

College of computer technology
Information network department
Programming with Visual Basic

=====

Structure of a Visual Basic Application

To run Visual Basic program select, Start> Programs > Microsoft Visual Studio 6.0> Microsoft Visual Basic 6.0 as shown in Fig.(2-1). When Visual Basic is loaded, the **New Project** dialog shown in Fig.(2-2) is displayed.

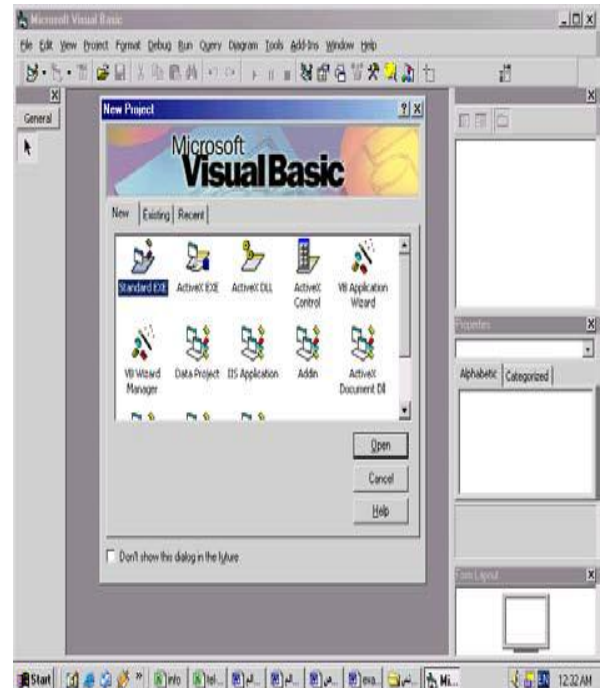
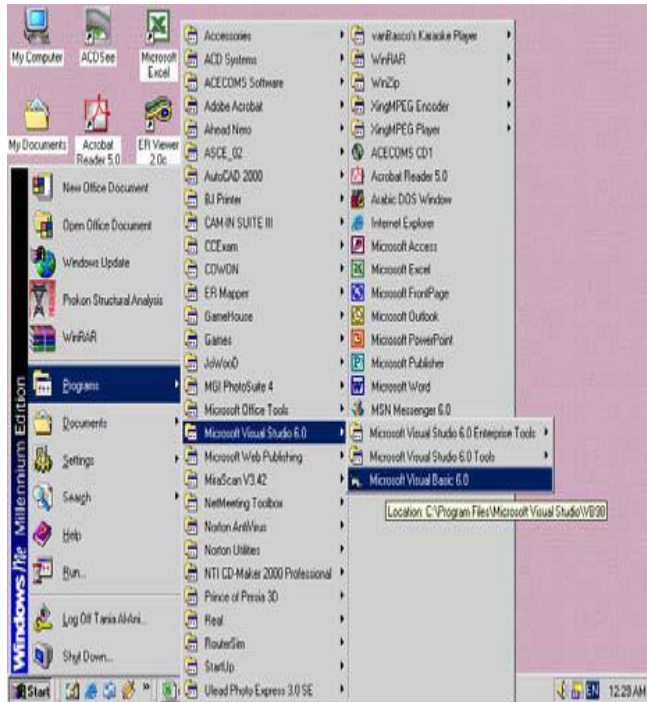


Fig.(2-1) Computer screen Fig.

(2-2) New Project dialog.

The New Project dialog allows the programmer to choose what type of Visual Basic program to create. Standard EXE, which is highlighted by default, allows the programmer to create a standard executable. Each type listed in Fig.(2-2) describes a group of related files called a Project.

2-1 Project (VBP) Project is a program designed to user application that may be simple (like calculator program) or complex (like word program). The project types listed in Fig.(2-3) are the “Visual” in Visual Basic, because they contain predefined features for designing Windows programs. The project is a collection of files that makes the user program. They may consist of form, modules, active x controls. The new project dialog contains three tabs

- New: creating new project.
- Existing: opening an existing project.
- Recent: opening a project that has been previously loaded into the IDE.

2-2 Elements of Integrated Development Environmental (IDE).

College of computer technology
Information network department
Programming with Visual Basic

Figure (2-3) shows The IDE after Standard EXE is selected. The top of the IDE window (the title bar) displays “Project1-Microsoft Visual Basic [design]”.The environment consists of various windows when Visual Basic is started (by default):

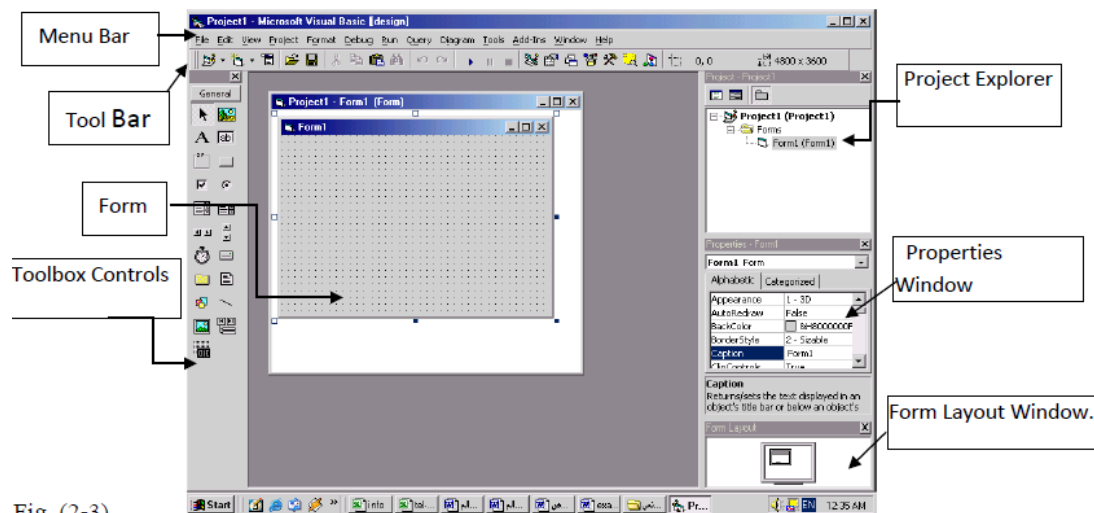


Fig. (2-3)

2-2-1 Project1-Form1 (Form): window contains a form named Form1, which is where the program’s Graphical User Interface (GUI) will be displayed. A GUI is the visual portion of the program, this is where the user enters data (called inputs) to the program and where the program displays its results (called outputs) .We refer to the Form1 window simply as “**the form**”. Forms are the foundation for creating the interface of an application. You can use the forms to add windows and dialog boxes to your application. You can also use them as container for items that are not a visible part of the application’s interface. For example, you might have a form in your application that serves as a container for graphics that you plan to display in other forms.

2-2-2 Toolbox Controls: Contains a collection of tools that are needed for project design as shown in Fig.(2-4). To show the toolbox press View> toolbox icon. The user can place the tool on form, and then work with the tool. To place the tool on form: click on tool>draw tool to form > the tool appears on form or double click on tool then the tool appears on form. Table (1) summarizes the toolbox controls.

College of computer technology
Information network department
Programming with Visual Basic

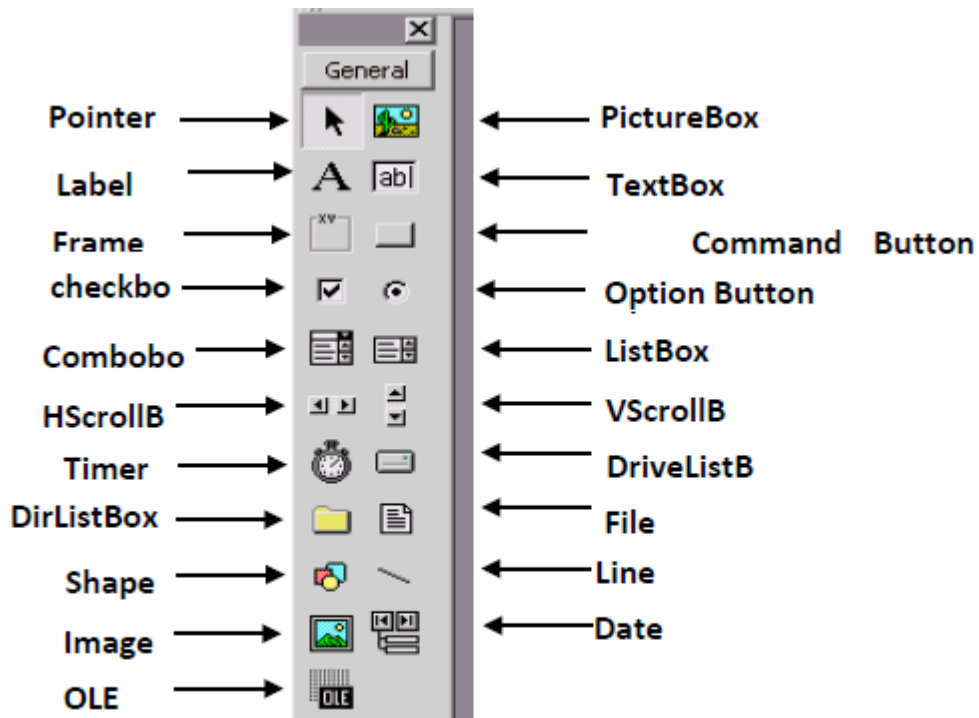


Fig.(2-4) Toolbox Window.

**College of computer technology
Information network department
Programming with Visual Basic**

=====

Table (1): Toolbox controls summary.

Control	Description
Pointer	Used to interact with controls on the form(resize them, move them, etc.). The pointer is not a control
PictureBox	A control that display images or print the result.
Label	A control that displays uneditable text to the user.
TextBox	A control for accepting user input. Textbox can also display text.
Frame	A control for grouping other controls.
CommandButton	A control that represents a button. The user presses or clicks to initiate an action.
CheckBox	A control that provides the user with a toggle choice (checked or unchecked)
OptionButton	Option buttons are used in groups where only one at a time can be true.
ListBox	A control that provides a list of items.
ComboBox	A control that provides a short list of items.
HScrollBar	A horizontal scrollbar.
VScrollBar	A vertical scrollbar.
Shape	A control for drawing circles, rectangles, squares or ellipse
Line	A control for drawing line.
DrivelistBox	A control accessing the system disk drivers.
DirListBox	A control accessing directories on a system
FileListBox	A control accessing file in a directory
Image	A control for displaying images. The images control does not provide as many capabilities as a picturebox.
OLE	A control for interacting with other window applications.
Timer	A control that performs a task at programmer specified intervals. A timer is not visible to the user.

2-2-3 Properties Window: The properties window displays the properties for a form or control. Properties are attributes such as size, position, etc. like a form; each control type has its own set of properties. Some properties, like width and height, such as, are common to both forms and controls, while other properties are unique to form or control. Controls often differ in the number and type of properties. Properties are listed either alphabetically (by selecting the alphabetic tab) or categorically (by selecting the categorized tab). The most important properties of the objects in general are listed in the following table. To show the properties window press View> properties window icon.

**College of computer technology
Information network department
Programming with Visual Basic**

=====

Properties name	Objective
Name	Used to represent name of object in code.
Caption	Name appears on object.
Back color	Background color for object.
Fore color	Color of text written on object.
Font	Font style type and size
Visible	The tool is visible or invisible.
Enable	The tool enable or disable
Height	Length of object
Width	Width of object
Top	Coordinates of top of object on screen
Left	Coordinates of left of object on screen
Text	Allows inputting and editing text in object.

2-2-4 Project Explorer Window: The window titled Project-Project1 is called the Project Explorer and contains the project files. The project explorer window's tool bar contains three buttons, namely view code, view object and toggle folders. When pressed, the view code button displays a window for writing Visual Basic code. View object, when pressed, displays the form. Double-clicking form1 (form1) also displays the form. The toggle folders button toggles (i.e., alternately hides or shows) the forms folder. The forms folder contains a listing of all forms in the current project. To show the Project Explorer window press View> Project Explorer window icon

2-2-5 Form Layout Window: The Form Layout window specifies a form's position on the screen at runtime. The Form

Layout window consists of an image representing the screen and the form's relative position on the screen. With the mouse pointer positioned over the form image, drag the form to a new location.

2-2-6 Menu Bar: Contains a standard command and specific command like (File, Edit, View, Project, Format, Debug, Run, etc.)

2-2-7 Tool Bar: Contains several icons that provide quick access to commonly used features

2-3 Code Form: Each standard form has one code form for code. The user can write code in this code form (as a work sheet) in the design stage. This code will be applied at run time.

The code is written in code form and it will be edited quickly by code editor. The codes are of two categories:

Declaration is written before any procedure in the code.

• Statements. The user selects the required event then code statements are written in side these event procedures.

2-3-1 Sub Procedures: A Sub Procedure is a block of code that is executed in response to an event. By breaking the code in a module into Sub procedures, it becomes much easier to find or modify the code in your application. The syntax for a Sub procedure is:
[Private Sub procedurename (arguments)

Statements

**College of computer technology
Information network department
Programming with Visual Basic**

=====

End Sub

2-3-2 Events: Events are like electrical switches. The electrical switches are of many types, so are the events. The form and controls support events (generation, interaction with mouse and keyboard). The most important events in Visual Basic are described in the following table.

Event	Action taken when	It provide the following integers
Click	Single click on object.	
DbClick	Double click on object.	
Mouse move	Mouse pointer move object.	Button ,shift ,X,Y
Key press	Pressing a key of the key board.	Key Ascii
DragDrop	Move object to another place.	Source, X, Y