

SOFTWARE USER INTERFACES



User Interface



- All software has a user interface that is the part of the computer with which you can interact.
- The user interface controls how data and instructions are entered and how information is presented on the screen.

Types of User Interface



- Command-driven user interface
- Menu-driven user interface
- Graphical user interface

Command Driven User Interface (CDUI)



- This is a type of user interface, in which the user must enter a command for the computer to execute or work.
- The main interfacing device for this user interface is the keyboard.

An example of a Command Driven User Interface

```
C:\WINDOWS\System32\cmd.exe

C:\>dir/w
Volume in drive C has no label.
Volume Serial Number is AC6A-3C74

Directory of C:\

[3d76b9a29b72554230941691105f49f7] 3month.mdb
3month.xls                          3month1.ndb
AUTOEXEC.BAT                        Book3.xls
[BROS BACKUP CD]                     CONFIG.SYS
[GWONDERS]                           [DATA]
[Documents and Settings]             FixBlast.exe
[forte4j]                             [GraphicalApp]
[jdk1.3.1]                             [LocalwithDB]
[Program Files]                       setpath.bat
[Stata8]                               [TP]
user1.zip                             [UWI_CMP]
user2.zip
```

Advantages of the CDUI

- Faster to use once you have learnt the commands.
- For the computer programmer, a command driven interface is cheaper to implement.

Disadvantages of the CDUI

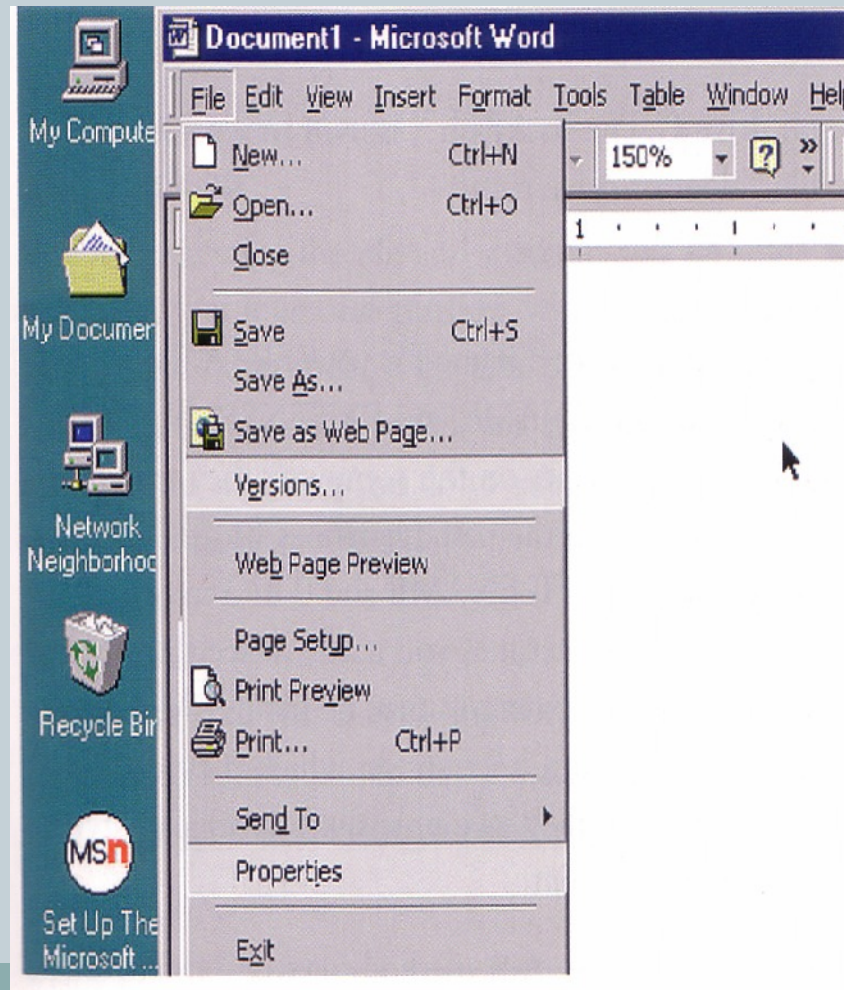
- The user has to remember all the commands or keep a user manual. This can be very difficult.
- Restricts users to only using the keyboard, while a wide variety of input devices can be used with other user interfaces.
- Commands must be entered at a special location on the screen.

Menu Driven User Interface (MDUI)



- This is a type of user interface in which the user selects a command or request from a list.
- The main interfacing device for the menu driven user interface is the mouse.

An example of a Menu Driven User Interface



Advantages of MDUI

- The user does not need to remember commands as they are presented with a list of options.
- Free from typing errors because the user does not type commands.
- A wide variety of input devices can be used to interface with menu options.



Disadvantages of MDUI

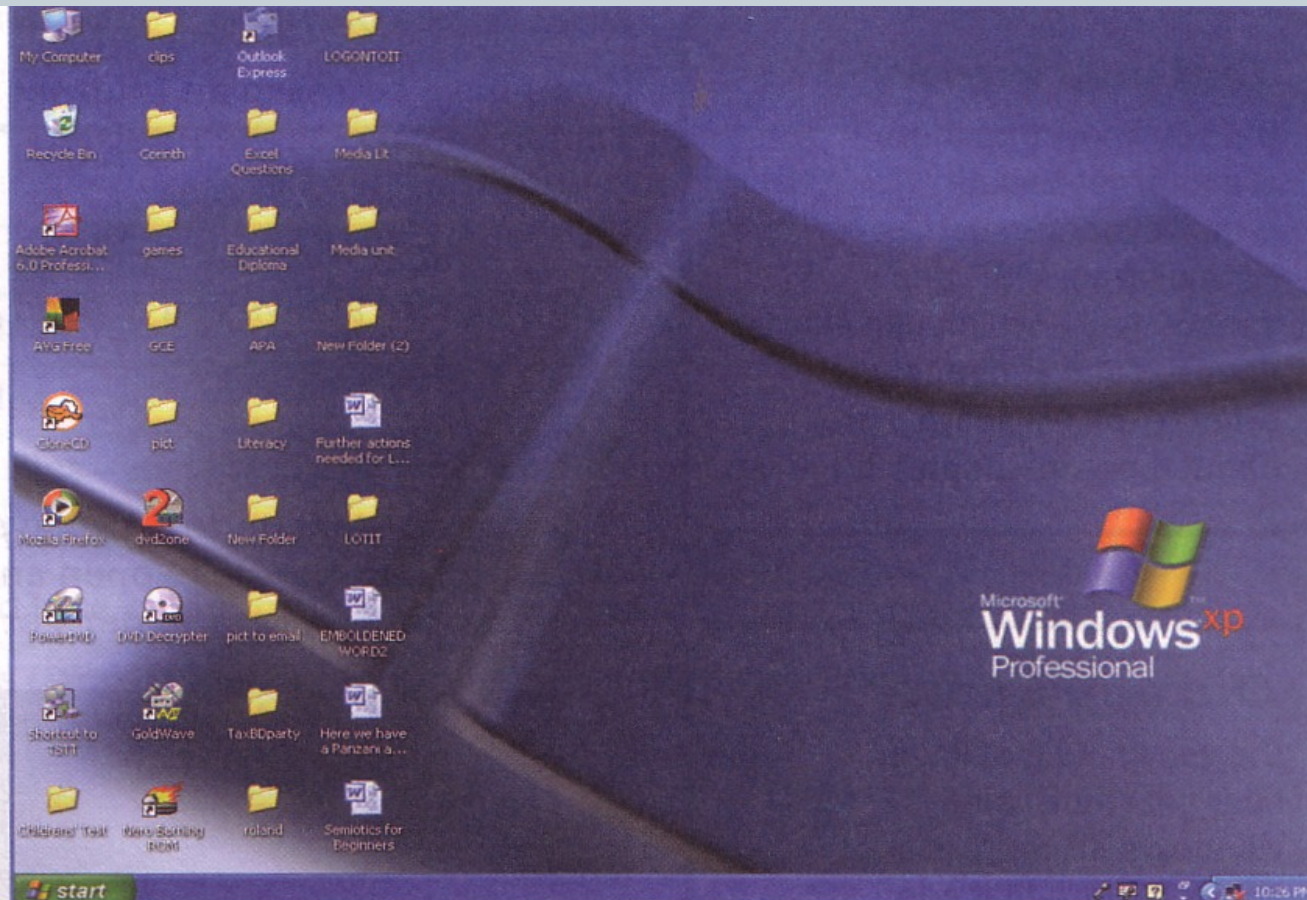
- It is slow because in order to execute a command one has to go through a series of menus.

Graphical User Interface



- This type of interface allows you to interact with the software using visual images such as icons.
- The main interfacing device for the GUI is the mouse.

An example of a Graphical User Interface



Advantages of GUI



- It is user friendly
- Reduces typing
- Fewer command errors
- Icons/symbols are easier to recognize and provide users with context.

Disadvantages of GUI



- May consume more screen space
- Increased use of computer memory can lead to slower processing
- The design of a graphical user interface is more complex for programmers.

Activity 1

1. What is the meaning of GUI?
2. What is an icon?
3. What are the types of user interfaces?
4. Which of the user interfaces do you prefer and why?

Activity 2

5 (a) Name the two types of interface which are presented in the figures below:



C:/dir

Figure 2

Activity 2



- (b) Discuss which user interface would be better for someone who is not familiar with a computer.

- (c) State the name of another user interface not mentioned in (a)