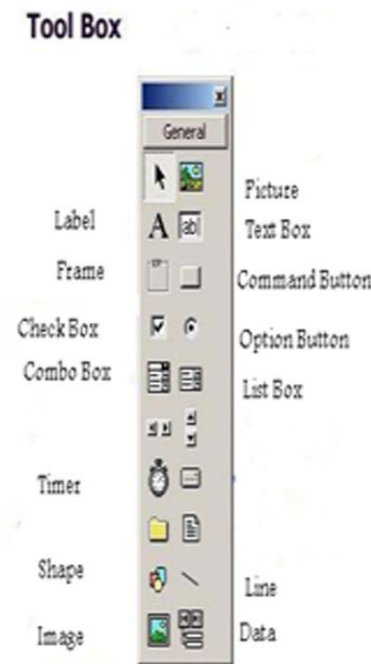


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The Elements of the User Interface

The user interface is what appears in the application's window when it runs. It consists of various elements with which the user can interact and control the application. The following figure illustrates the most important tool box.



Note some time the user wants more controls to design his application, you can access to these controls through **Project → Components**

Each control (object) has the following:

- A- Properties describe the characteristics of an object.
- B- Methods are actions that you can tell the object to perform.
- C- Events are activated when a user does something.

- 1- **Picture Box** is a tool used to display any picture you choose in your computer.
- 2- **Image** is look like a picture box but we can also read each pixel in the picture, and the picture can be stretch by the image tool.

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- 3- **Command Button** is the most important tools, used to execute code for sub program.
- 4- **Text Box** is used for enter, change, delete or display text.
- 5- **Label** is a tool used for display a text in the form; you cannot process the text during program execution.
- 6- **Check Box** is used to show many options and the user can choose more than one options at the same time.
- 7- **Option Button** is used to show many options and the user can choose only one option during program execution.
- 8- **List Box** is used for display a list of data.
- 9- **Combo Box** is look like list box and text box, so the user can display and enter data.
- 10- **Line** is used to draw line in the form.
- 11- **Shape** is used to draw circle, rectangular or any shapes.
- 12- **Timer** is a tool that cans program doing some action in some interval time.
- 13- **OLE (Object Linking and Embedding)** is used to join VB with an application program like (MS Excel and MS Word, etc).
- 14- **Data** is used to join VB with Database applications or programming language.
- 15- **V Scroll Bar** is used to put vertical scroll in the form.
- 16- **H Scroll Bar** is used to put horizontal scroll in the form.
- 17- **Frame** is used as a border to your tools.

There are two ways to put a tool in the form:

- 1- Double click in any tool.
- 2- Click on any tools and draw it to your form.

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Properties

Each tool in the tool box has many properties. Some properties are found in most tools while some properties are specific for some tools.

The standard form of changing property during run time:

Object Name.Property Name = New Value

1- Name property

The name property is used in programming (Code Window) to access to the required tool (object), that tool should found in the form.

2- Caption

The caption is used to display a title (text) in the tool.

3- Text

Text is used to enter or change the text.

4- Left

Left is used to control the left side of tool.

5- Top

Top is used to change top of tool.

Note the user can change the space between points in the form through Scale mode property (Twip, Inch, Pixel, character... etc).

Example

Write a code to move circuit form (0,0)

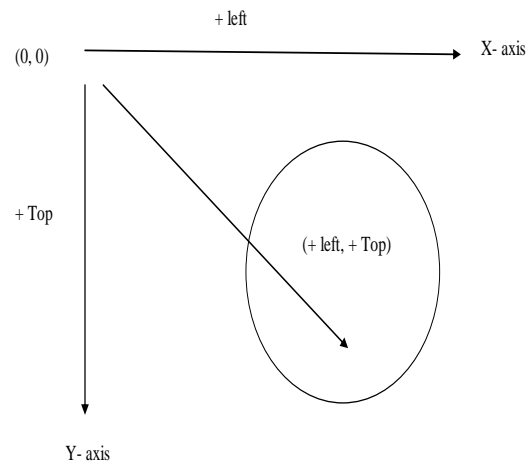
Point to (left, right, down, up, diagonal)

Left movement

To move circle to the left side the left

Property will decrease by some value.

Shape1.left = shape1.left -100



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Right movement

To move circle to the right side the left Property will increase by some value.

Shappe1.left = shape1.left + 100

Down movement

To move circle to the down the top Property will increase by some value.

Shappe1.Top = shape1.Top + 100

Up movement

To move circle to the Up the top Property will decrease by some value.

Shappe1.Top = shape1.Top - 100

Diagonal movement

To move circle in diagonal, the left and top properties will change.

Shappe1.left = shape1.Left +100

Shappe1.Top = shape1.Top +100

6- Height

Height property is used to change altitude of a shape.

7- Width

Width property is used to change with of a shape.

Example Write a code to enlargement a circle.

Shape1.height = Shape1.height + 100

Shape1.width = Shape1.width + 100

Example Write a code to decrease a circle.

Shape1.height = Shape1.height - 100

Shape1.width = Shape1.width - 100

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8- BackColor

BackColor is used to change the color of back ground.

9- Font

Font has many options to change the font of writing.

10- ForeColor

ForeColor is used to change the color of writing.

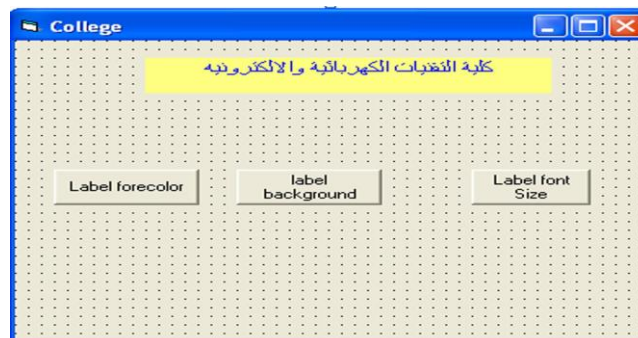
11- Visible

Visible is used to control showing of tool.

12- Enable

Enable is used to change the activity of tool, if true then tool is active and can use it, if false we cannot use it.

Example1 Design the following form, then change the label background, forecolor and font size properties.



```
Private Sub command1_Click()  
    Label1.BackColor = vbGreen  
End Sub  
Private Sub command2_Click()  
    Label1.ForeColor = vbRed  
End Sub  
Private Sub command3_Click()  
    Label1.Font.Size = 14  
End Sub
```

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Example2 writes a code to one picture and two commands.

- 1) Command1: the picture will show and active the "Hide" command button.
- 2) Command2: the picture will hide and active the "Show" command button.

Solution

```
Private sub CmdShow_click()
```

```
    Picture1.visible = True
```

```
    CmdShow.Enabled = False
```

```
    CmdHide.Enabled = True
```

```
End Sub
```

```
Private sub CmdHide_click()
```

```
    Picture1.visible = False
```

```
    CmdShow.Enabled = True
```

```
    CmdHide.Enabled = False
```

```
End Sub
```

Object	Property	Value
Command	Name	CmdShow
	Caption	Show
Command	Name	CmdHide
	Caption	Hide
Picture	Name	Picture1

Example3

Write a program to change the background of form to (blue, green and red) by using click event.

```
Private sub Cmdblu_click()
```

```
    Form1.BackColor = VbBlue
```

```
End sub
```

```
Private sub Cmdgre_click()
```

```
    Form1.BackColor = Vbgreen
```

```
End sub
```

```
Private sub Cmdred_click()
```

```
    Form1.BackColor = VbRed
```

```
End sub
```

Object	Property	Value
Command	Name	Cmdblu
	Caption	Blue
Command	Name	Cmdgre
	Caption	Green
Command	Name	Cmdred
	Caption	Red
Form	Name	Form1
	Caption	Form Color