# DEPARTMENT OF COMMERCE (CA) VISUAL BASIC (Semester-III) II M.COM (CA) Sub Code-18MCC32C UNIT - I

First steps with Microsoft VB6: Integrated Development Environment - First program in VB -Introduction to forms: Common properties, methods and events.

### **Introduction to Visual Basic**

Visual Basic is an ideal programming language for developing sophisticated professional applications for Microsoft Windows. It makes use of Graphical User Interface (GUI) for creating robust and powerful applications. The GUI as the name suggests, which enables users to interact with an application. This feature makes it easier to comprehend things in a quicker and easier way. Coding in the GUI environment is quite a transition to traditional, linear programming methods where the user is guided through a linear path of execution and is limited to a small set of operations. In a GUI environment, the number of options open to the user is much greater, allowing more freedom to the user and developer. Features such as easier comprehension, user-friendliness, faster application development and many other aspects such as introduction to ActiveX technology and Internet features make Visual Basic an interesting tool to work with.

The "Visual" part refers to the method used to create the graphical user interface (GUI). Rather than writing numerous lines of code to describe the appearance and location of interface elements, we can simply add prebuilt objects into place on screen. The "Basic" part refers to the BASIC (Beginners All-Purpose Symbolic Instruction Code) language, a language used by more programmers than any other language in the history of computing. Visual Basic has evolved from the original BASIC language and now contains several hundred statements, functions, and keywords, many of which relate directly to the Windows GUI. Beginners can create useful applications by learning just a few of the keywords, yet the power of the language allows professionals to accomplish anything that can be accomplished using any other Windows programming language.

#### Need for VB

Graphical User Interfaces, or GUIs have revolutionized the microcomputer industry. They demonstrate that the proverb," is worth a thousand words," hasn't lost its truth to most computer users. Windows applications have a consistent user interface. This means that users can spend more time mastering the application and less time worrying about which keystrokes do what within menus and dialog boxes. Windows programs are expected to be based on the GUI model. Therefore, if we need to develop programs for any version of windows, we want a tool to develop GUI-based applications efficiently. In order to develop GUI applications, Visual basic was introduced in 1991.

The features of Visual basic are:

• More Internet features.

- Better support for database development.
- More language features.

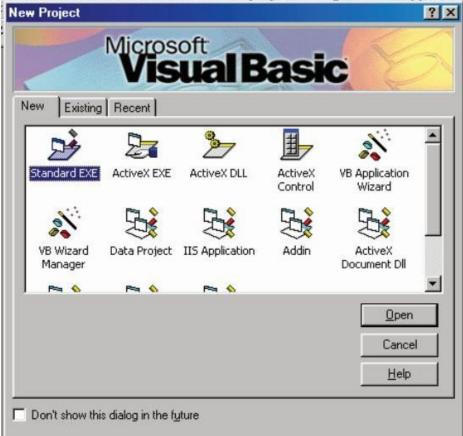
## Steps to design a VB application:

Visual basic (VB) is one component of the Microsoft Studio. Visual basic can be started by using the following steps.

Click the Start button

 Choose programs → Microsoft Visual studio 6.0 → Microsoft Visual basic 6.0 Alternatively, if one is using only visual basic straight away a click on Program → Microsoft Visual basic 6.0 or double click on the Visual basic icon exist in your desktop.

After Visual basic is started, the new project dialog box will appear as



The following options are available

- New
- Existing
- Recent
- Don't show this dialog in the future

- 1. New This tab enables the creation of a new project or application choosing from an assortment to templates or wizards.
- 2. Existing This tab enables the selection of an existing project displays a windows file open dialog box.
- 3. Recent This tab lists the visual basic projects that have been used recently.
- Don't show this dialog in the future check box Selecting this option will prevent this dialog box from being displayed when visual basic is started in the future. However, from the File → new project menu option, one will not receive the Existing and Recent tabs.

Whenever a project is opened or a new project is started the visual basic 6.0 Integrated Development Environment (IDE) window will appear as follows. The IDE window consist of following different parts of window.

- 1. Form Window
- 2. Toolbox
- 3. Project explorer
- 4. Property window
- 5. Form layout window

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#### **Integrated Development Environment**

The working environment in Visual Basic is often referred to as the integrated development environment or IDE because it integrates many different functions such as design, editing, compiling, and debugging within a common environment. In most traditional development tools, each of these functions would operate as a separate program, each with its own interface. In this section, the following topics are discussed:

- Starting the Visual Basic IDE Getting up and running.
- **Integrated Development Environment Elements** An introduction to the various parts of the IDE.
- Environment Options Configuring Visual Basic to our personal preferences.

#### **First Program in Visual Basic**

- Step 1: Download Visual Basic. ...
- Step 2: Create Your Project. ...
- Step 3: Add Controls. ...
- Step 4: Edit Control Properties. ...
- Step 5: Add Code. ...
- Step 6: Save and Test. ...
- Step 7: Final Thoughts.

#### Form Window

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In the form window there is a control menu in which the user can restore, move, size, minimize, maximize and close the form. The user can load, unload, show and hide the form.

## **Common properties**

- 1. Back color property
- 2. Caption property
- 3. Startup position property
- 4. Window state property
- 5. Font property
- 6. Icon property

## **Methods and Events**

Forms and controls also support various actions that may be taken. The actions are known as methods and events. There are three events :

- 1. Select suitable controls
- 2. Set the properties
- 3. Write the code

# **REFERENCE :**

1. Programming Microsoft Visual Basic- Francesco Balenda, WP Publications and Distributors. 2. Visual Basic 6-Gary Cronell, TataMcGraw Hill Publishing Compnay Ltd.

3. Visual Basic 6 – How to Program, H.M.Deitel., P.J.Deital and T.R.Nieto

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