

What is Visual Basic?

Visual Basic is a high level programming language which evolved from the earlier DOS version called BASIC. **BASIC** means “**B**eginners **A**ll-purpose **S**ymbolic **I**nstruction **C**ode”. **Visual Basic** is an example of a graphical-based language. A graphical-based language allows the user to work directly with graphics.

It is a very easy programming language to learn. Different software companies produced different of high-level languages but only a few have achieved broad acceptance, for example (**QBASIC, FORTAN and Pascal**). However, people prefer to use Microsoft Visual Basic today, as it is a well-developed programming language and supporting resources are available everywhere.

Visual Basic is a Microsoft Windows Programming language. Visual Basic programs are created in an Integrated Development Environmental (**IDE**). The **IDE** allows the programmer to create, run and debug Visual Basic programs conveniently. **IDEs** allows a programmer to create working programs in a fraction of the time that it would normally take to code programs without using **IDEs**.

Features of Visual Basic 6.0

Features: Visual Basic was designed to be easily learned and used by beginner programmers. The language not only allows programmers to create simple GUI (graphical user interface) applications, but can also develop complex applications.

Programming in VB is a combination of visually arranging components or controls on a form, specifying attributes and actions of those components, and writing additional lines of code for more functionality. Since default attributes and actions are defined for the components, a simple program can be created without the programmer having to write many lines of code. Performance problems were experienced by earlier versions, but with faster computers and

native code compilation this has become less of an issue, the following are some interactive features used in Visual Basic:

- Create user Interface using design tools
- Add drawings to the forms
- Set properties for the individual object on the form
- Build an executable file
- Debug the applications
- Examine the objects in the forms
- Work with data in the programs (ODBC)
- Add more functionality to the program by writing code
- Publishing the project as standard EXE program.

What programs can you create with Visual Basic 6?

With VB 6, you can create any program depending on your objective. For example you can create educational programs to teach business, economics, engineering, computer science, accountancy, financial management, information system and more to make teaching more effective and interesting. If you are in business, you can also create business programs such as inventory management system, point-of-sale system, payroll system, financial program as well as accounting program to help manage your business and increase productivity.

The Importance of Visual Basic Program

Languages like Basic and Pascal depend on variables and procedures to build the applications .This is why it is called procedural languages. The new approach is called object programming for visual programs like Visual Basic and Visual C++ and others. In this programming approach every thing (form, command buttons, controls) is an object. The reasons for of implementing Visual Basic program are listed as follows:

1- It uses integrated development environment (IDE) which is easier for the user to minimize code writing.

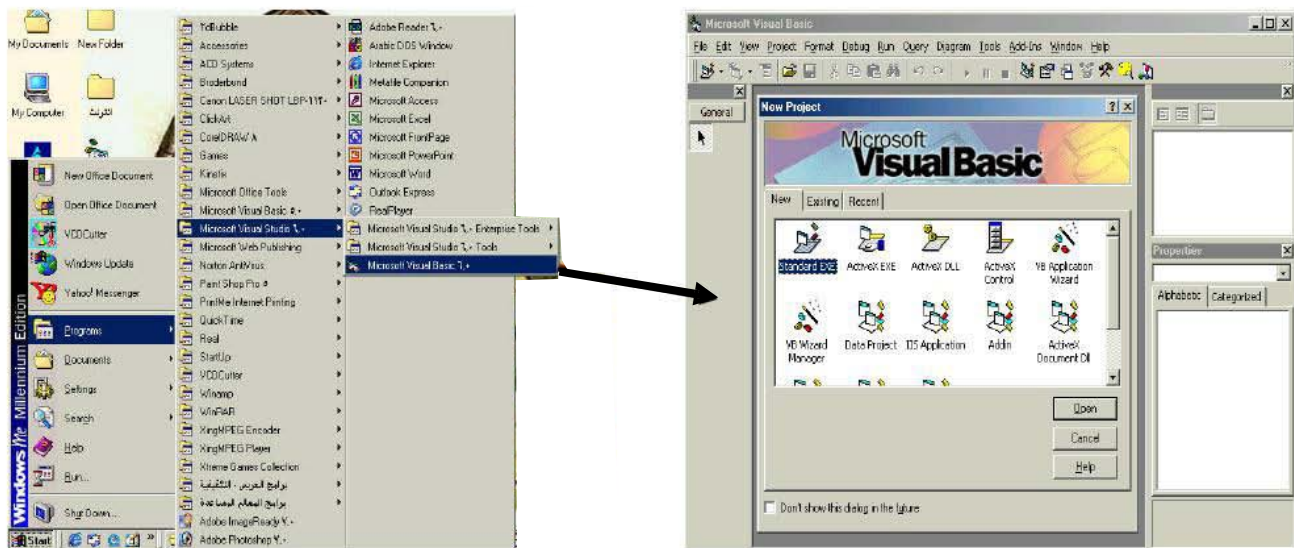
2- All visual programs follow the same concepts, therefore the user will become more familiar with visual approach for other visual languages.

3- It provides Input box and Output box as an interactive windows with user.

4- It is able to connect to Internet, and to call Explorer.

The Visual Basic 6 Integrated Development Environment

Before you can program in VB 6, you need to install Visual Basic 6 in your computer. On startup, Visual Basic 6.0 will display the following dialog box You can choose to start a new project, open an existing project or select a list of recently opened programs. A project is a collection of files that make up your application. There are various types of applications that we could create; however, we shall concentrate on creating Standard EXE programs (EXE means executable program). Now, click on the Standard EXE icon to go into the actual Visual Basic 6 programming environment.

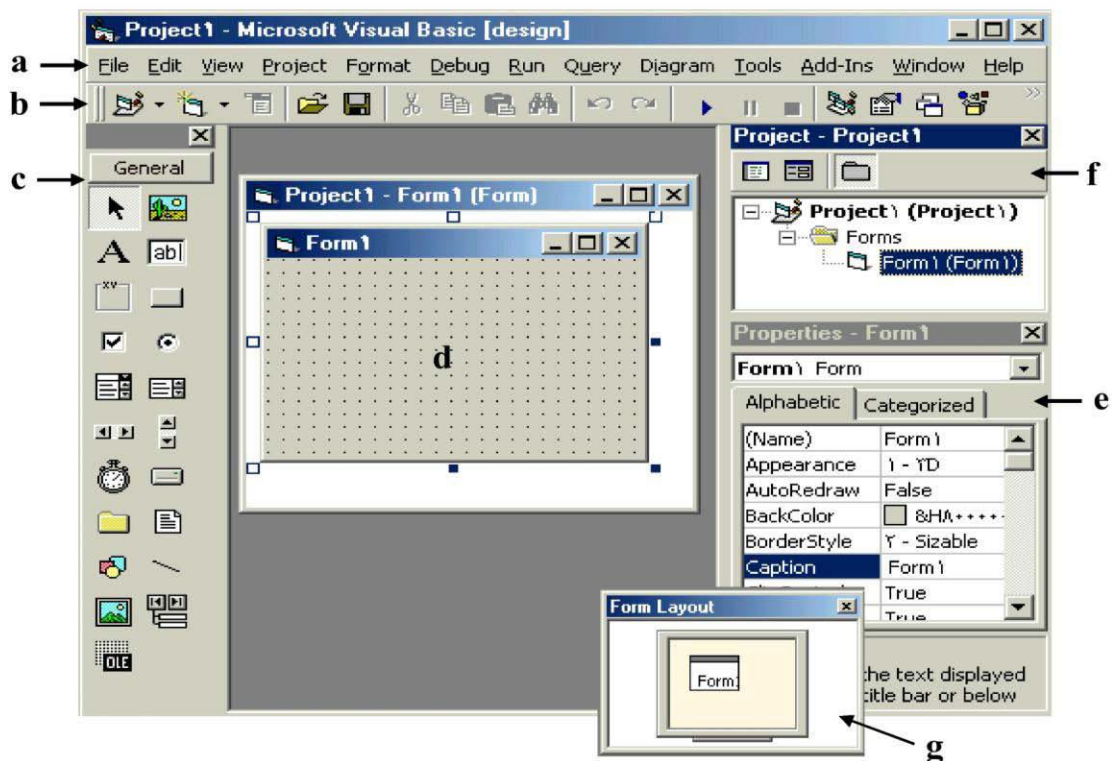


Project is a collection of files that make up your application. There are various types of applications that we could create

To exit from Visual Basic and return to Windows is like exit from most Windows applications. There are three ways to close the Visual Basic as stated below.

- 1- Click on close button icon that appears in the upper-left corner of the screen.
- 2- Press Alt+F4
- 3- Select File >Exit

The IDE (integrated development environment) consists of many elements. Some elements are displayed when Visual Basic is started (By default) as in the following figure. Other elements are displayed if the user requires them. We will list some of these elements.

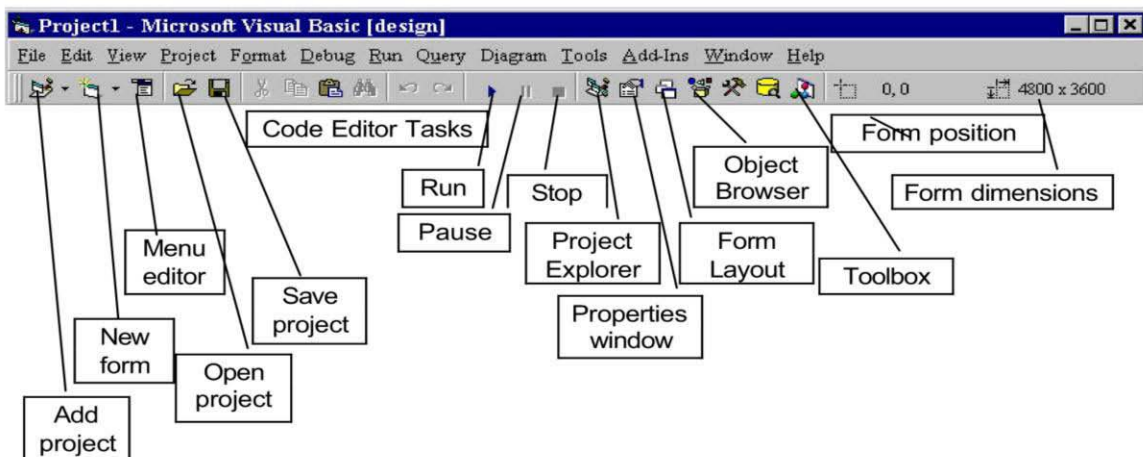


- a. Menu Bar: It contains a standard command like: File, Edit, View, Window, Help menus, and specific command such as: Project, Format, or Debug menus.
- b. Toolbar: it contains the most commonly used commands (button), if clicked an action represented by that button is carried out.
- c. ToolBox: it contains a collection of tools that are needed for project design.

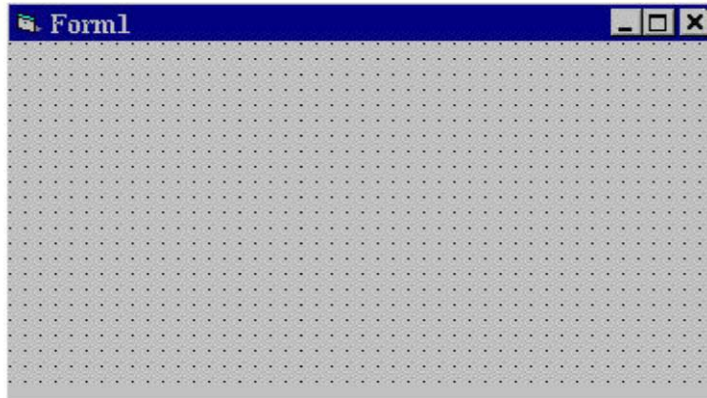
- d. form Designer: it is a window for each form to customize the designed interface of the application. Using the form designer, the user can add controls, graphics, and text to create the desired form appearance.
- e. Properties Window: it is a List of properties settings for a selected form or a control. These properties are characteristics (such as size, visible, or color) of the selected object it provides an easy way to set properties.
- f. Project Explorer Window: it is a list of the forms and modules for the current projects. It is a hierarchical tree- branch structure, where the project at top of tree and other parts like forms ,modules) descend from this tree.
- g. Form Layout Window: The Form Layout window is a small screen. Which is used to reposition the form of the application so that it appears in proper place when project is run.

Six windows appear when you start Visual Basic:

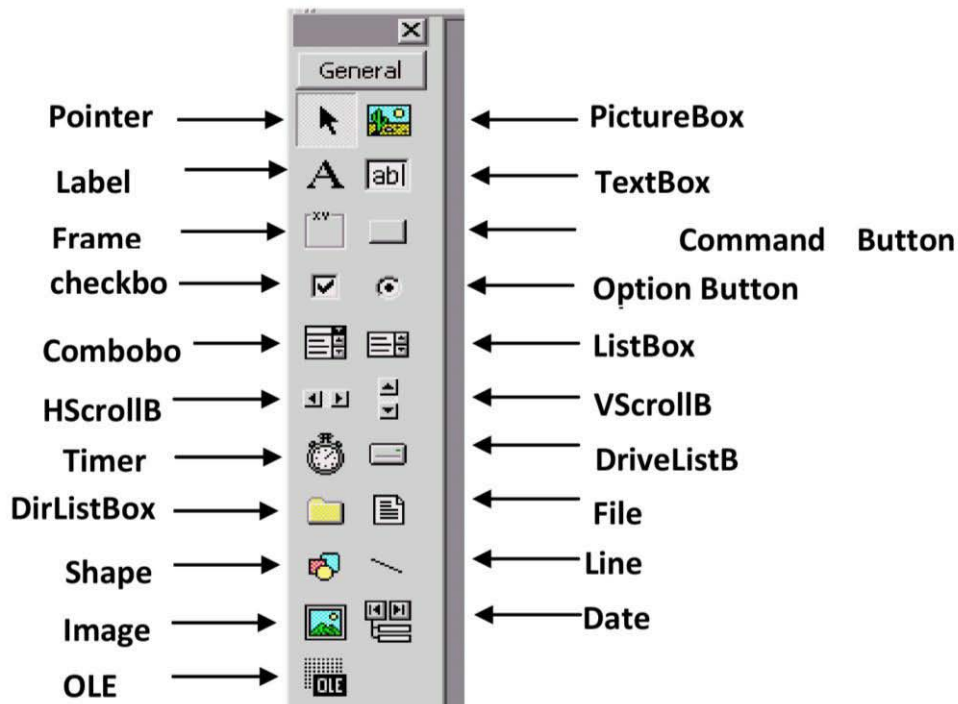
1. The **Main Window** consists of the title bar, menu bar, and toolbar. The title bar indicates the project name, the current Visual Basic operating mode, and the current form. The menu bar has drop-down menus from which you control the operation of the Visual Basic environment. The toolbar has buttons that provide shortcuts to some of the menu options. The main window also shows the location of the current form relative to the upper left corner of the screen (measured in twips) and the width and length of the current form.



2. The **Form Window** is central to developing Visual Basic applications. It is where you draw your application.



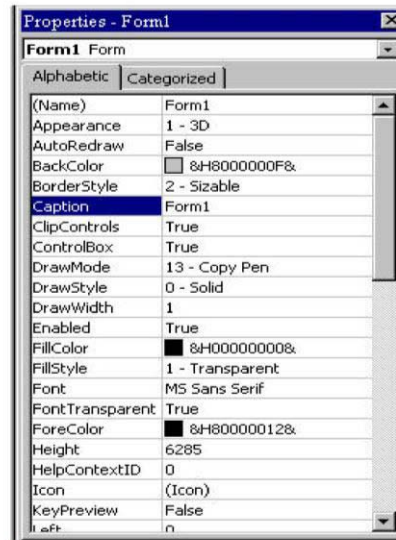
3. **Toolbox Controls** Contains a collection of tools that are needed for project design as shown in. To show the toolbox press View> toolbox icon. The user can place the tool on form, and then work with the tool. To place the tool on form: click on tool>draw tool to form > the tool appears on form or double click on tool then the tool appears on form.



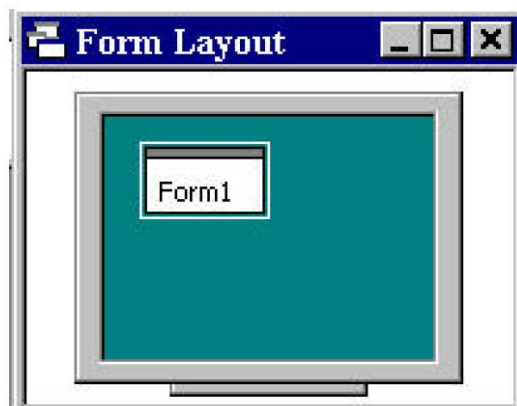
ToolBox Controls Summary

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.

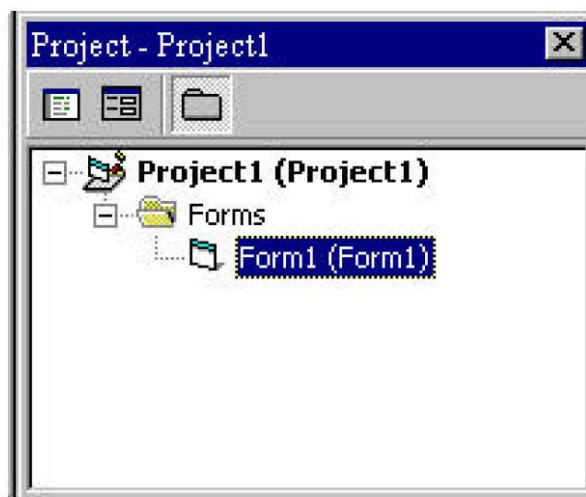
4. The **Properties Window** is used to establish initial property values for objects. The drop-down box at the top of the window lists all objects in the current form. Two views are available: Alphabetic and Categorized. Under this box are the available properties for the currently selected object.



5. The **Form Layout Window** shows where (upon program execution) your form will be displayed relative to your monitor's screen



6. The **Project Window** displays a list of all forms and modules making up your application. You can also obtain a view of the **Form** or **Code** windows (window containing the actual Basic coding) from the Project window.



As mentioned, the user interface is „drawn“ in the form window. There are two ways to place controls on a form:

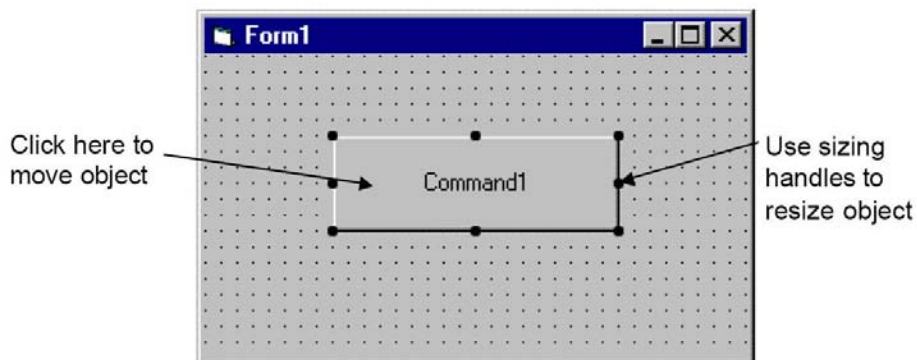
1. **Double-click** the tool in the toolbox and it is created with a default size on the form. You can then move it or resize it.
2. **Click** the tool in the toolbox, then move the mouse pointer to the form window. The cursor changes to a crosshair. Place the crosshair at the upper left corner of where you want the control to be, press the left mouse button and hold it down while dragging the cursor toward the lower right corner. When you release the mouse button, the control is drawn.

To **move** a control you have drawn, click the object in the form window and drag it

to the new location. Release the mouse button.

To **resize** a control, click the object so that it is select and sizing handles appear.

Use these handles to resize the object.



Code Editor Window: Code Editor Window is used to write a VB code for an application. For each form there is a separate code editor window. It is displayed when user clicks on form or object in form.



To Create an Application:

The title of program includes the name of project, and when the user first starts the program it takes a defaulted value (project1). The following steps are required to create an application in Visual Basic 6.0:

- 1) Select type of project New or Exciting. A form automatically appears in the form design .The basis for any application's interface is the form that user should create. User can add other forms to the project (to add another form select project menu>add form).
- 2) To add objects (controls) to the form use the ToolBox.
- 3) Set the properties for the objects through properties window.
- 4) Write code. The Visual Basic Code consists of statements, and declarations. The code for an application can be written on the Code Editor window. In this window user can view and edit quickly any of the code.
- 5) Run the Application. To run the application, click the Start button on the toolbar, or press F5.
- 6) Stop. To stop running the application and return to visual basic program click on stop button in tool bar.
- 7) Check if there is an error, return to step 3 ,otherwise continue.
- 8) Save project.
- 9) Exit

