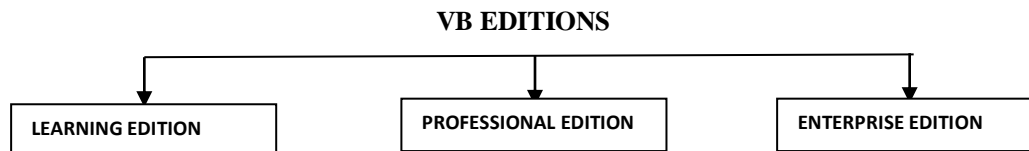


Introduction to Visual Basic

Visual Basic is a third-generation_event-driven programming language. Visual Basic was derived from BASIC and enables the_rapid application development (RAD)of graphical user interface (GUI) applications, access to databases using Data Access Objects, Remote Data Objects, or ActiveX Data Objects, and creation of ActiveX controls and objects. A programmer can create an application using the components provided by the Visual Basic program itself. Visual basic is a unique language with respect to different interface, a different style and a different method of doing things must be learned. Visual basic is completely graphically oriented, so you will be learning a lot of controls (tools) and different methods for controlling the program. Visual basic is also a fun and practical language because all the difficulties of coding is minimized with its custom data bases, but it is fully functional for creating games, applications, diagnostics etc. any windows program can be created with visual basic and we find it is the easiest language for creating window base application.

Visual Basic Editions :-



- A) LEARNING EDITION** - The visual basic learning edition allows programmers to easily create Powerful applications for Microsoft windows 95 and windows NT. It includes all the general windows controls, grid control, tab control and data-bound control. It also incorporates a limited subset of the Jet Engine's data access capabilities in the data control and specific data control. These features allow you to access existing database, but do not provide for creating new database or data access objects.
- B) PROFESSIONAL EDITION** - The professional edition provides computer professionals with a full featured set of tools for developing solutions for others. It includes all the features of the learning edition, plus additional Active X controls, including internet controls and the crystal report writer. The professional edition includes all of the data control features and in addition provides the full data access objects programming interface.
- C) ENTERPRISE EDITION** - The Enterprise edition allow professionals to create robust distributed application in a team setting. It includes all the features of the professional edition, plus the automation manager, component manager, database management tools and Microsoft visual source safe. The enterprise edition adds a number of powerful client/server tools to visual basic's data access capabilities, including the Remote Data Control (RDC) specifically designed to access Remote ODBC (Open Database Connecting) client/server databases.

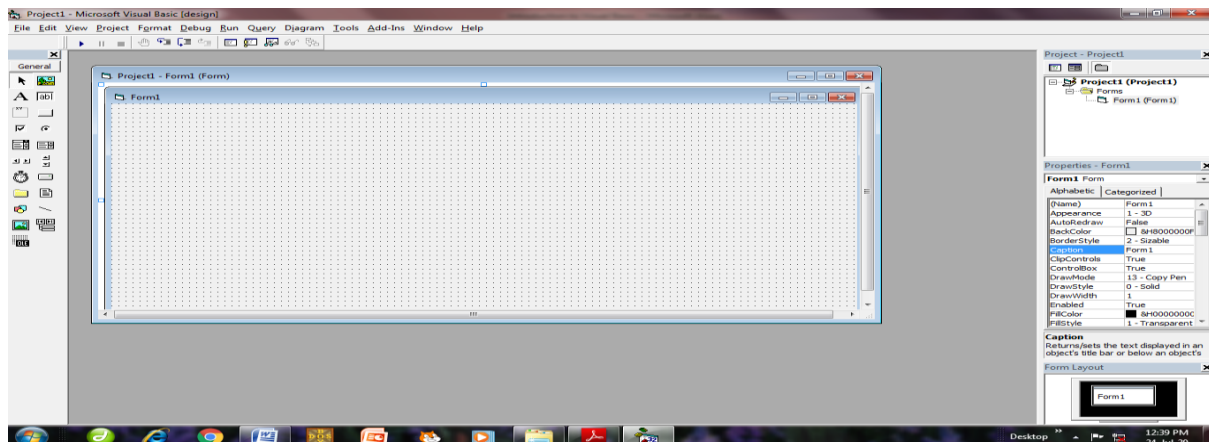
EVENT-DRIVEN PROGRAMMING

In computer programming, event-driven programming is a programming paradigm in which the flow of the program is determined by events such as user actions, sensor outputs, or messages from other programs or threads. Event-driven programming is the dominant paradigm used in graphical user interfaces and other applications that are centered on performing certain actions in response to user input. The application starts and a form or control receives an event. The event can be caused by the user (by pressing a key) or by the system (timer) or indirectly by your code. There is an event procedure corresponding to events. Many event occurs in conjunction with other events. For eg:- when the double click event occurs the mouse down, mouse up or click events also occurs. Even driven programming or event programming is a program model in which the flow of program is determined by events that is sensor output or user access (mouse click, key press) or message from other program. Even driven programming can also be defined as an application architecture in which the application has been main loop which is clearly divided in to two section. The first is event section (event direction) and second is the event handling. Event driven programs can be written in any language although the visual basic is easier that provide high level abstraction. Some integrated development environment (IDE) provide code section, combining section, error section etc. The Sequence of events applications are:-

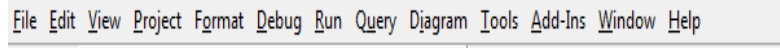
- i. The application start a form is loaded and display. The form GUI component receipt and event. The event by because by the user our system or indirectly by a code. If these is a code in corresponding even procedure is executed.
- ii. The application wait for next events some common events are given below:-
 - a. Keyword related events:- key down, key up, key press etc.
 - b. Mouse related events:- mouse move, mouse down, mouse up, mouse click, mouse double click.
 - c. Form related events:- initialized, load, resize, activate, deactivate etc.
 - d. Control related events:- Got focus, last focus etc.

VISUAL BASIC IDE

The term of IDE stands for integrated development environment. VB is not just a language it is an integrated development environment in which we can develop, run, test and debug our application. 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 designed the one editing, compile and debugging with in a common environment. In most traditional development tools each of these functions would operates as a separate program. Each with it's own interface the visual basic integrates the following options:-



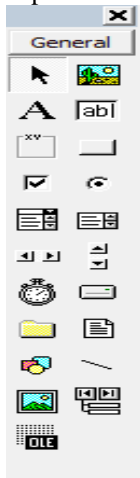
- i. **MENU BAR:-** The menu bar displays the commands to work with these VB. It provides access to function specific tool programming such as file, edit, view, project, format, tools etc. eg:-



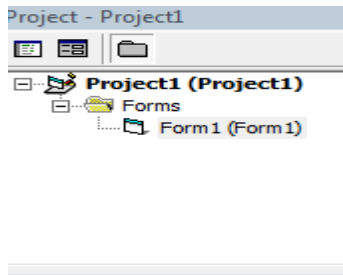
- ii. **TOOL BAR:-** Tool bar provides quick access to commonly used commands in the programming environment we take a button on the tool bar. Once to carry out the action represented by the button by default standard tool bar is displayed when we start VB.



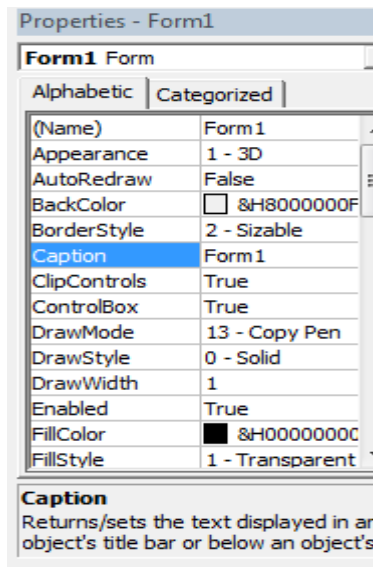
- iii. **TOOL BOX :-** The tool box provides a set of tools that we use at designed time to place control or component on a form.



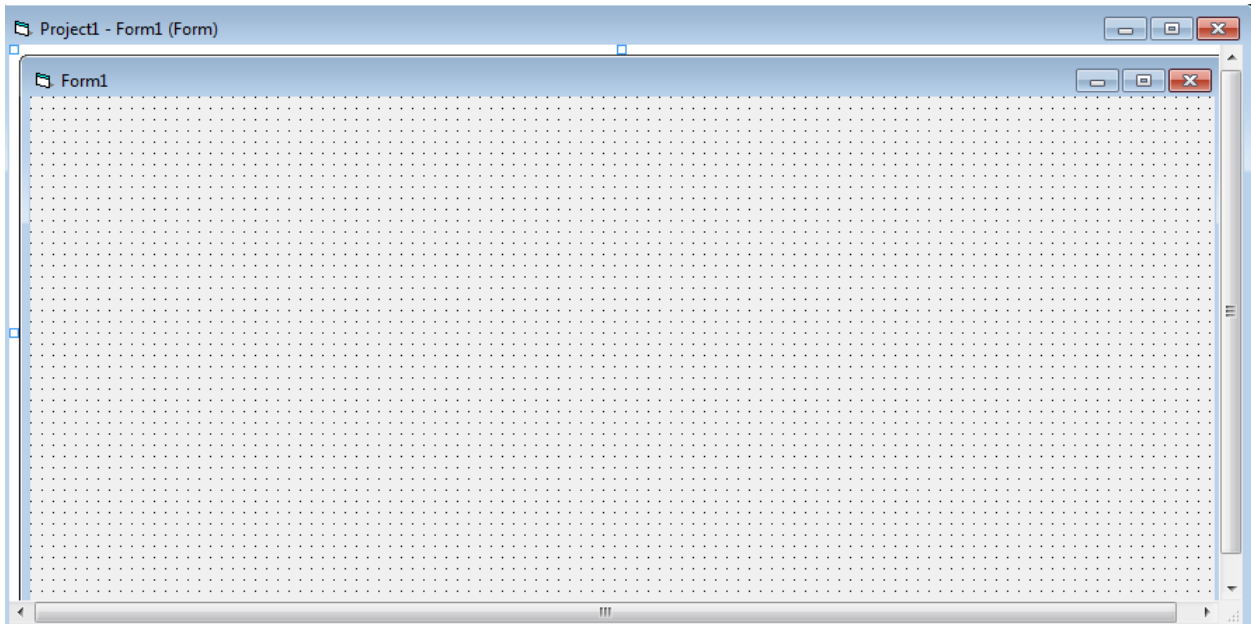
- iv. **PROJECT EXPLORER WINDOWS:-** It list the forms and modules in our current project is the collection of files to built an application.



- iv. **PROPERTIES WINDOWS** :- properties windows list the property setting for selected control or component. A property is a characteristics of an object such as size, caption, font, back color, visible etc.



- v. **FORM DESIGNER** :- The form designer serves as a window that we customize to design the interface of our application. We add tools, graphics, and pictures to a form.



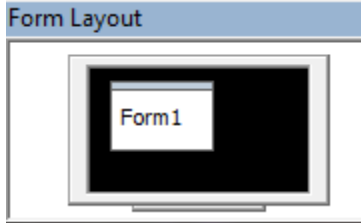
- vii. **CODE EDITOR WINDOWS** :- The code editor window serves as an editor for entering application code. A separate code editor window is created for each form or code model in our application.

```


Command1 Click
Private Sub Command1_Click()
Form1.BackColor = vbRed
End Sub

```


viii. FORM LAYOUT WINDOW :- The form layout window allow us to position we form in our application using a small graphical representation of the screen.





VISUAL BASIC CONTROLS (OBJECTS)


I. **LABEL**  :- A label control display text that user can't change directly, OR A label display read only text some important properties of label controls are outside, backcolor, backstyle, forecolor, forestyle, caption data form, datamember, datasource.


Notes:- The caption properties determines the text shown in the label. If we defined corporate in the caption access key is defined if we defined. The label control has many of the same events as any other control like change, click, double click, mouse move, mouse turn.


II. **TEXT BOX**  :- Text box are commonly used for accepting user input or entering data. A textbox displays information that we entered during design mode or run mode, it is also called edit field or edit control. Some important properties are data field data member data source, locked, maximum length multiline, password char, scrollbar, text.


III. **COMMAND BUTTON**  :- A command button control one of the most common control forms in windows application. A command button control carries out a command or action when a user selects it. Some of the important properties of command button are:- caption, cancel, style, default, enable, name etc.


IV. **OPTION BUTTON**  :- Option button control is also called radio button that are use to select one and only one option from a group of option, usually option buttons are grouped together with in a frame control. Some important properties of option button are caption, name ,value etc. VALUE:- The option button is valuable at both designed time and run time. At run time we test the value property to see whether it is turn on or off the value property has two settings true and false. Option button events are click, double click, drag and drop, got-focus, last-focus etc.


V. **CHECK BOX**  :- A check box control is similar to option button both are grouped in a frame or form and value property is tested to see if check box is on or off. The check box have three possible settings for the value on, off, grayed (Dimmed).


VI. **LIST BOX**  :- List box control display a list of items from which user can select one or more item. List is the important property of list box control we enter list box item in a list property of list box menu. After entering first item we press CTRL + ENTER for entering second item in a list box control other some important properties are columns, list count, list index, multi select, selected sorted etc.


VII. **COMBO BOX**  :- The combo box combines the features of both text box and list box. Combo box control allow the user to specify doesn't exist on the list.


VIII. **IMAGE CONTROL**  :- The image control is used to display bitmaps(.bmp), icons(.ico), jpeg(.jpg) and GIF file. Some important properties of image control are name, picture and stretch. stretch:- Stretch property is a control property that is true or false. When stretch is said to false the control resizes to control efforts but if we said the stretch property true the picture resizes to picture control.


IX. **PICTURE CONTROL**  :- The picture box control is similar to image control. It will display graphics of format bitmaps, icons, JPEG and GIF. The image control consume less memory than picture control. The picture control can act as a container of other object.


X. **HSCROLL BAR**  :- A Horizontal scroll bar allow an user to select a value within a range of values. Some important properties of horizontal scroll bar are large change, max, min, small change an value. Scroll () and click () events are the important event of Hscroll bar.

XI. **VSCROLL BAR**  :- A Vertical scroll bar allow an user to select a value within a range of values. Some important properties of vertical scroll bar are large change, max, min, small change an value. Scroll () and click () events are the important event of Vscroll bar.


XII. **TIMER**  :- The timer control executes timer events at specified time interval.


XIII. **DRIVE LIST BOX**  :- The drive list box control display and allow a user to select valid disk drive.

XIV. **DIR LIST BOX**  :- The directory list box control display and allow user to select directories and path.

XV. **FILE LIST BOX**  :- The file list box controls display and allow user to select form a list of files.

NOTE:- Path is the important properties of drive, directory, file and change event is important event of drive list box, dir list box, file list box.

XVI. **SHAPE CONTROL**  :- The shape control adds a rectangle, square, ellipse or circle to a form.

XVII. **LINE CONTROL**  :- The line control adds a straight line segment to a form.

XVIII. DATA CONTROL



:- The data control enable us to connect to an existing data base and display information from database to forms.

XIX. OLE CONTROL



:- The OLE container control embeds data in to a VB application.