

1.0 INTRODUCTION

VisualBasic is a Windows programming language that has been developed at Microsoft Corporation. VisualBasic is a powerful programming language to develop sophisticated windows programs very quickly. VisualBasic is one of the RAD (Rapid Application Development) tools as it enables the programmer to develop applications very easily and very quickly. It contains the same BASIC-like language that has been popular over the years and it includes all the necessary extensions required to produce Windows programs.

VisualBasic applications are very popular as front-end to many Client/Server database systems like SQL/Server, Oracle etc.

1.1 OBJECTIVES

At the end of this unit you will be able to,

- ◆ Load and use VisualBasic.
- ◆ Understand the VisualBasic development cycle.
- ◆ Understand the components of a VisualBasic application.

1.2 VISUALBASIC APPLICATION DEVELOPMENT CYCLE

Given below are the necessary steps to create a VisualBasic program. Programmers call these steps as 'development cycle'.

- ◆ Decide what you want the computer to do.
- ◆ Decide how you want your program to look on the screen. (The appearance of your program is called the user interface).
- ◆ Draw your user interface by using common components, such as windows, menus and command buttons. (The components of user interface are called objects or controls).

- ◆ Define the name, color, size and appearance of each user interface object (An object's characteristics are called properties.)
- ◆ Write instructions in BASIC to make each part of your program do something (BASIC instructions are called commands).
- ◆ Run your program to see whether it works.
- ◆ Fix any errors (or bugs) in your program.

1.2.1 Develop an Attractive User Interface

The user interface is what someone sees when your program is running. Every program has a user interface in one form or another. Some programs have elaborate, colorful windows while other programs have a simple appearance.

A VisualBasic user interface consists of forms and objects. A form is nothing more than a window that appears on the screen. Most VisualBasic programs have at least one form, although most programs use several forms.

Objects are items that appear on a form, such as a command button, scroll bar, option button or check box. An object enables the user to give commands to your program.

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1.2.2 Define Properties

After you create a form and draw some objects on the form, the next step is to define the properties of each form and object. An object's properties determine the object's name, color, size, location and appearance on the screen.

Different objects have different properties. Each time you draw an object on a form, VisualBasic assigns default property values, which define a generic object that nobody can really use. If you want to customize an object, you need to define one or more properties for each object used by your program.

1.2.3 Write the Code

The final step involves writing BASIC commands (also known as code) to make your program actually work. If you want to edit the appearance of your user interface, you can go back and alter it at any time.

The whole purpose of VisualBasic code is to tell the object on a form what to do when the user does something. For example, if the user clicks on an OK or Cancel command button, nothing happens unless you have written BASIC commands to tell your computer exactly what to do.

Any time a user presses a key, moves the mouse, or clicks the mouse button, such an action is called an **event**. Whenever an event occurs, the code written for that event gets executed (sometime referred as 'fired').

Essentially, writing a VisualBasic program means drawing your user interface and then writing BASIC code or procedures to make the user interface work.

1.3 LOADING VISUALBASIC

When you load VisualBasic and start working you are using the IDE or Integrated Development Environment which provides the user with a number of useful interfaces to work with like the ToolBar, ToolBox, Form window, Project Explorer window, properties window, code window.

1.3.1 VisualBasic Editions

VisualBasic software comes in three editions:

- ◆ Learning Edition: which includes the VisualBasic development environment and use of standard tools to develop applications.
- ◆ Professional Edition: is used by computer professionals as it supports the tools to develop ActiveX and Internet controls.

- ◆ Enterprise Edition: which includes all the features of professional edition as well as Microsoft Visual Source safe for source code control and Automation and Component manager.

1.3.2 Load VisualBasic

To load VisualBasic, you just have to follow these simple steps:

- ◆ Click on the Start button that appears in the lower left-hand corner of the Windows 95/NT taskbar.
- ◆ A pop-up menu appears.
- ◆ Highlight Programs, highlight the VisualBasic 6 folder and then highlight VisualBasic 6.
- ◆ VisualBasic displays a New Project dialog box, as shown below.

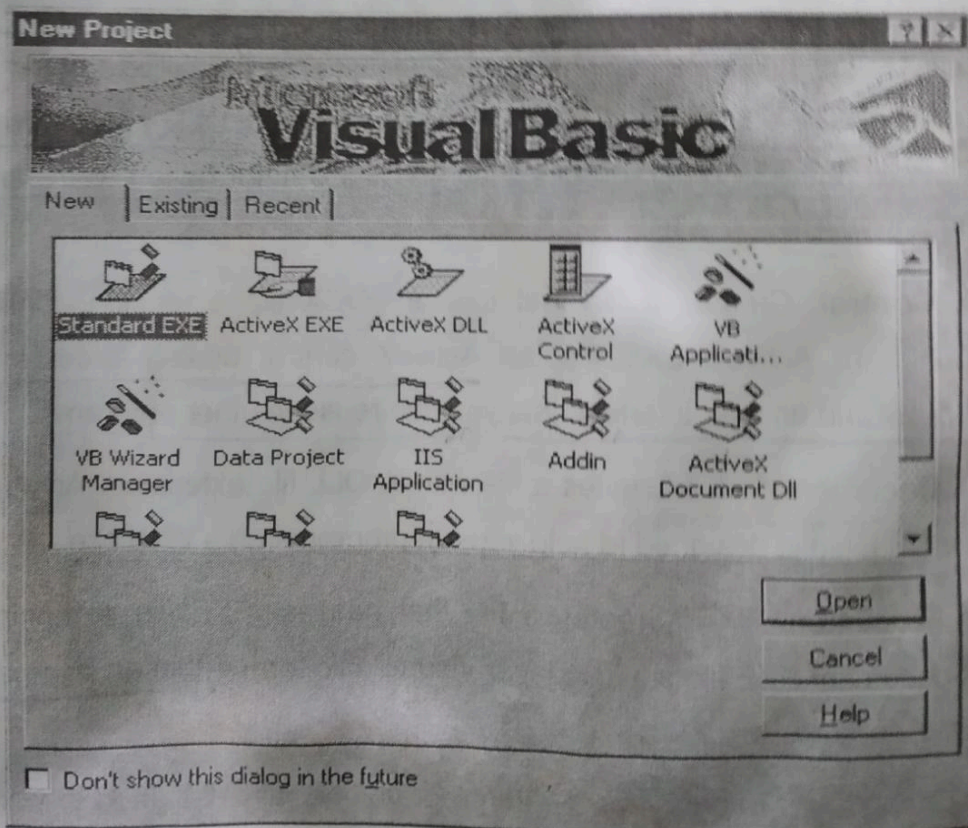


Figure 1.1 : The New Project dialog

After New Project dialog box appears, you have several options, where you can, start writing a brand new program or load an existing program so you can modify it.

Starting a New Program

After you have the New Project dialog box displayed, you have a number of templates of the different types of programs you want to create:

Standard EXE: Creates a stand-alone program that you can copy, give away, or sell to others. Examples of stand-alone programs are Microsoft Word, Lotus 1-2-3, and Netscape Navigator. Stand-alone programs have an .EXE file extension.

Active X DLL: Creates a file that has a .DLL file extension. ActiveX DLL files are not meant to be used by them. Instead, these types of files contain subprograms designed to be used as building blocks when creating a stand-alone program.

ActiveX EXE: Creates a file that has an .EXE file extension. Unlike a stand-alone EXE file, an ActiveX EXE file is designed to work as an OLE server, which is nothing more than a program designed to share information with another program.

ActiveX Control: Creates a file that has an .OCX file extension. Unlike an ActiveX DLL or ActiveX EXE file, an ActiveX control usually provides both subprograms and an user interface that you can reuse in other programs.

ActiveX Document DLL : Creates a file with a .DLL file extension. An Active X document DLL file is designed to help you run programs on a Web site.

ActiveX Document EXE: Creates a file that has as .EXE file extension. An ActiveX document EXE file can display a VisualBasic form within an internet Web browser.

AddIn: Enables you to create an AddIn program specially designed to work with the VisualBasic user interface.

VB Application Wizard: The VisualBasic friendly guide to help you create a skeleton VisualBasic stand-alone EXE program quickly and easily.

IIS Application: An IIS (Internet Information Server) application is a VisualBasic application that lives on a Web server and responds to requests from the browser. An IIS application uses HTML to present its user interface and uses compiled VisualBasic code to process requests and responds to events in the browser. IIS applications can be used on the Internet or an intranet. End users of an IIS application do not need a specific operating system or browser. IIS applications use the Active Server Pages (ASP) object model.

DHTML Application: A DHTML (Dynamic HTML) application can also respond to events in an HTML page. However, DHTML applications are intended for use on intranets, and are dependent on Internet Explorer 4.0 or later. DHTML applications use the Dynamic HTML object model.