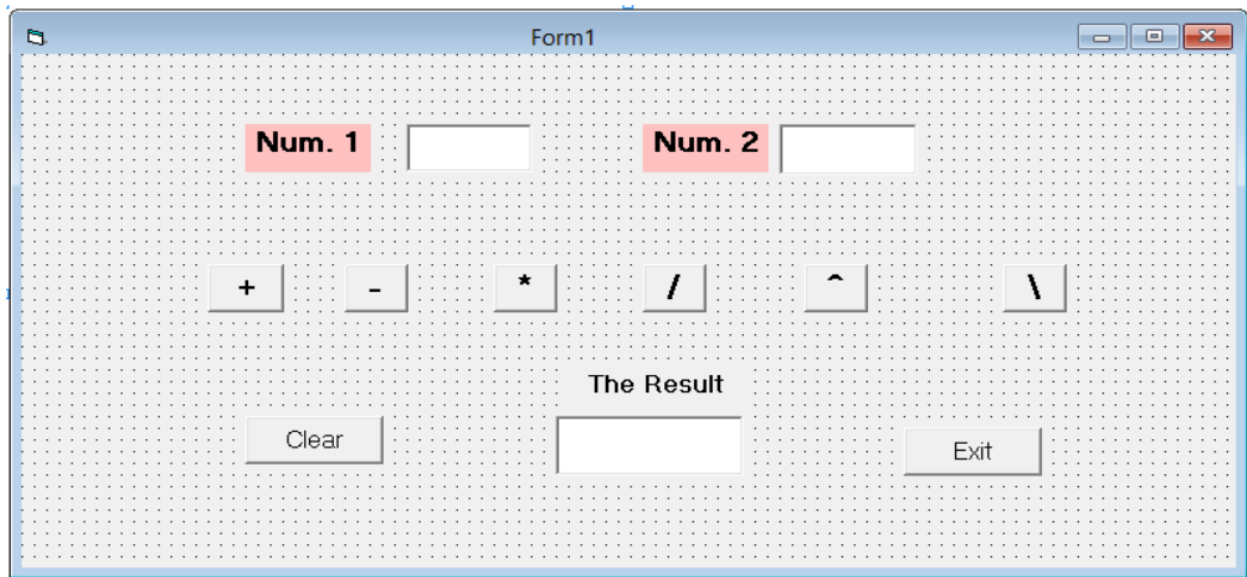


Example2: Write a Visual Basic program to build a calculator including (+, -, /, ^, *, mod(\)) operations between two numbers as shown below:



Do the following:

1- Format the properties of the **Form1** as mentioned in the table below:

Name	Form1
BackColor	Pallete(choose any color)
Caption	حاسبة or Calculator

**Name: specify the name of the control that will appears in the code window.*

**BackColor: specify the color of the control's background selected from a palette of colors.*

**Caption: specify the name of the control that will appears in the form window.*

2- Use the following properties in Creating the Textboxes, Labels and the Commands:

Text1		Text2		Text3	
Name	Text1	Name	Text2	Name	Text3
ForeColor	Blue	ForeColor	blue	ForeColor	blue
Text		Text		Text	
Font	Times, Bold, 12	Font	Times, Bold, 12	Font	Times, Bold, 12
Alignment	Center	Alignment	Center	Alignment	Center

*TextBox: Used to change values or get answers (input or output).

*ForeColor: Specify the color of the control's foreground.

*Text: Lists the text name displayed on the control. Used at input and output texts.

*Font: Display a font dialog box to vary font properties (size, style).

*Alignment: Determine whether text is left, center or right of the control.

Label1		Label2		Label3	
Name	Lable1	Name	Lable2	Name	Lable3
BackColor	White	BackColor	white	BackColor	white
Caption	First Num.	Caption	Second Num.	Caption	Result
Font	Times, Bold, 12	Font	Times, Bold, 12	Font	Times, Bold, 12
Alignment	Center	Alignment	Center	Alignment	Center

*Label: Displays a text that the user cannot modify or interact with.

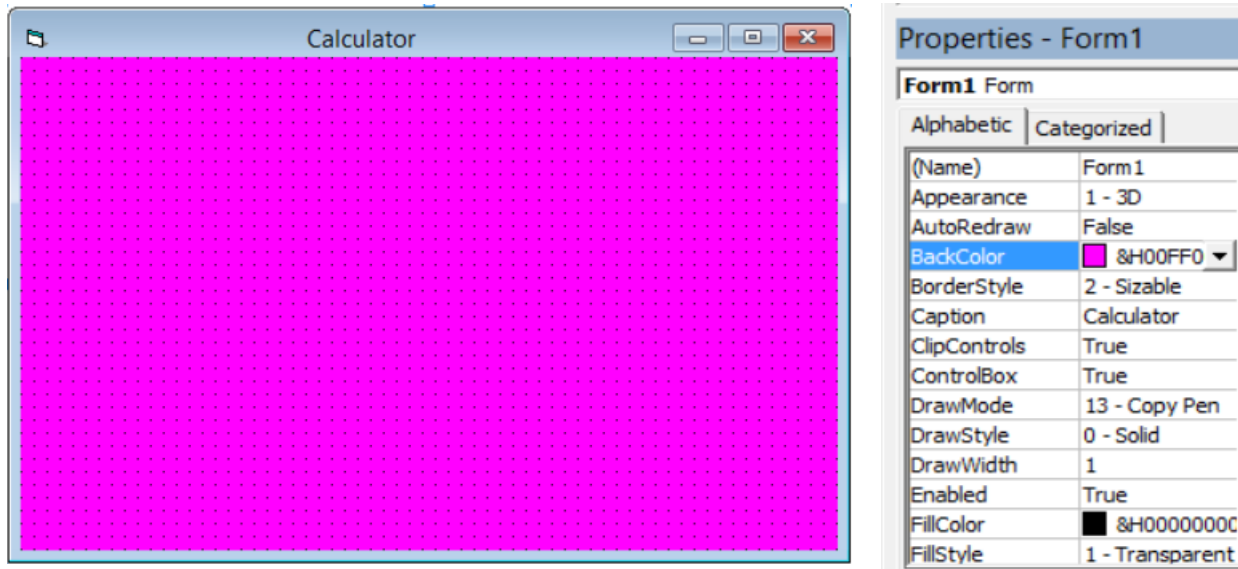
Command1		Command2		Command7	
Name	Command1	Name	Command2	Name	Command7
Caption	+	Caption	-	Caption	Exit
Font	Times, Bold, 12	Font	Times, Bold, 12	Font	Times, Bold, 12

*Command button: Used to write the code in the code window which appear by double click on command button.

3- Write the code of each action.

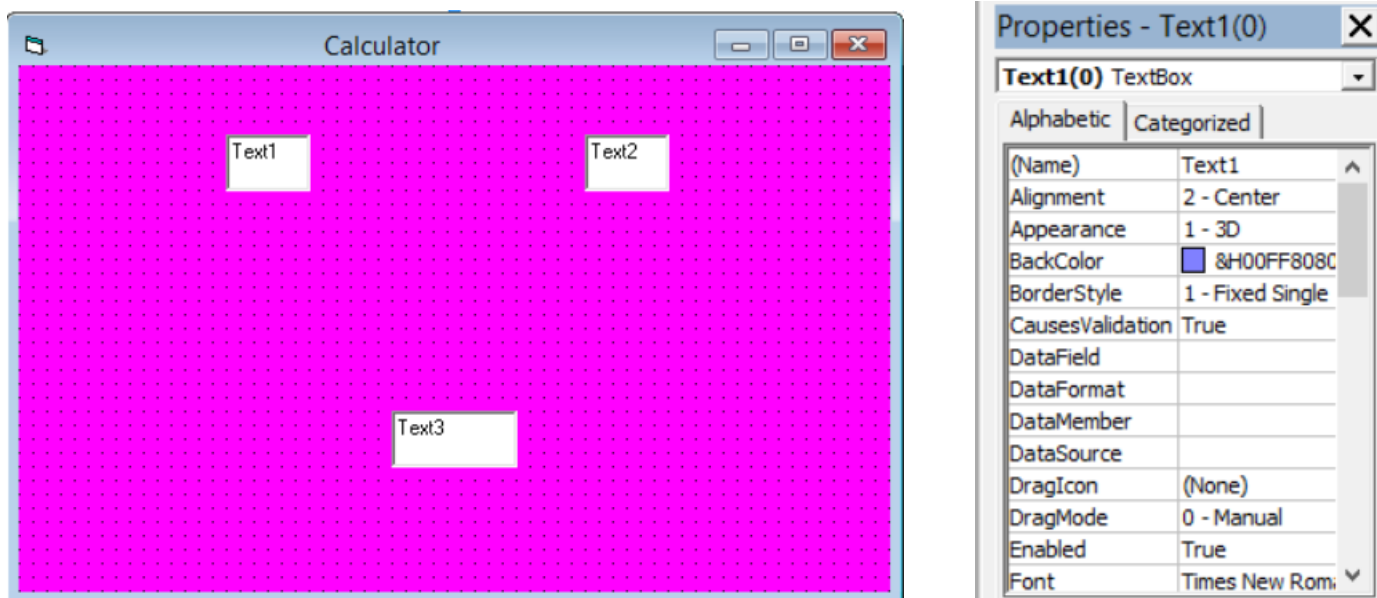
Sol:

1- open the program and Format the properties of the **Form1**

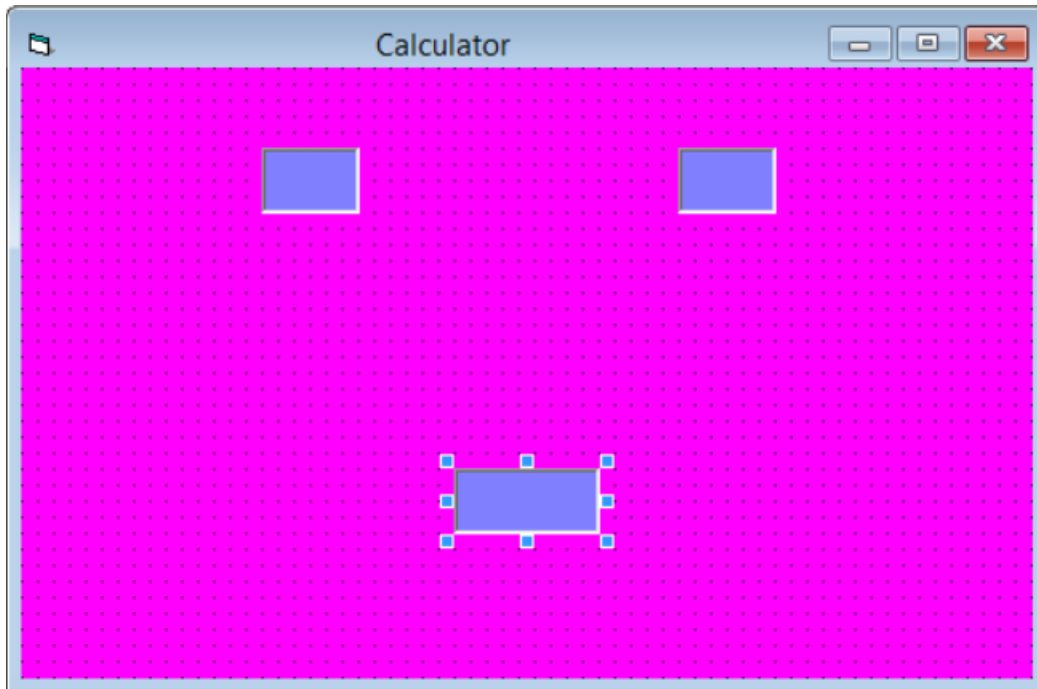


2- Create the following (three controls elements of type **Text box**, three controls elements of type **labels** and eight control elements of type **command**) and change their properties according to the tables mentioned above.

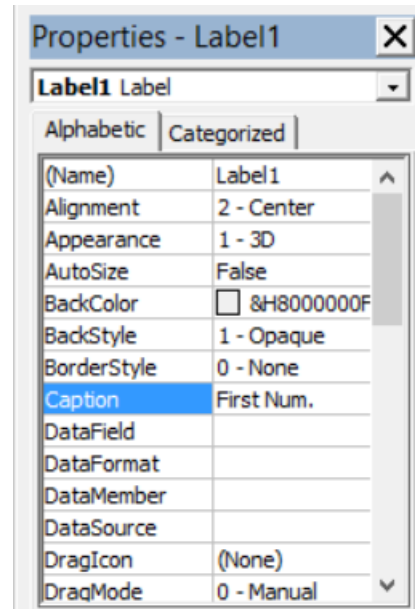
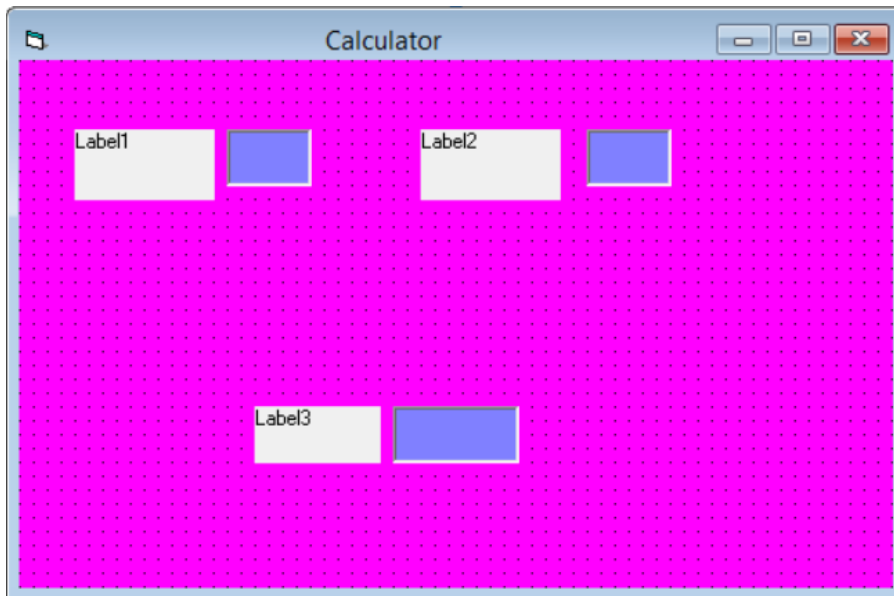
Creating the textboxes



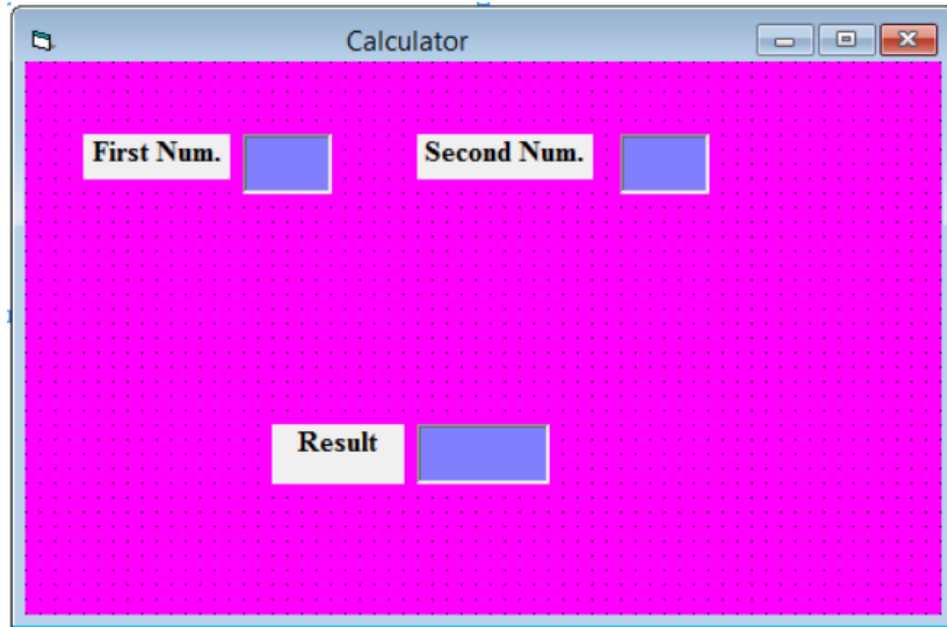
Textboxes after changing the properties



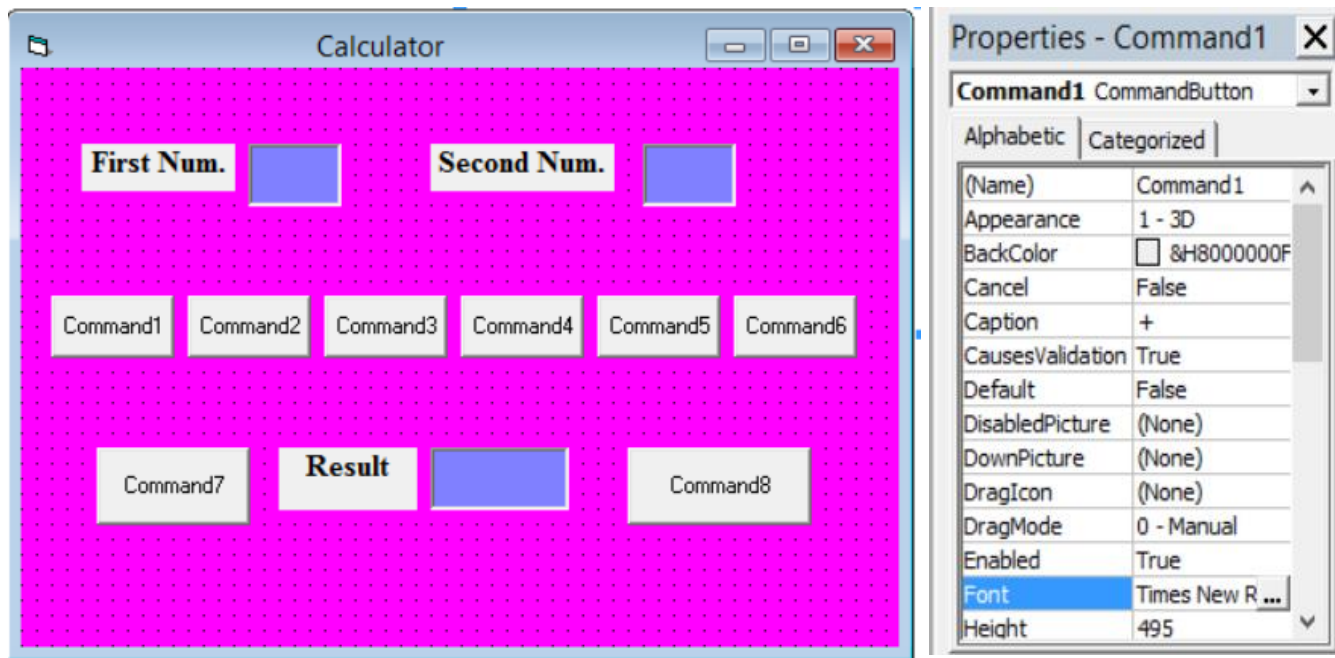
Creating the Labels



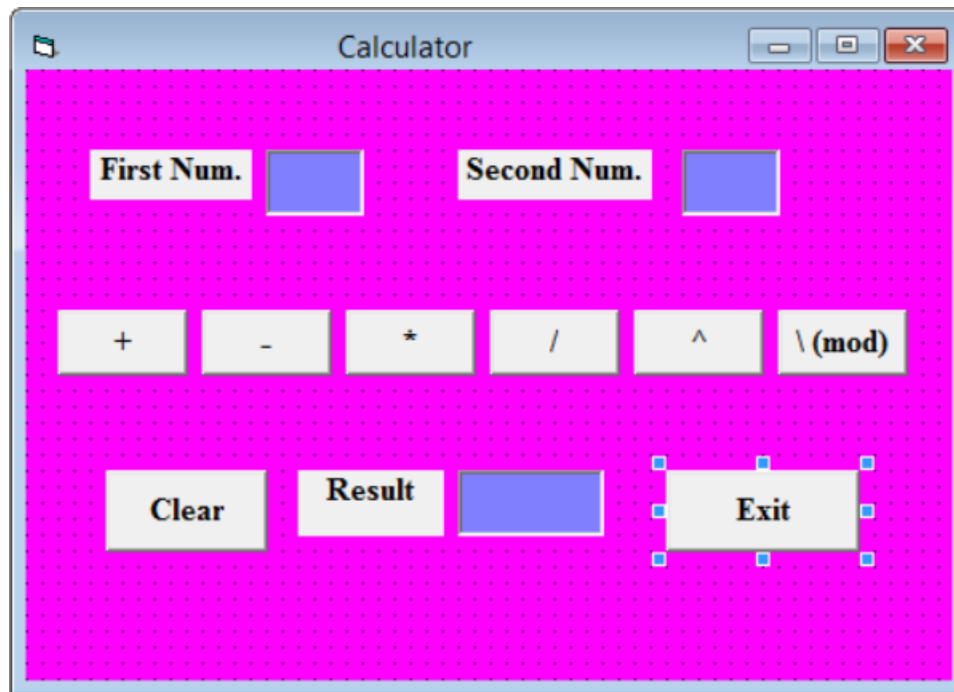
Labels after changing the properties



Creating the Commands



Commands after changing the properties

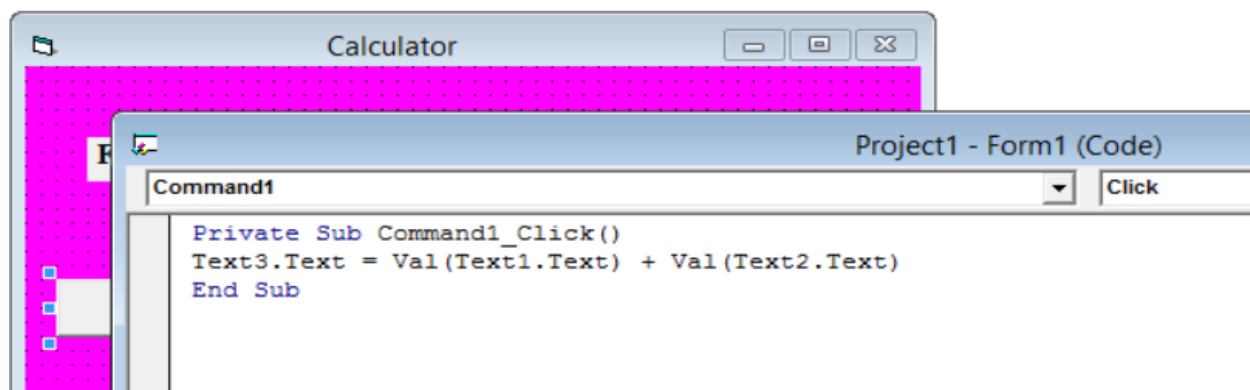


3- Write the code on the command buttons

- Double click on command1 (+..addition operation)
- Write the code of addition

Text3.Text = Val(Text1.Text) + Val(Text2.Text)

-Val: Used to get the value of text.....Val(120)=120



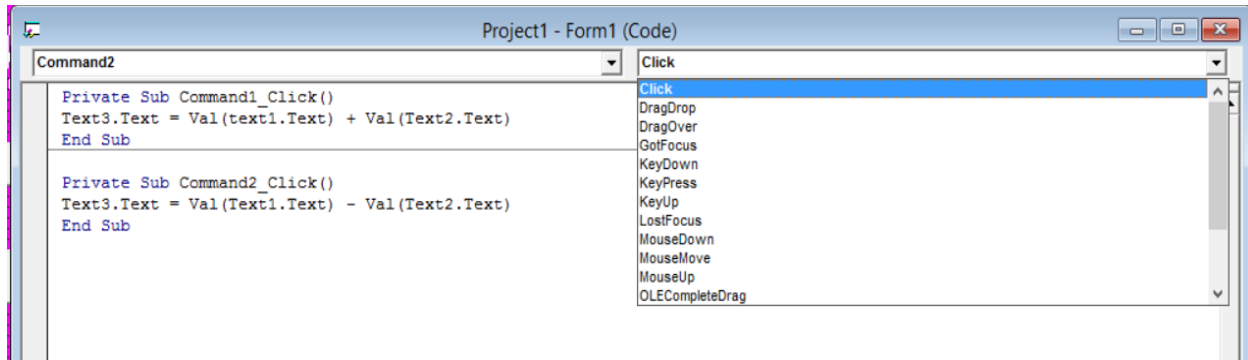
*Any coded procedure for any controls is written with the following block

Private Sub Control'sName_EventName()

End Sub

**Control'sName*: taken from ToolBox (CommandButton, Label, TextBox,...)

**EventName*: is a callback mechanism used by the user for notifying to execute the routine.



- Write the code of Command2...(-)

Text3.Text = Val(Text1.Text) - Val(Text2.Text)

- Write the code of Command3...(*)

Text3.Text = Val(Text1.Text) * Val(Text2.Text)

- Write the code of Command4...(/)

IF Val(Text2.Text)=0 THEN

Text3.Text ="ERROR"

ELSE

Text3.Text = Val(Text1.Text) / Val(Text2.Text)

END IF

- Write the code of Command5....(^)

Text3.Text = Val(Text1.Text) ^ Val(Text2.Text)

- Write the code of Command6....(\)

IF Val(Text2.Text)=0 THEN

Text3.Text ="ERROR"

ELSE

Text3.Text = Val(Text1.Text) mod Val(Text2.Text)

END IF

***mod: is the function to get the remainder of division.**

- Write the code of Command7...(Clear)

Text1.Text = ""

Text2.Text = ""

Text3.Text = ""

- Write the code of Command8....(Exit)

END

To Save the project, do the following:

File.....Save project (the program VB save the **form** in extension .FRM)

File.....Save project As (the program VB save the **project** in extension .VBP)

File.....Make project.exe (to create an application of the project)

****it is noticeable to save each project in a new folder***

Note: If you have two conditions in an equation, you should use (and, or) in the (if statement). This note will be explained in the following example.

$$S = \frac{\sqrt{a}}{3f}$$

In this example, we have two conditions:

1- $f \neq 0$

2- $a > 0$

In this case the code should be written as follows:

If $f=0$ or $a<0$ THEN

S="Error"

ELSE

S = (val (a.text)) ^ 0.5 / (3 * val (f.text))

END IF

H.W2: Write a (VB) program (profile and code) to find the value of X mentioned in the following equation:

$$x = \frac{-b + \sqrt{b^2 - 4ac}}{2a}$$