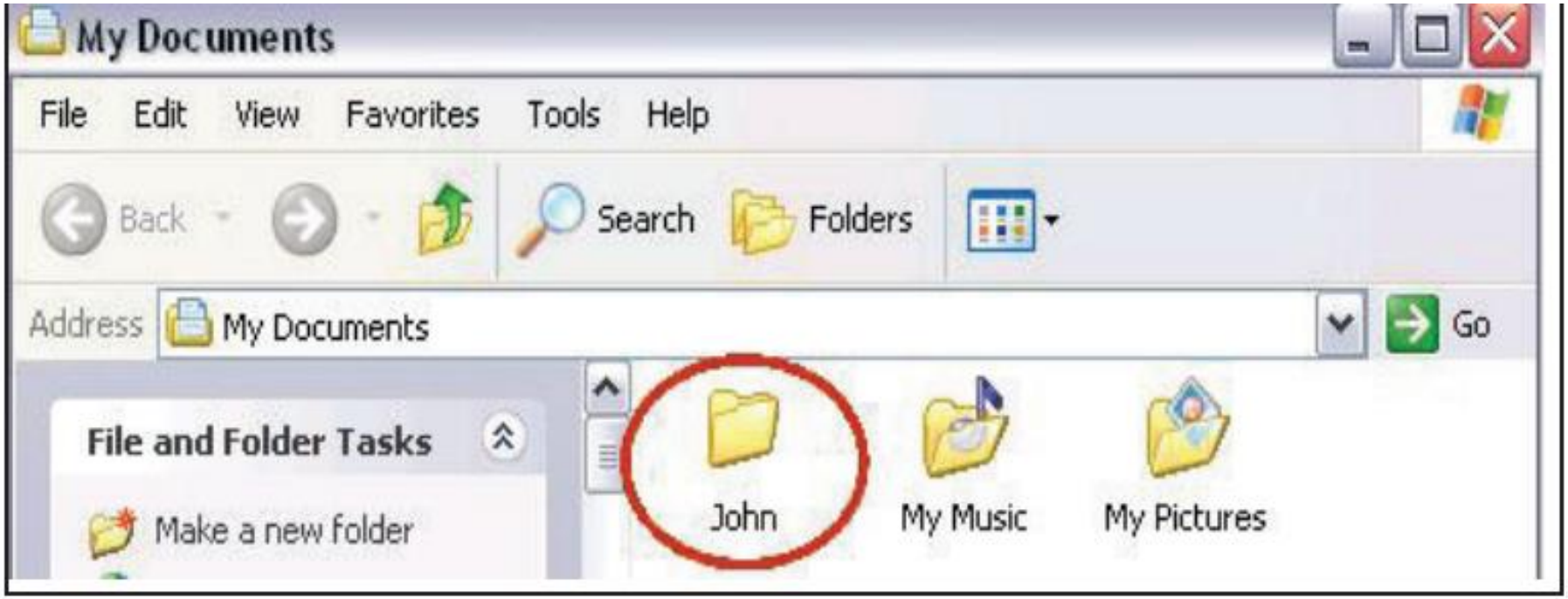
Advantages of file short cuts.

1. Helps to launch/open a file very fast.
2. Can be used to avoid accidentally deleting files, since the real files are kept in other directories(folders)

Organising Files

The management of computer files and paper files has much in common. If all the paper documents accrued in a house or business were stored in a single drawer without using paper folders, it would soon become impossible to find anything. A well organised house will have some filing system to segregate electric bills from telephone bills and from bank statements etc. Files on a computer should be managed in a similar manner. A good practice is to use a **Personal Folder** to organise your files. This is the equivalent of a filing cabinet in paper filing. It can be created in the **My Documents folder** or in the **C: Drive** of the computer. This folder is the **Root Folder** of the filing system. Subfolders can then be created for subject areas. Within these, further subfolders can be used to organise the files within each subject. An example is shown below

- Create a root folder in My Documents



- Create sub-folders within the root folder for subject areas etc.

Note: This organisation will make files easier to find and **backing up** your files will involve copying the **root folder** to the backup device

Managing Files and Folders

- Files and folders can be **selected, copied, pasted, moved, renamed** and **deleted.**

Activity

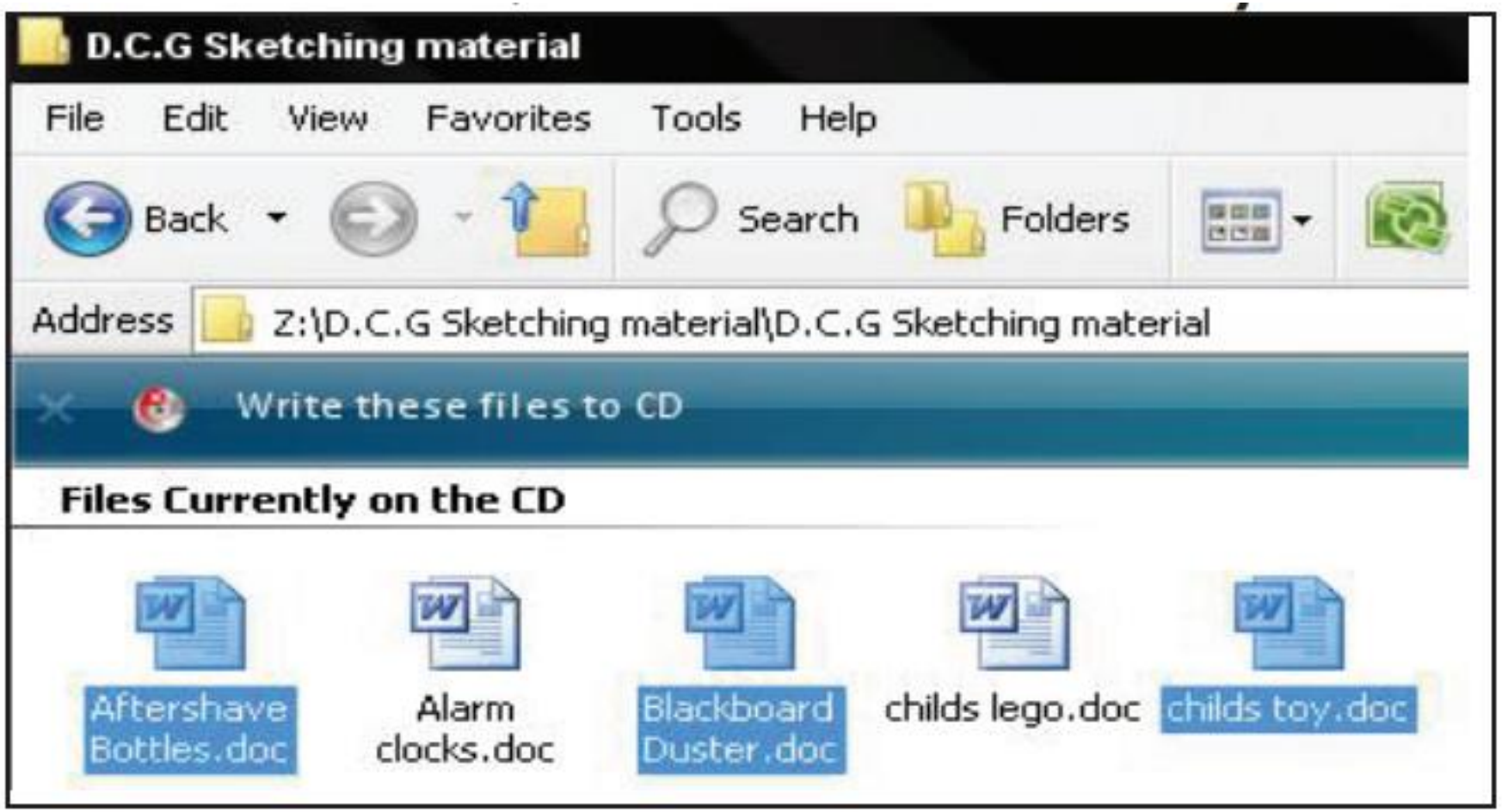
3.3: Selecting Files.

- Open a drive or go to desktop where there are files and folders.
- To select a single file, just click it. It changes colour on selection

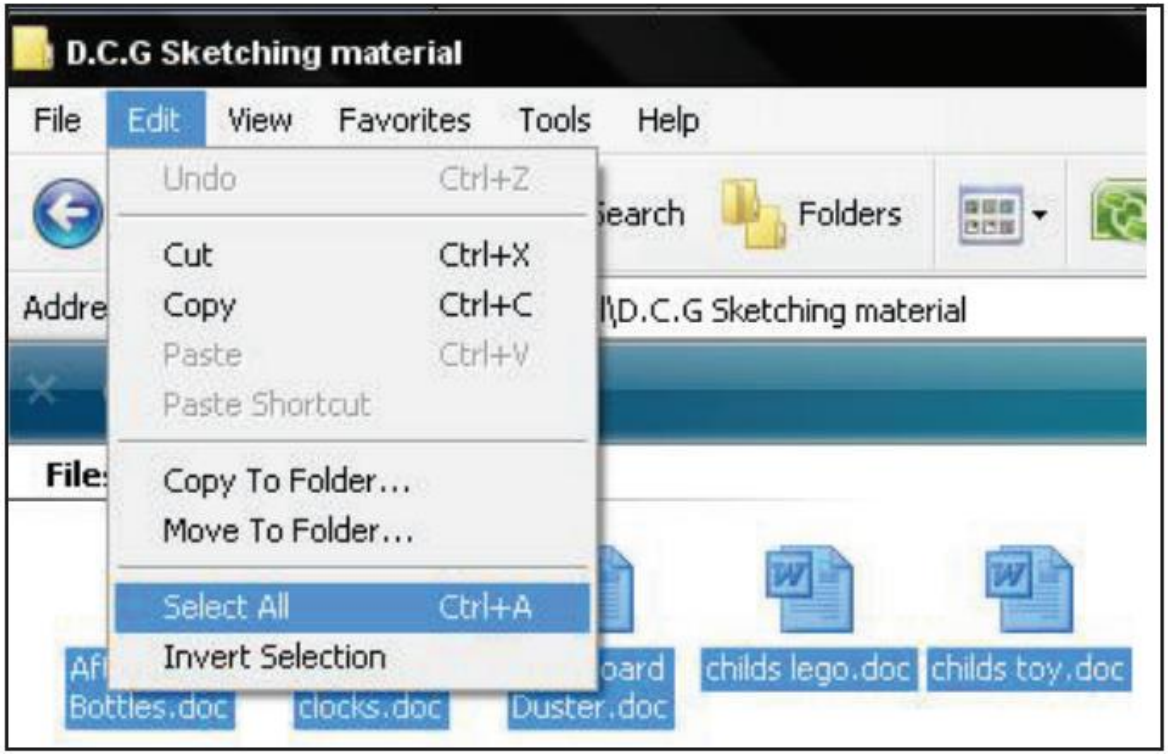
The selected file changes colour below

To select consecutive files, click the first file, hold down the **Shift** key and select the last file. The files in between are automatically selected.

To select non-consecutive files, hold down the **Control** key (Ctrl) and select the files in turn(one by one)



To select all the files in a folder, click the Edit command and choose Select All.

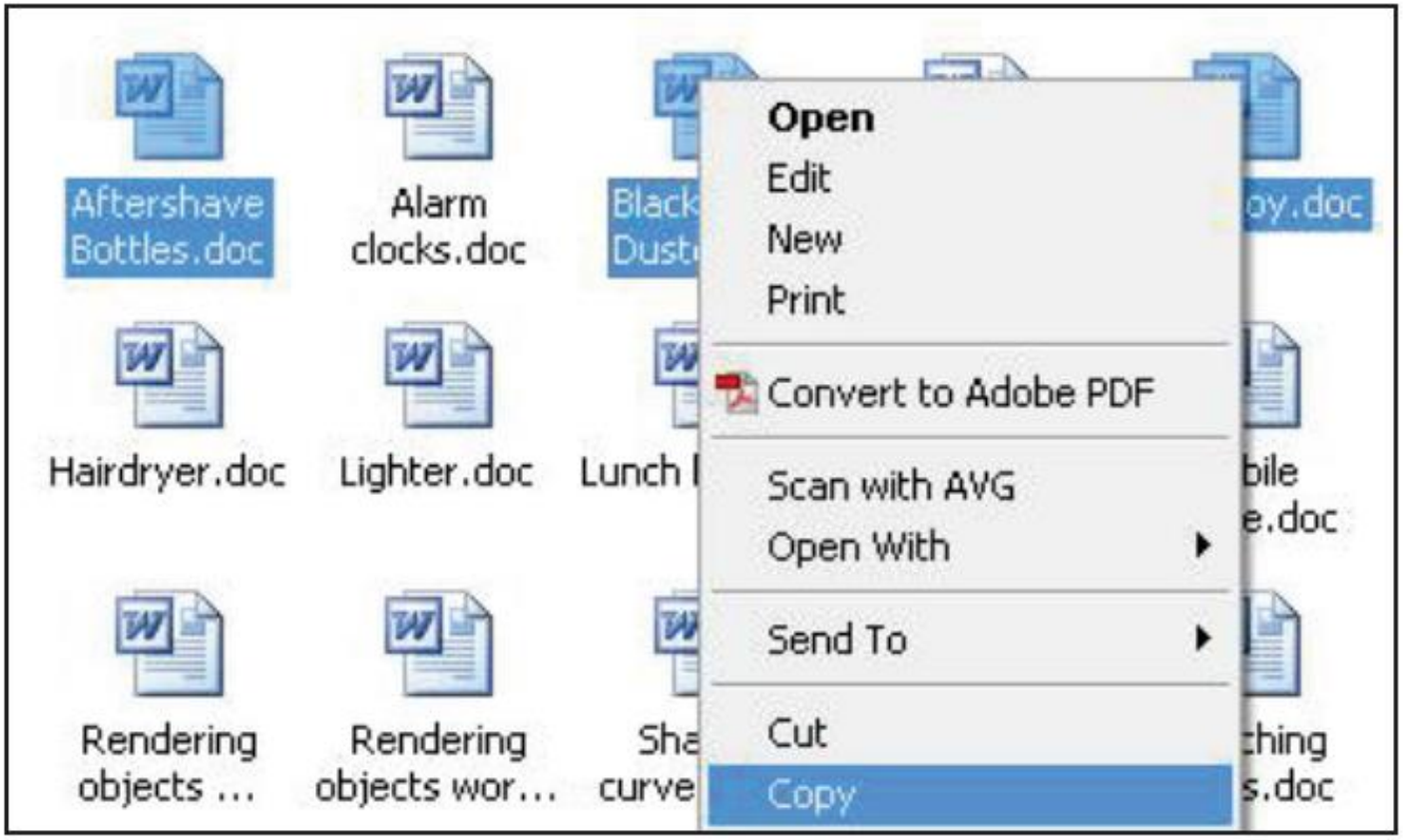


Or

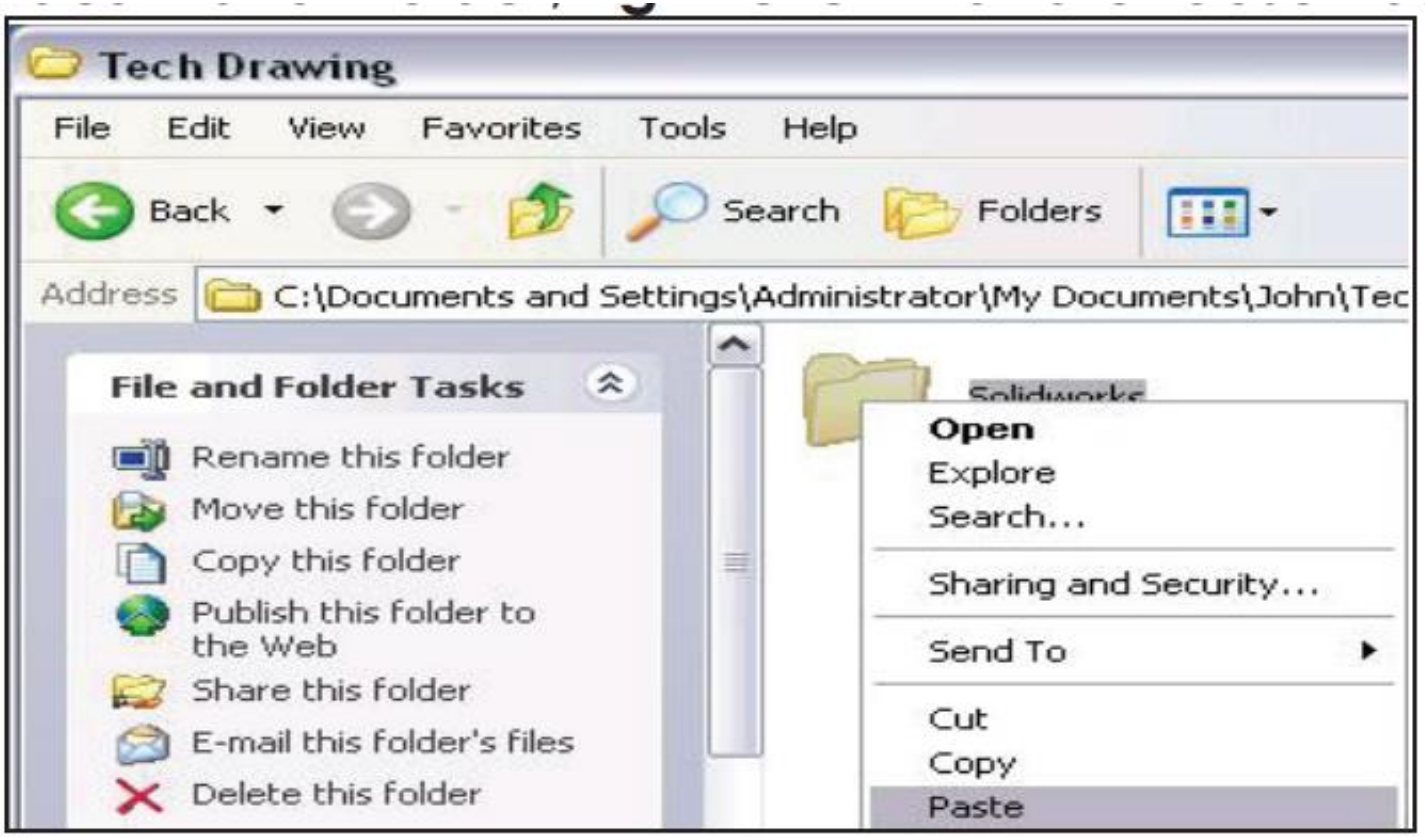
From the keyboard, select **Ctrl** + **A** keys simultaneously, all the files/folders will be selected

Copying and pasting files

First select the required file/s. Then right-click the files and choose Copy. The files are copied in an area of memory called the Clipboard

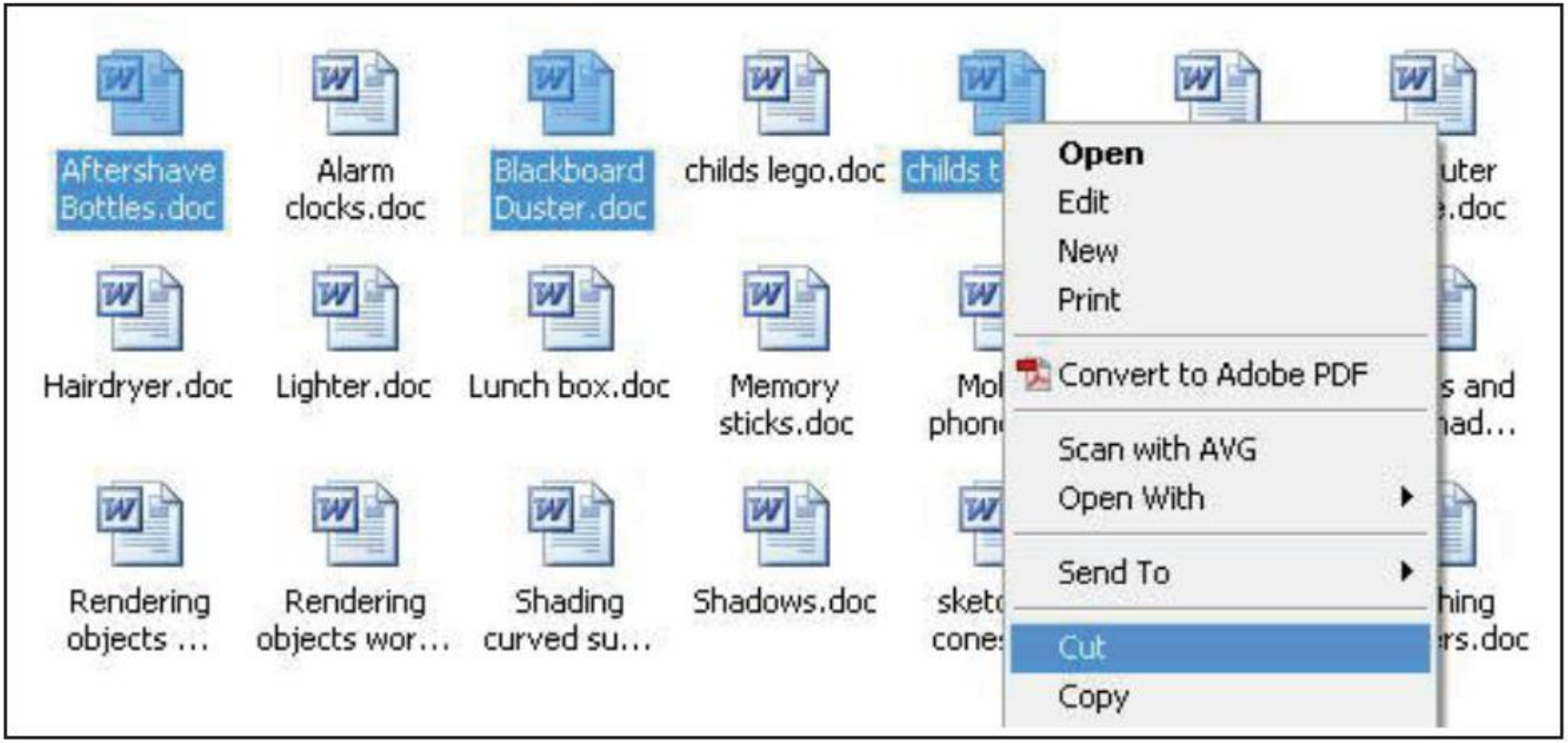


Browse to the destination folder, right-click it and choose Paste



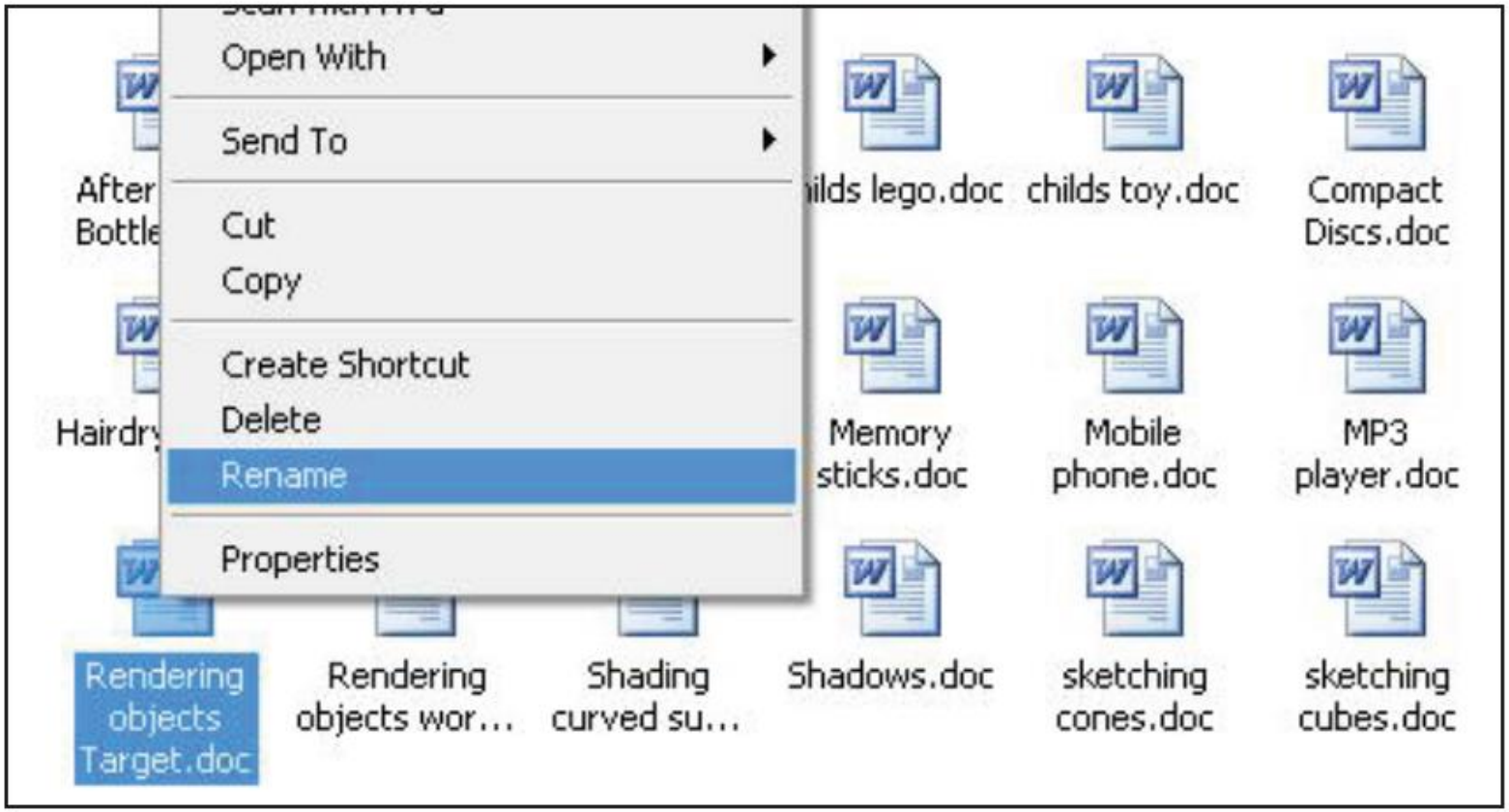
Moving Files

The procedure is similar to copy and paste except that instead of choosing Copy, you choose Cut



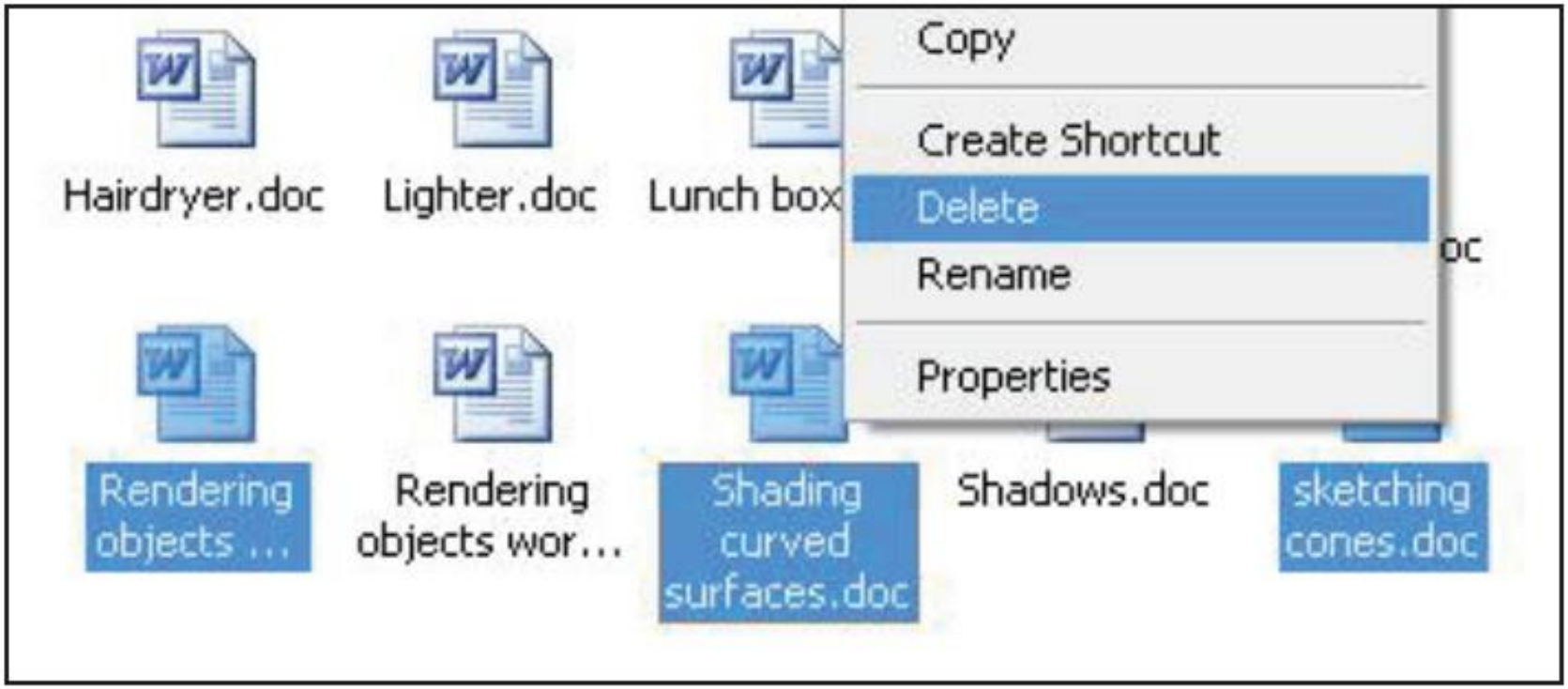
Rename Files

Files must be renamed individually. To rename a file, right-click it and choose Rename. Type the new name and press **Return/Enter** key or click away from the file



Deleting Files

Select the files to be deleted. Right-click any selected file and choose delete from the menu. Click the Yes button in the dialog box to confirm delete



The Recycle Bin

Files and folders deleted from the computer are placed in the recycle bin. They are not lost until the recycle bin is emptied

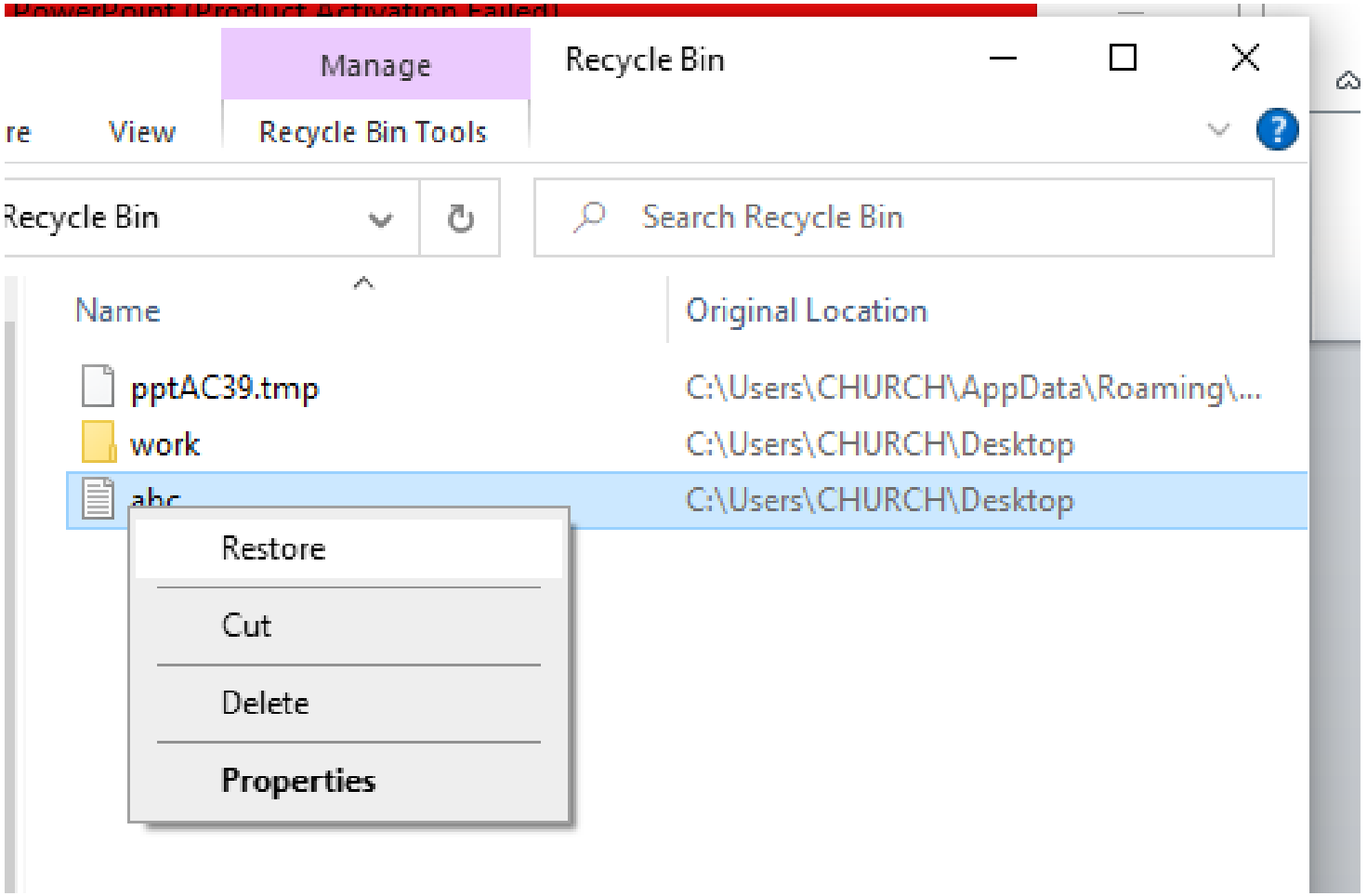
Managing the Recycle Bin

- Delete a folder normally by right-clicking the folder and selecting Delete.

Check in the Recycle Bin to confirm if the folder/file has arrived.

To Undelete the folder, right-click the recycle bin and choose Open

Right click on the file to undelete and choose restore. The folder/file will be restored to its original location as it gets out of the recycle bin



ACTIVITY

Define the following;

i. Compressing a file
ii. Saving a file
iii. Moving a file
iv. Deleting a file
v. Copying a file
vi. Editing a file
vii. Renaming a file

TAKING CARE OF FILES

a. Constantly keep saving your file you are working with on a computer.
b. Install antivirus programs to guard files against viruses.
c. Make backup copies of files to prevent total data losses.
d. Delete all corrupt and unnecessary files on your computer.
e. Store files in a more safer format such as PDF, RTF to prevent corruption and virus infection.

How to Manage and organize computer files

i. Use of folders:- create a folder with descriptive names for easy identification to store your files.

ii. Creating backups:- this helps to restore files in case of disaster or failure.

iii. Creating passwords:- this will block un authorised users from accessing your files.

iv. Separate your files:- avoid keeping unrelated files together. Videos, images and programs files should be kept separately

v. Compress your files:- this creates more storage space on your hard disk or for easy transmission

Ways of keeping files secure on a computer

- Installing an updated antivirus software
- By putting passwords files.
- By limiting physical access or usage of computer by unauthorized users.
- By encrypting the files
- By avoiding usage of old storage devices

Causes of data/file loss in computers

- **Accidental deletion.** This is when files, folders or content in a file is deleted/erased unaware, which causes data loss.
- **Power fluctuation.** Power fluctuations cause system failure and data/information loss.
- **Computer viruses.** Computer viruses refer to computer programs that cause/alter the normal functioning of the computer. These also corrupt the files hence data loss.
- **System failure** caused by aging hardware.
- **Natural disasters** Eg floods that destroy hardware

Measurement of Storage Capacity

In a computer system, data is represented using the binary system; combinations of binary digits (bits). There are only two binary digits, 1 and 0.

These digits can be arranged in such a way that they represent characters, digits and other values.

Data storage has various units including bits (b), Bytes (B), Kilobytes (KB), Megabytes (MB), Gigabytes (GB), and Terabytes (TB)

Activity 3.6:

Data storage units 1.

i. Distinguish between a bit and a byte.

ii. What is the relationship between bits, bytes, kilobytes, megabytes, gigabytes and terabytes? Give examples where necessary.

Activity of Integration 1

A researcher saved her draft work on a CD ROM from a friend's computer with an intention of sending it to her supervisor by e-mail once she got home. However, on reaching home, she realized that her computer could not read a CD ROM.

Task:

How can you advise this researcher to have her work sent to the supervisor without physically going back to her friend?

Activity of Integration 2

- A student borrowed a computer with a hard disk of 40GB on which he saved his project work for 3 years. The project work on the hard disk is stored on a space of 30GB. Recently, the owner of the computer requested to have it back and provided the student with a pack of 100 CDs each with a storage capacity of 700MB on which project data can be transferred.

Task:

a) Describe how the project data could be transferred from the hard disk onto the CDs provided by the student.

b) How many CDs full of data do you think the student used? Give reasons for you answer.

Chapter Summary

In this chapter, you have learnt about:

a) *Creating, saving and transferring files across various media.*

b) *Converting data storage into various units.*