

Visual Basic.NET

VB.NET / Eng. Fallah NAJJAR

Iraq – An Najaf
Technical College of Management
Computer Center
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How to Install Visual Basic .NET

- ❖ Click the INSTALL link to the bottom.



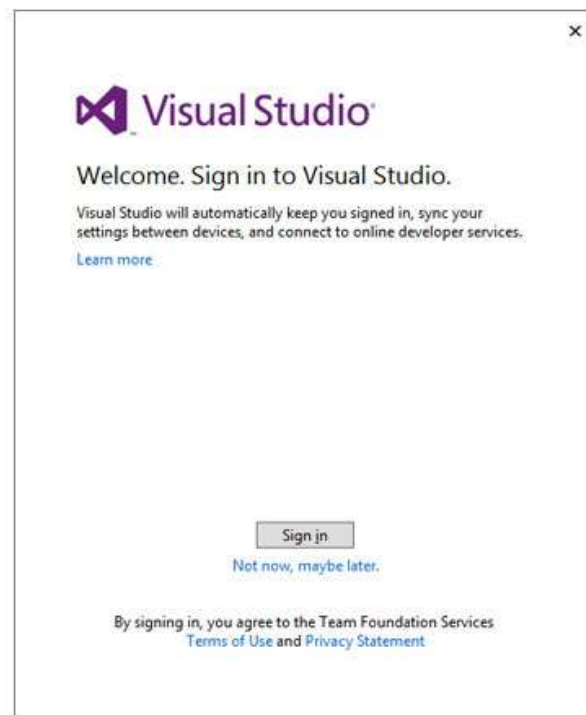
- ❖ The setup process may take for a while so please be patient:



- ❖ Once you get the "Setup Successful!" message click the LAUNCH link



- ❖ The new Welcome dialog will offer you to **Sign in to Visual Studio** which is optional so just click "**Not now, maybe later**".



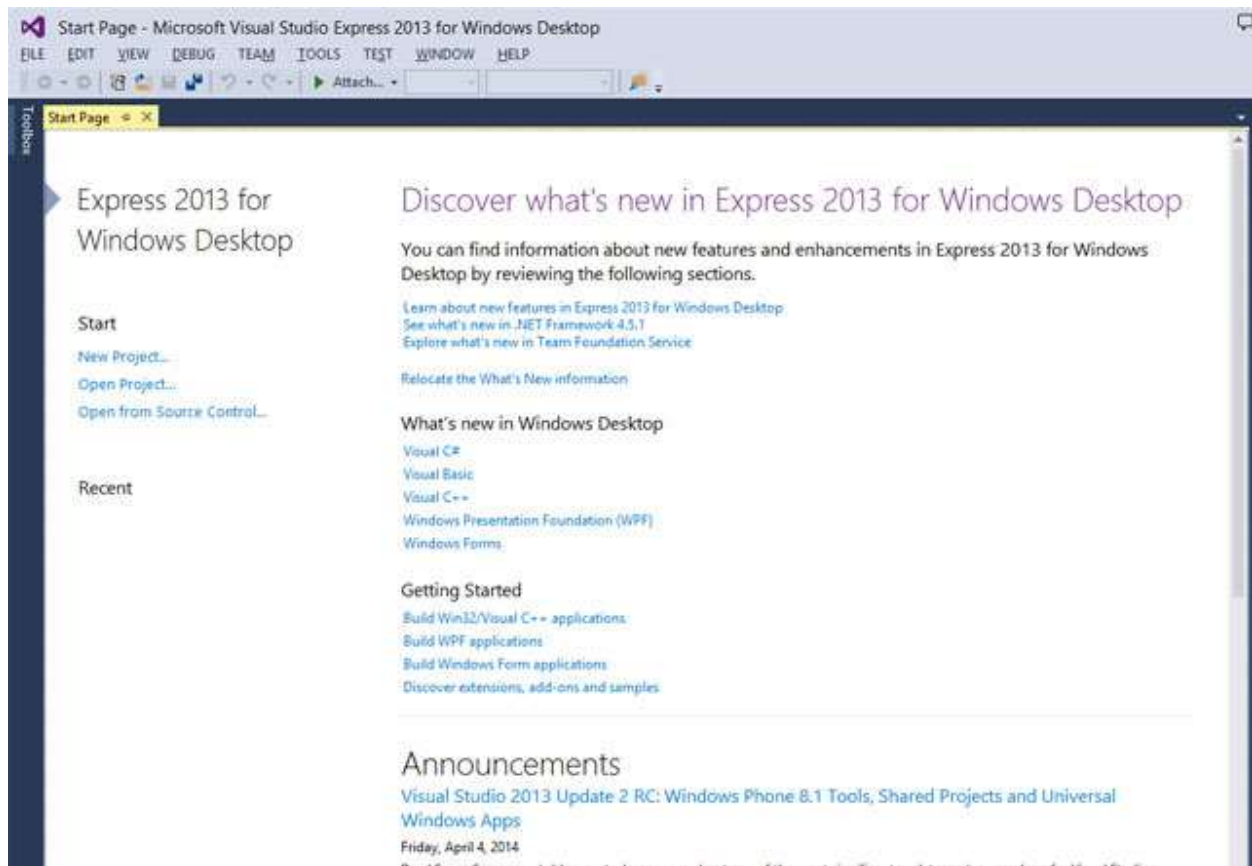
- ❖ After a while the new dialog will be shown up saying that **it's preparing for first use**.



- ❖ Now you have the latest Visual Studio Express for Windows Desktop running on your computer. **Congratulations!**



- ❖ By default, you'll see the **Start Page** showing Start section, Recent Projects (empty as for now), Getting Started etc.



Introduction

Visual Basic .NET (VB.NET) is an object-oriented computer programming language implemented on the .NET Framework. Although it is an evolution of classic Visual Basic language, it is not backwards-compatible with VB6, and any code written in the old version does not compile under VB.NET.

The following reasons make VB.Net a widely used professional language:

- Modern, general purpose.
- Object oriented.
- Component oriented.
- Easy to learn.
- Structured language.
- It produces efficient programs.
- It can be compiled on a variety of computer platforms.
- Part of .Net Framework.

VB.Net - Program Structure

A VB.Net program basically consists of the following parts:

- Namespace declaration
- A class or module
- One or more procedures
- Variables
- The Main procedure
- Statements & Expressions
- Comments

Let us now briefly look into what do class, object, methods and instance variables mean.

- **Object** - Objects have states and behaviors. Example: A dog has states - color, name, breed as well as behaviors - wagging, barking, eating, etc. An object is an instance of a class.
- **Class** - A class can be defined as a template/blueprint that describes the behaviors/states that objects of its type support.
- **Methods** - A method is basically a behavior. A class can contain many methods. It is in methods where the logics are written, data is manipulated and all the actions are executed.
- **Instance Variables** - Each object has its unique set of instance variables. An object's state is created by the values assigned to these instance variables.

Identifiers

An identifier is a name used to identify a class, variable, function, or any other user-defined item. The basic rules for naming classes in VB.Net are as follows:

- A name must begin with a letter that could be followed by a sequence of letters, digits (0 - 9) or underscore. The first character in an identifier cannot be a digit.
- It must not contain any embedded space or symbol like (? - +! @ # % ^ & * () [] {} . ; : " ' / and \). However, an underscore (_) can be used.
- It should not be a reserved keyword.

Data Types in VB.Net

VB.Net provides a wide range of data types. The following table shows all the data types available:

| Data Type | Storage Allocation |
|--------------|--|
| Boolean | Depends on implementing platform |
| Byte | 1 byte |
| Char | 2 bytes |
| Date | 8 bytes |
| Decimal | 16 bytes |
| Double | 8 bytes |
| Integer | 4 bytes |
| Long | 8 bytes |
| Object | 4 bytes on 32-bit platform 8 bytes on 64-bit platform |
| SByte | 1 byte |
| Short | 2 bytes |
| Single | 4 bytes |
| String | Depends on implementing platform |
| UInteger | 4 bytes |
| ULong | 8 bytes |
| User-Defined | Depends on implementing platform |
| UShort | 2 bytes |

A variable is nothing but a name given to a storage area that our programs can manipulate. Each variable in VB.Net has a specific type, which determines the size and layout of the variable's memory; the range of values that can be stored within that memory; and the set of operations that can be applied to the variable.

We have already discussed various data types. The basic value types provided in VB.Net can be categorized as:

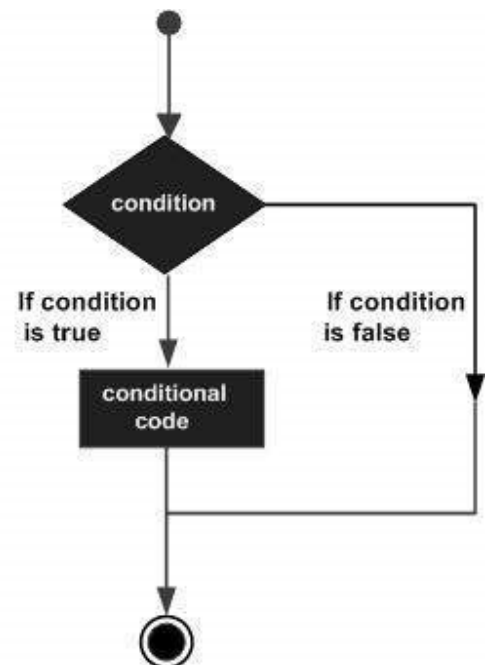
| Type | Example |
|----------------------|---|
| Integral types | SByte, Byte, Short, UShort, Integer, UInteger, Long, ULong and Char |
| Floating point types | Single and Double |
| Decimal types | Decimal |
| Boolean types | True or False values, as assigned |
| Date types | Date |

Decision Making

Decision making structures require that the programmer specify one or more conditions to be evaluated or tested by the program, along with a statement or statements to be executed if the condition is determined to be true, and optionally, other statements to be executed if the condition is determined to be false.

Following is the general form of a typical decision-making structure found in most of the programming languages:

VB.Net provides the following types of decision making statements. Click the following links to check their details.



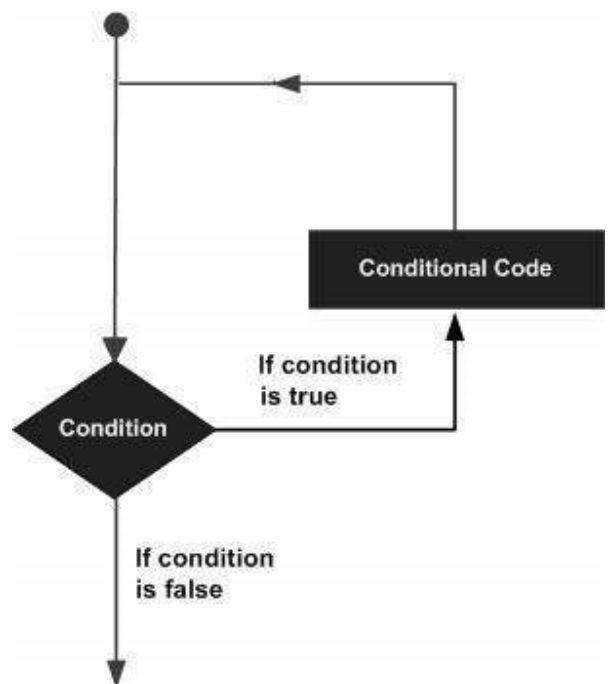
| Statement | Description |
|--------------------------------------|---|
| If ... Then statement | An If...Then statement consists of a Boolean expression followed by one or more statements. |
| If...Then...Else statement | An If...Then statement can be followed by an optional Else statement , which executes when the Boolean expression is false. |
| nested If statements | You can use one If or Else if statement inside another If or Else if statement(s). |
| Select Case statement | A Select Case statement allows a variable to be tested for equality against a list of values. |
| nested Select Case statements | You can use one select case statement inside another select case statement(s). |

Loops

There may be a situation when you need to execute a block of code several number of times. In general, statements are executed sequentially: The first statement in a function is executed first, followed by the second, and so on.

Programming languages provide various control structures that allow for more complicated execution paths.

A loop statement allows us to execute a statement or group of statements multiple times and following is the general form of a loop statement in most of the programming languages:



VB.Net provides following types of loops to handle looping requirements. Click the following links to check their details.

| Loop Type | Description |
|---------------------------|---|
| Do Loop | It repeats the enclosed block of statements while a Boolean condition is True or until the condition becomes True. It could be terminated at any time with the Exit Do statement. |
| For...Next | It repeats a group of statements a specified number of times and a loop index counts the number of loop iterations as the loop executes. |
| For Each...Next | It repeats a group of statements for each element in a collection. This loop is used for accessing and manipulating all elements in an array or a VB.Net collection. |
| While... End While | It executes a series of statements as long as a given condition is True. |
| With... End With | It is not exactly a looping construct. It executes a series of statements that repeatedly refer to a single object or structure. |
| Nested loops | You can use one or more loops inside any another While, For or Do loop. |

Loop Control Statements:

Loop control statements change execution from its normal sequence. When execution leaves a scope, all automatic objects that were created in that scope are destroyed.

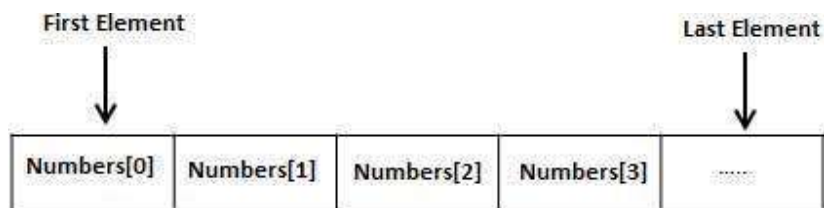
VB.Net provides the following control statements. Click the following links to check their details.

| Control Statement | Description |
|---------------------------|--|
| Exit statement | Terminates the loop or select case statement and transfers execution to the statement immediately following the loop or select case. |
| Continue statement | Causes the loop to skip the remainder of its body and immediately retest its condition prior to reiterating. |
| GoTo statement | Transfers control to the labeled statement. Though it is not advised to use GoTo statement in your program. |

Arrays

An array stores a fixed-size sequential collection of elements of the same type. An array is used to store a collection of data, but it is often more useful to think of an array as a collection of variables of the same type.

All arrays consist of contiguous memory locations. The lowest address corresponds to the first element and the highest address to the last element.



Creating Arrays in VB.Net

To declare an array in VB.Net, you use the Dim statement. For example,

```
Dim intData(30)          ' an array of 31 elements
Dim strData(20) As String ' an array of 21 strings
Dim twoDarray(10, 20) As Integer 'a two dimensional array of integers
Dim ranges(10, 100)     'a two dimensional array
```

You can also initialize the array elements while declaring the array. For example,

```
Dim intData() As Integer = {12, 16, 20, 24, 28, 32}
Dim names() As String = {"Karthik", "Sandhya", "Shivangi", "Ashwitha", "Somnath"}
Dim miscData() As Object = {"Hello World", 12d, 16ui, "A"c}
```

Multi-Dimensional Arrays

VB.Net allows multidimensional arrays. Multidimensional arrays are also called rectangular arrays.

You can declare a 2-dimensional array of strings as:

```
Dim twoDStringArray(10, 20) As String
```

or, a 3-dimensional array of Integer variables:

```
Dim threeDIntArray(10, 10, 10) As Integer
```

Functions

A procedure is a group of statements that together perform a task when called. After the procedure is executed, the control returns to the statement calling the procedure. VB.Net has two types of procedures:

- Functions
- Sub procedures or Subs

Functions return a value, whereas Subs do not return a value.

Defining a Function

The Function statement is used to declare the name, parameter and the body of a function. The syntax for the Function statement is:

```
[Modifiers] Function FunctionName [(ParameterList)] As ReturnType  
    [Statements]  
End Function
```

Where,

- **Modifiers**: specify the access level of the function; possible values are: Public, Private, Protected, Friend, Protected Friend and information regarding overloading, overriding, sharing, and shadowing.
- **FunctionName**: indicates the name of the function
- **ParameterList**: specifies the list of the parameters
- **ReturnType**: specifies the data type of the variable the function returns

Function Returning a Value

In VB.Net, a function can return a value to the calling code in two ways:

- By using the return statement
- By assigning the value to the function name

Sub Procedures

As we mentioned in the previous chapter, Sub procedures are procedures that do not return any value. We have been using the Sub procedure Main in all our examples. We have been writing console applications so far in these tutorials. When these applications start, the control goes to the Main Sub procedure, and it in turn, runs any other statements constituting the body of the program.

Defining Sub Procedures

The **Sub** statement is used to declare the name, parameter and the body of a sub procedure. The syntax for the Sub statement is:

```
[Modifiers] Sub SubName [(ParameterList)]  
    [Statements]  
End Sub
```

Where,

- **Modifiers**: specify the access level of the procedure; possible values are: Public, Private, Protected, Friend, Protected Friend and information regarding overloading, overriding, sharing, and shadowing.
- **SubName**: indicates the name of the Sub
- **ParameterList**: specifies the list of the parameters

Classes and Objects

Generally speaking, a class is a software component that defines and implements one or more interfaces. (Strictly speaking, a class need not implement all the members of an interface. We discuss this later when we talk about abstract members.) In different terms, a class combines data, functions, and types into a new type. Microsoft uses the term type to include classes.

Class Modules in VB.NET

Under Visual Studio.NET, a VB class module is inserted into a project using the Add Class menu item on the Project menu. This inserts a new module containing the code:

```
Public Class ClassName  
  
End Class
```

Although Visual Studio stores each class in a separate file, this isn't a requirement. It is the Class...End Class construct that marks the beginning and end of a class definition. Thus, the code for more than one class as well as one or more code modules (which are similarly delimited by the Module...End Module construct) can be contained in a single source code file.

The C-Person class defined in the next section is an example of a VB class module.

Class Members

In VB.NET, class modules can contain the following types of members:

❖ Data members

This includes member variables (also called fields) and constants.

❖ Event members

Events are procedures that are called automatically by the Common Language Runtime in response to some action that occurs, such as an object being created, a button being clicked, a piece of data being changed, or an object going out of scope.

❖ Function members

This refers to both functions and subroutines. A function member is also called a method. A class' constructor is a special type of method.

❖ Property members

A property member is implemented as a Private member variable together with a special type of VB function that incorporates both accessor functions of the property.

❖ Type members

A class member can be another class, which is then referred to as a nested class.

Inheritance

One of the most important concepts in object-oriented programming is that of inheritance. Inheritance allows us to define a class in terms of another class which makes it easier to create and maintain an application. This also provides an opportunity to reuse the code functionality and fast implementation time.

When creating a class, instead of writing completely new data members and member functions, the programmer can designate that the new class should inherit the members of an existing class. This existing class is called the base class, and the new class is referred to as the derived class.

Base & Derived Classes:

A class can be derived from more than one class or interface, which means that it can inherit data and functions from multiple base classes or interfaces.

* **VB.Net supports multiple inheritance.**

Dialog Boxes

There are many built-in dialog boxes to be used in Windows forms for various tasks like opening and saving files, printing a page, providing choices for colors, fonts, page setup, etc., to the user of an application. These built-in dialog boxes reduce the developer's time and workload.

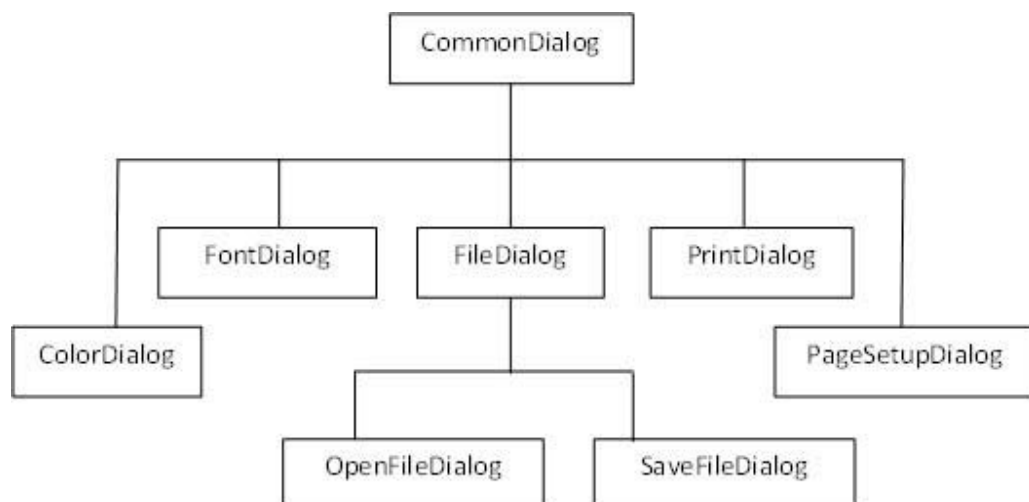
All of these dialog box control classes inherit from the **CommonDialog** class and override the *RunDialog()* function of the base class to create the specific dialog box.

The *RunDialog()* function is automatically invoked when a user of a dialog box calls its *ShowDialog()* function.

The **ShowDialog** method is used to display all the dialog box controls at run-time. It returns a value of the type of **DialogResult** enumeration. The values of DialogResult enumeration are:

- **Abort** - returns DialogResult.Abort value, when user clicks an Abort button.
- **Cancel**- returns DialogResult.Cancel, when user clicks a Cancel button.
- **Ignore** - returns DialogResult.Ignore, when user clicks an Ignore button.
- **No** - returns DialogResult.No, when user clicks a No button.
- **None** - returns nothing and the dialog box continues running.
- **OK** - returns DialogResult.OK, when user clicks an OK button
- **Retry** - returns DialogResult.Retry, when user clicks an Retry button
- **Yes** - returns DialogResult.Yes, when user clicks an Yes button

The following diagram shows the common dialog class inheritance:



All these above-mentioned classes have corresponding controls that could be added from the Toolbox during design time. You can include relevant functionality of these classes to your application, either by instantiating the class programmatically or by using relevant controls.

When you double click any of the dialog controls in the toolbox or drag the control onto the form, it appears in the Component tray at the bottom of the Windows Forms Designer, they do not directly show up on the form.

The following table lists the commonly used dialog box controls. Click the following links to check their detail:

| S.N. | Control & Description |
|------|---|
| 1 | ColorDialog It represents a common dialog box that displays available colors along with controls that enable the user to define custom colors. |
| 2 | FontDialog It prompts the user to choose a font from among those installed on the local computer and lets the user select the font, font size, and color. |
| 3 | OpenFileDialog It prompts the user to open a file and allows the user to select a file to open. |
| 4 | SaveFileDialog It prompts the user to select a location for saving a file and allows the user to specify the name of the file to save data. |
| 5 | PrintDialog It lets the user to print documents by selecting a printer and choosing which sections of the document to print from a Windows Forms application. |

Exception Handling

- An exception is a problem that arises during the execution of a program. An exception is a response to an exceptional circumstance that arises while a program is running, such as an attempt to divide by zero.

Exceptions provide a way to transfer control from one part of a program to another. VB.Net exception handling is built upon four keywords: Try, Catch and Finally.

- **Try:** A Try block identifies a block of code for which particular exceptions will be activated. It's followed by one or more Catch blocks.
- **Catch:** A program catches an exception with an exception handler at the place in a program where you want to handle the problem. The Catch keyword indicates the catching of an exception.
- **Finally:** The Finally block is used to execute a given set of statements, whether an exception is thrown or not thrown. For example, if you open a file, it must be closed whether an exception is raised or not.

Syntax

Assuming a block will raise an exception, a method catches an exception using a combination of the Try and Catch keywords. A Try/Catch block is placed around the code that might generate an exception. Code within a Try/Catch block is referred to as protected code, and the syntax for using Try/Catch looks like the following:

```
Try
  [ tryStatements ]
  [ Exit Try ]
[ Catch [ exception [ As type ] ] [ When expression ]
  [ catchStatements ]
  [ Exit Try ] ]
[ Catch ... ]
[ Finally
  [ finallyStatements ] ]
End Try
```

You can list down multiple catch statements to catch different type of exceptions in case your try block raises more than one exception in different situations.

Toolbox Controls

Controls make programming a lot easier and faster. You can drag and drop a button or a text box to the designer and their codes will be generated automatically.

| | | | |
|-------------------|---------------------|---------------------|--------------------|
| Pointer | ErrorProvider | NotifyIcon | SaveFileDialog |
| BackgroundWorker | EventLog | NumericUpDown | SerialPort |
| BindingNavigator | FlowLayoutPanel | OpenFileDialog | ServiceController |
| BindingSource | FolderBrowserDialog | PageSetupDialog | SplitContainer |
| Button | FontDialog | Panel | Splitter |
| Chart | GroupBox | PerformanceCounter | StatusStrip |
| CheckBox | HelpProvider | PictureBox | TabControl |
| CheckedListBox | HScrollBar | PrintDialog | TableLayoutPanel |
| ColorDialog | ImageList | PrintDocument | TextBox |
| ComboBox | Label | PrintPreviewControl | Timer |
| ContextMenuStrip | LinkLabel | PrintPreviewDialog | ToolStrip |
| DataGridView | ListBox | Process | ToolStripContainer |
| DataSet | ListView | ProgressBar | ToolTip |
| DateTimePicker | MaskedTextBox | PropertyGrid | TrackBar |
| DirectoryEntry | MenuStrip | RadioButton | TreeView |
| DirectorySearcher | MessageQueue | ReportViewer | VScrollBar |
| DomainUpDown | MonthCalendar | RichTextBox | WebBrowser |

I'll describe the most common properties and events for common tools control

VB.Net - Form Control

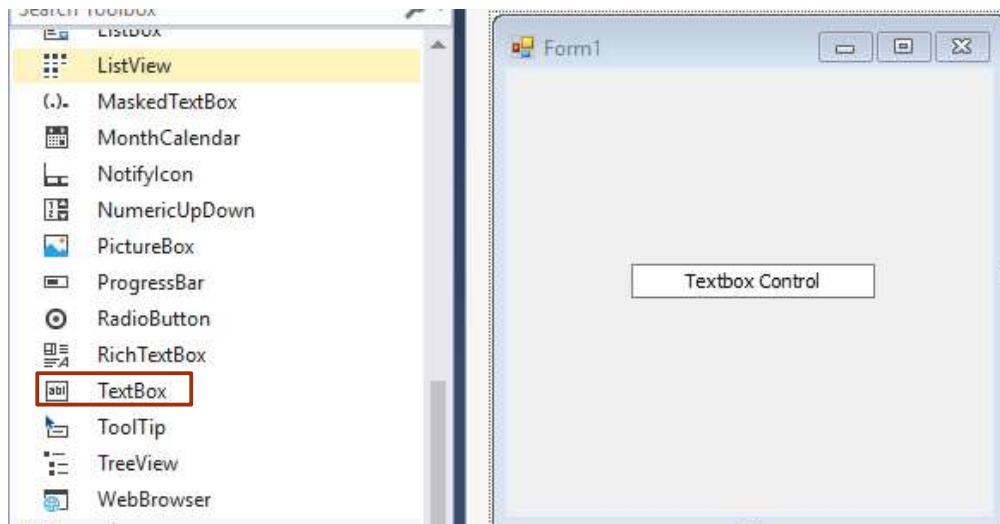
| Property | Description |
|----------|---|
| Name | This is the actual name of the form. |
| Text | The text, which will appear at the title bar of the form. |

Form Events

| Event | Description |
|-------|---|
| Load | Occurs before a form is displayed for the first time. |
| Event | Description |

VB.Net - TextBox Control

Let's create a text box by dragging a Text Box control from the Toolbox and dropping it on the form.



TextBox Properties

| Property | Description |
|--------------|--|
| Multiline | Gets or sets a value indicating whether this is a multiline TextBox control. |
| PasswordChar | Gets or sets the character used to mask characters of a password in a single-line TextBox control. |
| Text | Gets or sets the current text in the TextBox. |
| TextAlign | Gets or sets how text is aligned in a TextBox control. This property has |

TextBox Methods

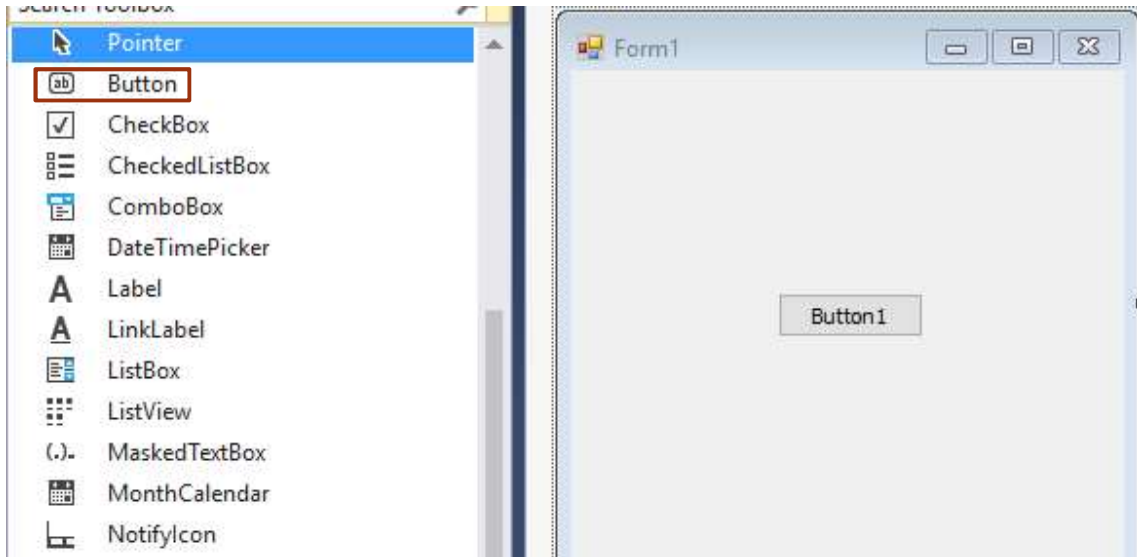
| Method | Description |
|----------|--|
| Clear | Clears all text from the text box control. |
| ToString | Returns a string that represents the TextBox Base control. |

TextBox Events

| Event | Description |
|------------------|---|
| Click | Occurs when the control is clicked. |
| DoubleClick | Occurs when the control is double-clicked. |
| TextAlignChanged | Occurs when the TextAlign property value changes. |

VB.Net - Button Control

Let's create a label by dragging a Button control from the Toolbox and dropping it on the form



Button Properties

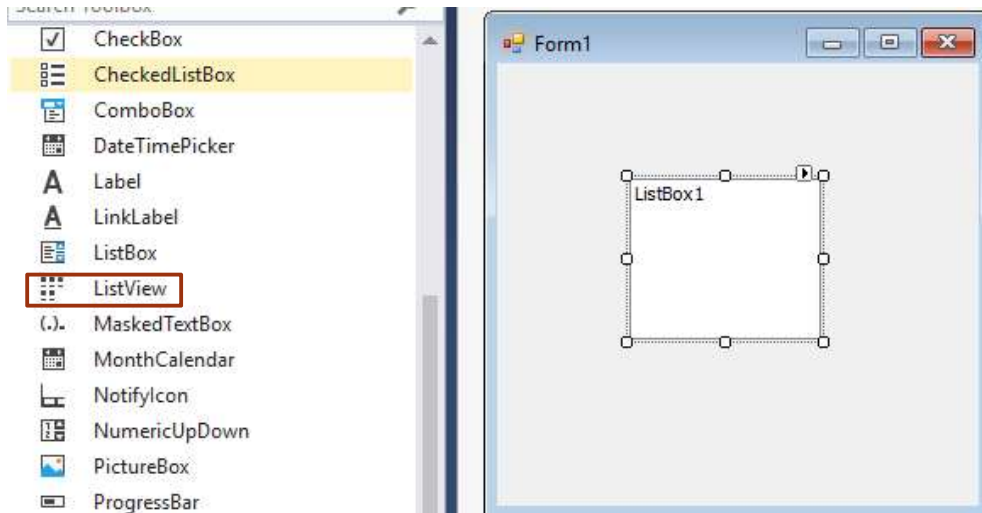
| Property | Description |
|----------|---|
| Text | Gets or sets the text associated with this control. |

Button Events

| Event | Description |
|-------|-------------------------------------|
| Click | Occurs when the control is clicked. |

VB.Net - ListBox Control

Let's create a list box by dragging a ListBox control from the Toolbox and dropping it on the form.



ListBox Properties

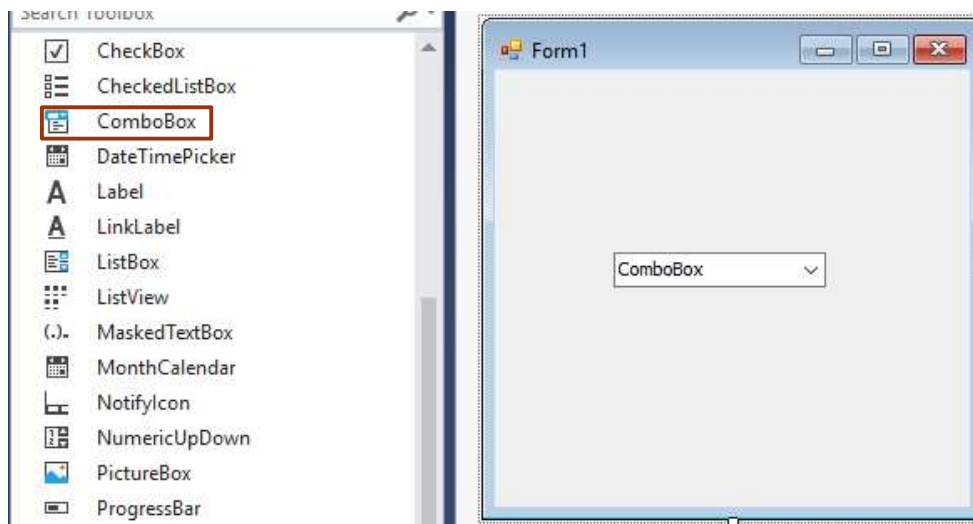
| Property | Description |
|---------------|--|
| Items | Gets the items of the list box. |
| MultiColumn | Gets or sets a value indicating whether the list box supports multiple columns. |
| SelectedIndex | Gets or sets the zero-based index of the currently selected item in a list box. |
| SelectedItem | Gets or sets the currently selected item in the list box. |
| SelectedItems | Gets a collection containing the currently selected items in the list box. |
| Sorted | Gets or sets a value indicating whether the items in the list box are sorted alphabetically. |
| Text | Gets or searches for the text of the currently selected item in the list box. |

Listbox Events

| Event | Description |
|----------------------|--|
| Click | Occurs when a list box is selected. |
| SelectedIndexChanged | Occurs when the SelectedIndex property of a list box is changed. |

VB.Net - ComboBox Control

Let's create a combo box by dragging a ComboBox control from the Toolbox and dropping it on the form.

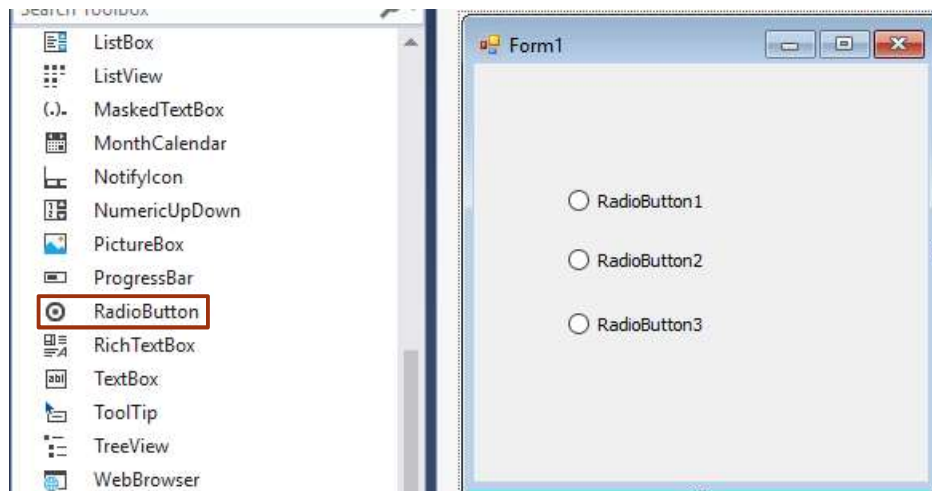


ComboBox Properties

| Property | Description |
|---------------|---|
| Items | Gets an object representing the collection of the items contained in this ComboBox. |
| SelectedIndex | Gets or sets the index specifying the currently selected item. |
| SelectedText | Gets or sets the text that is selected in the editable portion of a ComboBox. |
| Sorted | Gets or sets a value indicating whether the items in the combo box are sorted. |
| Text | Gets or sets the text associated with this control. |

VB.Net - RadioButton Control

Let's create three radio buttons by dragging Radio Button controls from the Toolbox and dropping on the form.

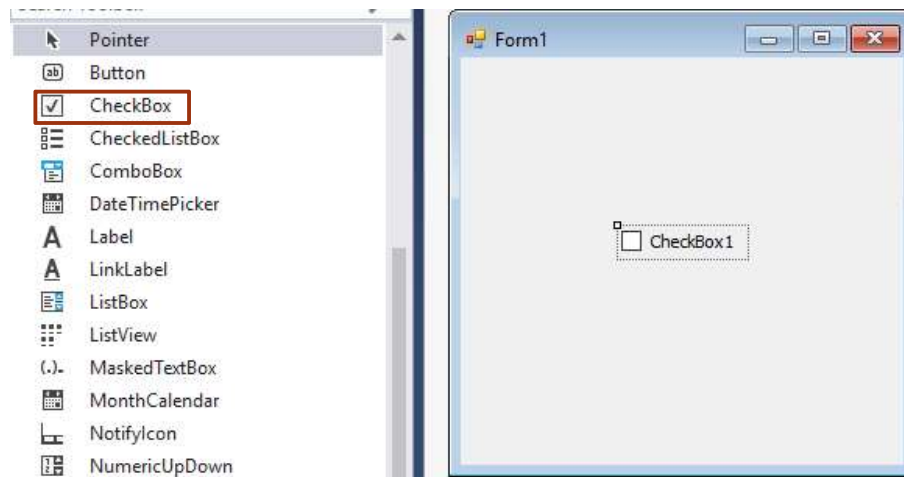


RadioButton Properties

| Property | Description |
|----------|---|
| Checked | Gets or sets a value indicating whether the control is checked. |
| Text | Gets or sets the caption for a radio button. |

VB.Net - CheckBox Control

Let's create two check boxes by dragging Check Box controls from the Toolbox and dropping on the form.



CheckBox Properties

| Property | Description |
|----------|--|
| Checked | Gets or sets a value indicating whether the check box is selected. |
| Text | Gets or sets the caption of a check box. |

Note: the previous tools with their properties, methods, and event not all things, there are many tools have many.

Now I'll start with simple projects code



Project 1: Simple Clock

Add to your Form project

- ❖ Label
- ❖ Timer

Timer Properties

| Property | Set |
|----------|-------|
| Enables | False |
| Interval | 100 |

Source Code

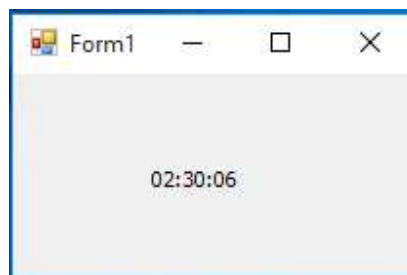
Double click (DC) on Timer1, then write

```
Me.Label1.Text = Now.ToString("HH:mm:ss")
```

Double click (DC) on Label1, then write

```
Timer1.Enabled = True
```

Then run your application (app) to get:





Project 2: Difference in days

Add to your Form project

❖ Button

Button Properties

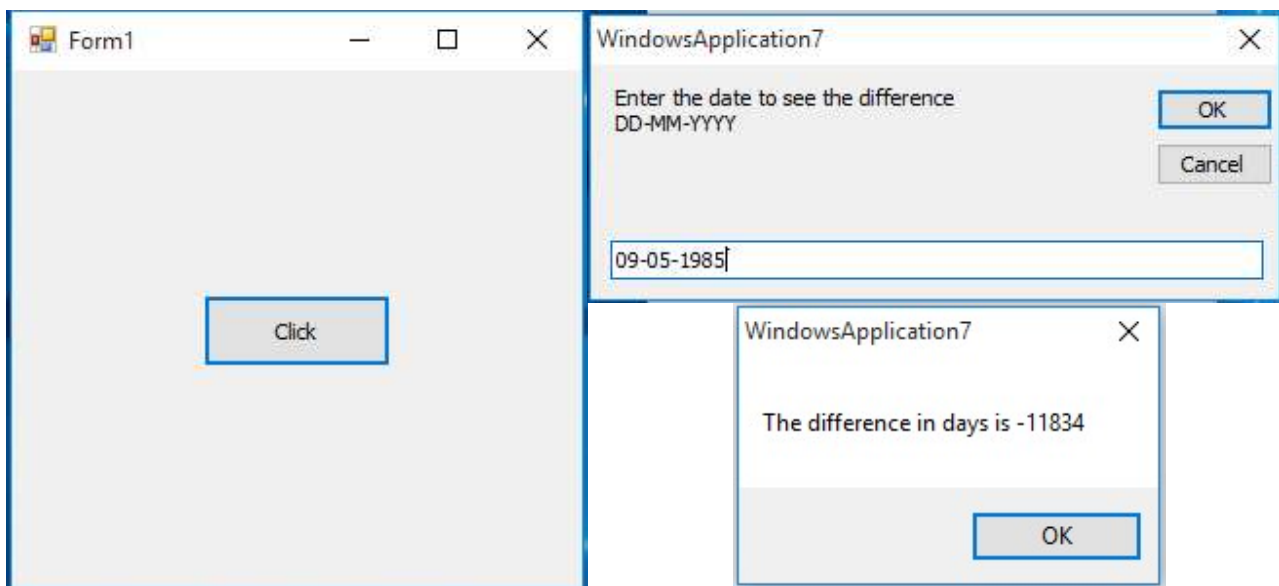
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button, then write

```
Dim firstDate, msg As String
Dim secondDate As Date
firstDate = InputBox("Enter the date to see the difference" & vbNewLine & "DD-MM-YYYY")
secondDate = CDate(firstDate)
msg = "The difference in days is " & DateDiff _
(DateInterval.Day, Now, secondDate)
MsgBox(msg)
```

Then run your application (app) to get:





Project 3: Check if file exists or not

Create text file and save it in C: and its name must be FileName.txt.

Add to your Form project

❖ Button

Button Properties

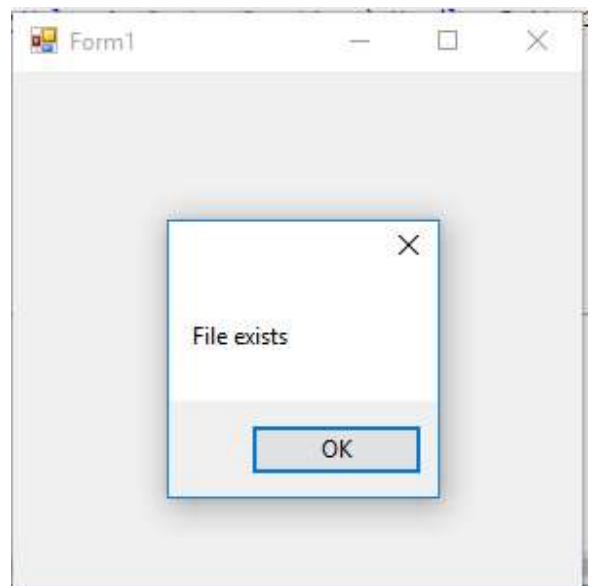
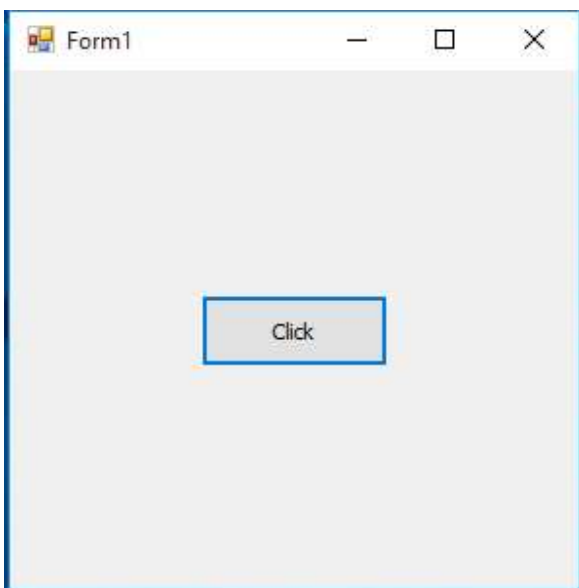
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button, then write

```
If IO.File.Exists("C:\ NAJJAR.txt") = True Then
    MessageBox.Show("File exists")
Else
    MessageBox.Show("File does not exist")
End If
```

Then run your application (app) to get:





Project 4: Create a file

Add to your Form project

❖ Button

Button Properties

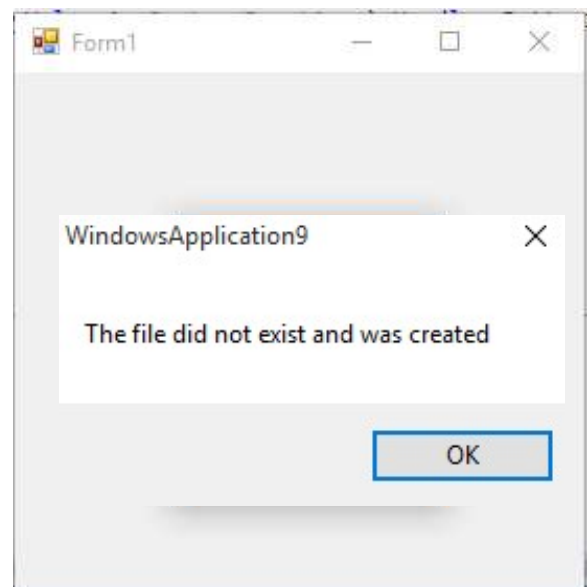
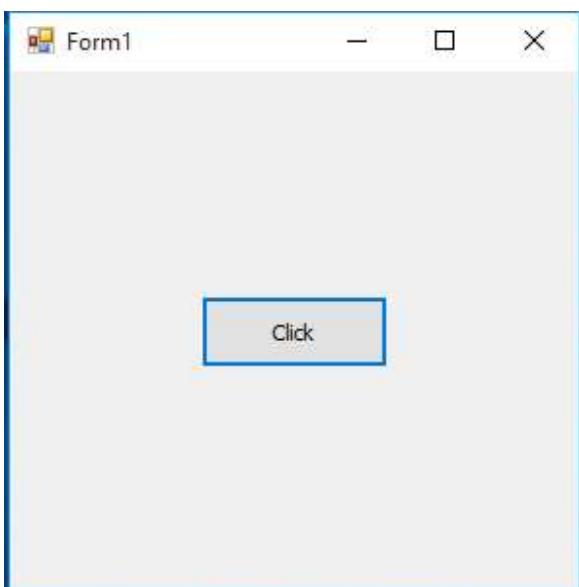
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button, then write

```
If IO.File.Exists("F:\Najjar.txt") Then  
MsgBox("file exists")  
Return  
End If  
Dim sr As IO.StreamWriter = IO.File.CreateText("F:\ NAJJAR.txt")  
sr.Close()  
MsgBox("The file did not exist and was created")
```

Then run your application (app) to get:





Project 5: Get file creation time

Add to your Form project

❖ Button

Button Properties

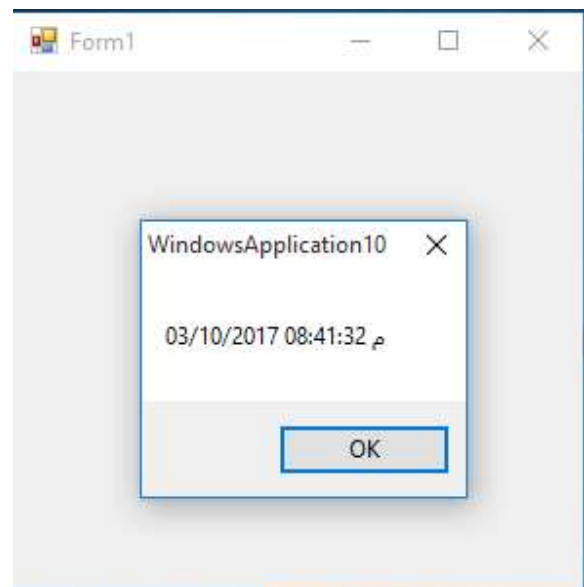
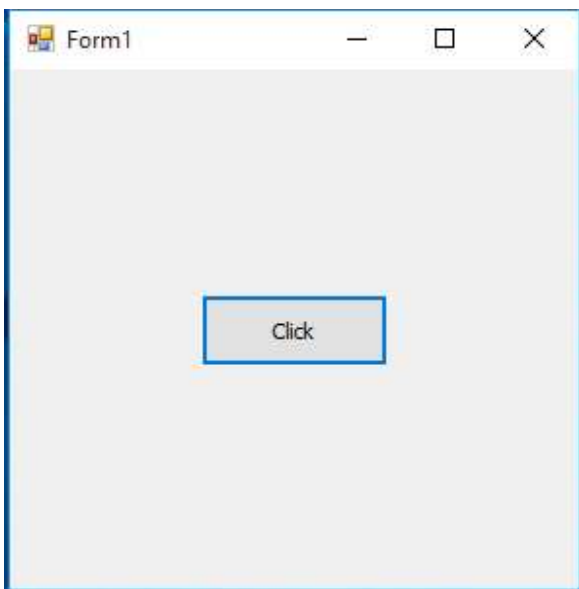
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button, then write

```
MsgBox(IO.File.GetCreationTime("F:\ NAJJAR.txt"))
```

Then run your application (app) to get:





Project 6: Get file last write time

Add to your Form project

❖ Button

Button Properties

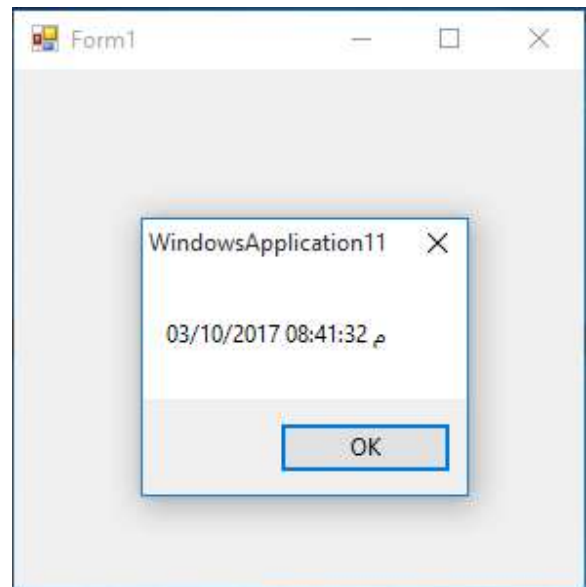
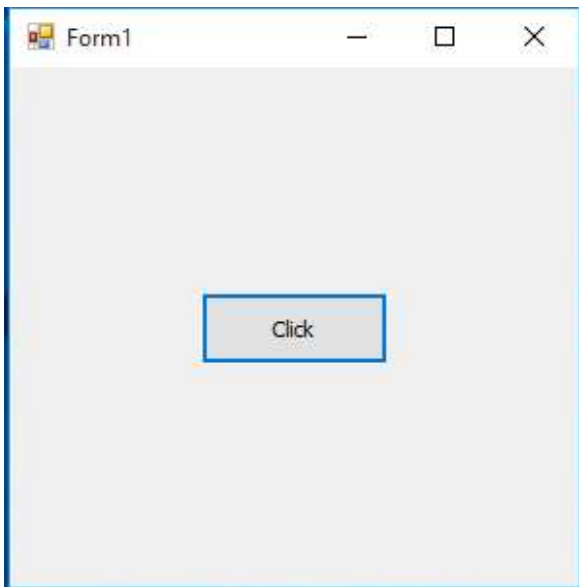
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button, then write

```
MsgBox(IO.File.GetLastWriteTime("F:\ NAJJAR.txt"))
```

Then run your application (app) to get:





Project 7: Get file extension

Add to your Form project

❖ Button

Button Properties

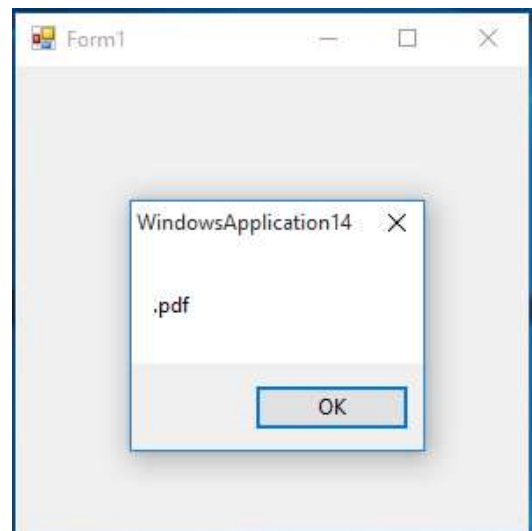
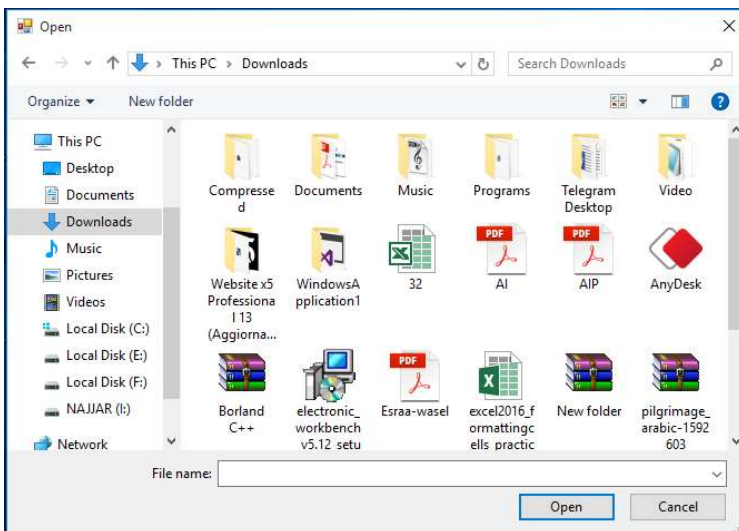
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button, then write

```
Dim ofd As New OpenFileDialog
Dim MyFile As String
If ofd.ShowDialog = DialogResult.OK Then
MyFile = ofd.FileName
End If
Dim FI As FileInfo
FI = New FileInfo(MyFile)
MsgBox(FI.Extension)
```

Then run your application (app) to get:





Project 8: Add text to the file

Add to your Form project

- ❖ Button
- ❖ TextBox

Button Properties

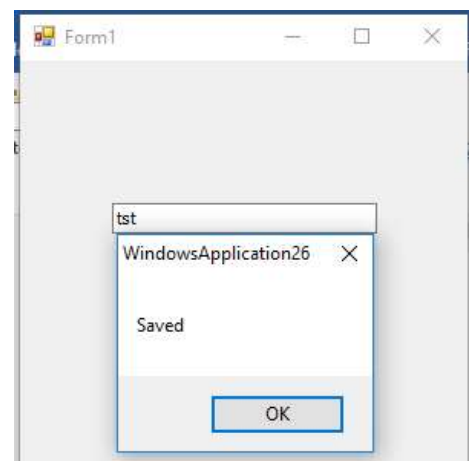
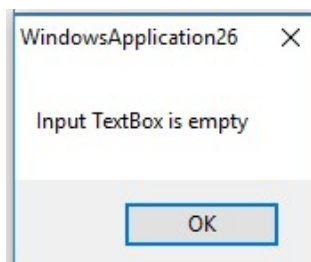
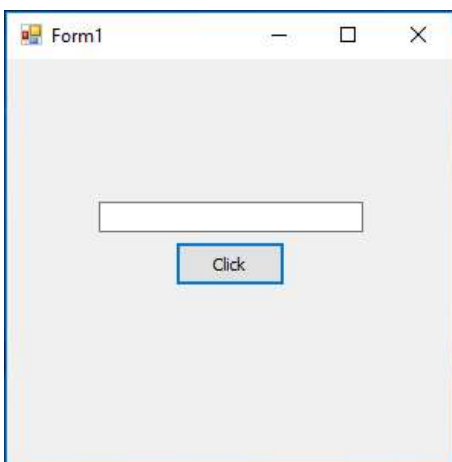
| Property | Set |
|----------|----------|
| Text | Add Text |

Source Code

Double click (DC) on Button, then write

```
Dim Fs As IO.FileStream = New IO.FileStream("F:\ NAJJAR.txt",  
IO.FileMode.Append, IO.FileAccess.Write, IO.FileShare.None)  
If TextBox1.Text <> "" Then  
Dim sw As New IO.StreamWriter(Fs)  
sw.Write(TextBox1.Text & " ")  
sw.WriteLine()  
sw.Flush()  
sw.Close()  
Fs.Close()  
MsgBox("Saved")  
Else  
MsgBox("Input TextBox is empty")  
End If
```

Then run your application (app) to get:



You can try the following codes:

Double click (DC) on Button, then write

```
Kill("F:\ NAJJAR.txt")
```

```
SetAttr("F:\ NAJJAR.txt", FileAttribute.System)
```

```
File.SetAttributes("F:\FileName.txt", File.GetAttributes("F:\ NAJJAR.txt") _  
Or FileAttributes.Hidden Or FileAttributes.System)  
FileCopy("F:\ NAJJAR.txt", "F:\ Fallah.txt")
```

```
My.Computer.FileSystem.DeleteFile("F:\ NAJJAR.txt")
```

```
Dim sFileName As String = "F:\ NAJJAR.txt"  
My.Computer.FileSystem.WriteAllText(sFileName, " لا إله إلا الله", False)
```

```
TextBox1.Text = My.Computer.FileSystem.ReadAllText("F:\ NAJJAR.txt")  
Me.OpenFileDialog1.Filter = "TEXT FILES (*.TXT)|*.TXT"  
Me.OpenFileDialog1.ShowDialog()  
If Me.OpenFileDialog1.FileName <> "" Then  
Me.TextBox1.Text = My.Computer.FileSystem.ReadAllText(Me.OpenFileDialog1.FileName)  
End If
```



Project 9: Create Folder

Add to your Form project

❖ Button

Button Properties

| Property | Set |
|----------|-------|
| Text | Click |

Source Code

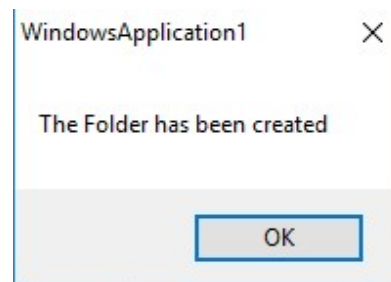
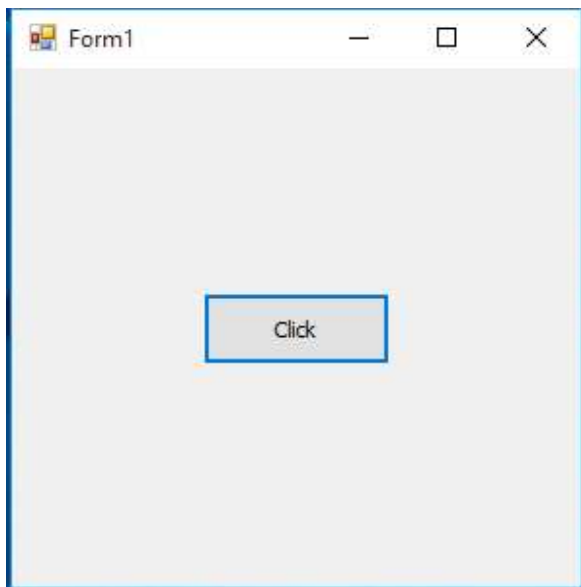
Double click (DC) on Button, then write

```
System.IO.Directory.CreateDirectory("F:\ NAJJAR ")  
MsgBox("The Folder has been created")
```

Or

```
Mkdir("F:\ NAJJAR ")  
MsgBox("The Folder has been created")
```

Then run your application (app) to get:





Project 10: Create & Delete Folder

Add to your Form project

❖ Tow Buttons

Buttons Properties

| Tool | Property | Set |
|----------|----------|--------|
| Button 1 | Text | Create |
| Button 2 | Text | Delete |

Source Code

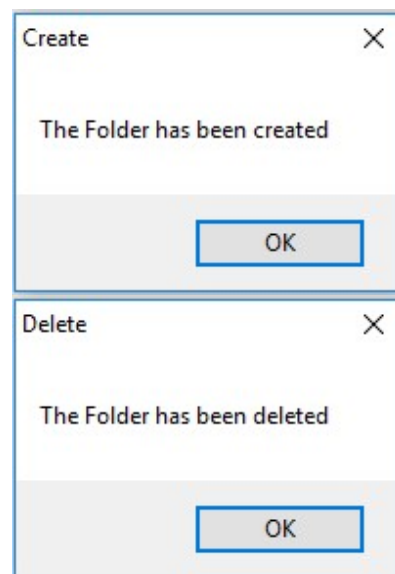
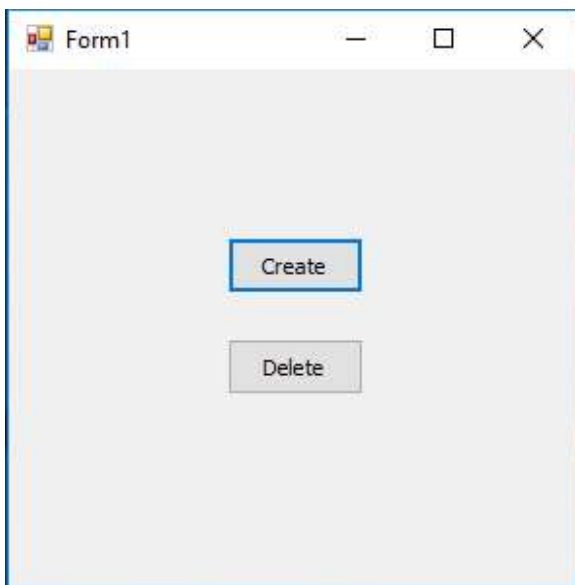
Double click (DC) on Button 1, then write

```
System.IO.Directory.CreateDirectory("F:\ NAJJAR ")  
MsgBox("The Folder has been created", , "Create")
```

Double click (DC) on Button 2, then write

```
Rmdir("F:\ NAJJAR ")  
MsgBox("The Folder has been deleted", , "Delete")
```

Then run your application (app) to get:





Project 11: Folder Exists

Add to your Form project

❖ Button

Button Properties

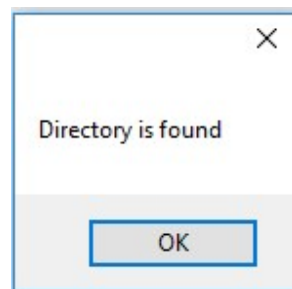
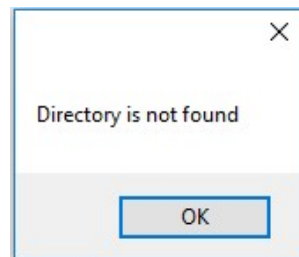
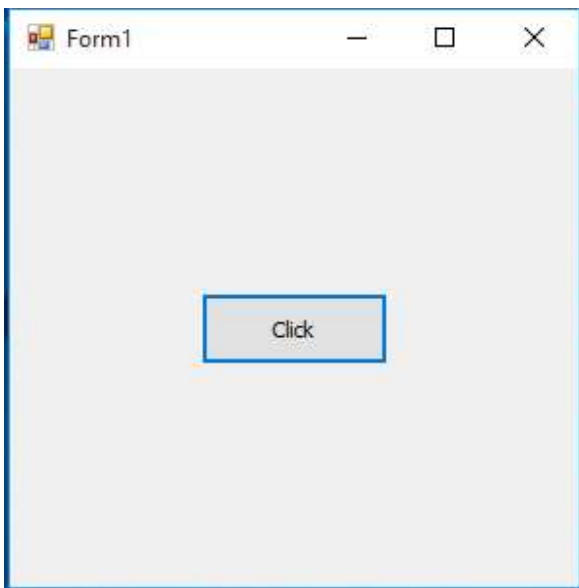
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button 1, then write

```
If My.Computer.FileSystem.DirectoryExists("F:\ NAJJAR ") = True Then
    MessageBox.Show("Directory is found")
Else
    MessageBox.Show("Directory is not found")
End If
```

Then run your application (app) to get:





Project 12: Folder Creation Time

Add to your Form project

❖ Button

Button Properties

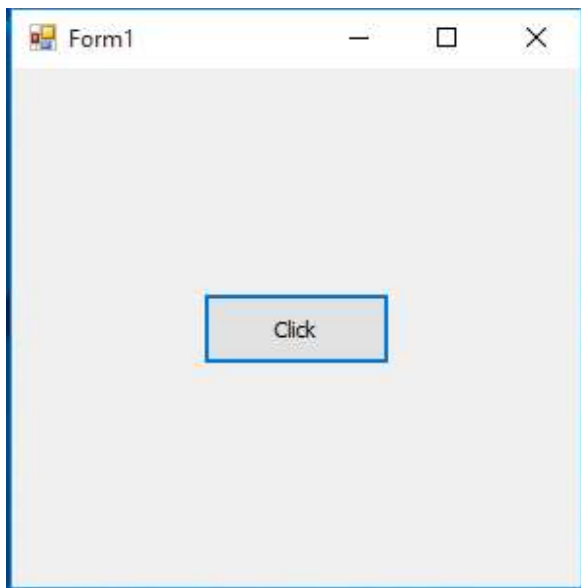
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button 1, then write

```
MsgBox(System.IO.Directory.GetCreationTime("F:\ NAJJAR ").ToString, , "")
```

Then run your application (app) to get:





Project 13: Folder Last Access Time

Add to your Form project

❖ Button

Button Properties

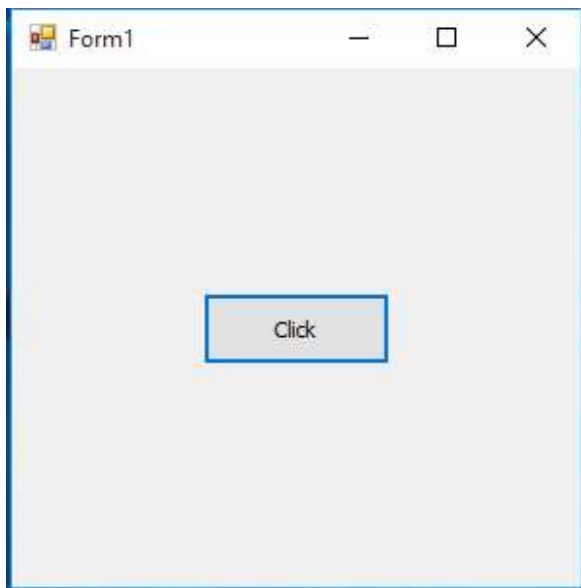
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button 1, then write

```
MsgBox(System.IO.Directory.GetLastAccessTime("F:\NAJJAR").ToString, , "")
```

Then run your application (app) to get:





Project 14: Folder Size

Add to your Form project

❖ Button

| Property | Set |
|----------|-------|
| Text | Click |

Button Properties

Source Code

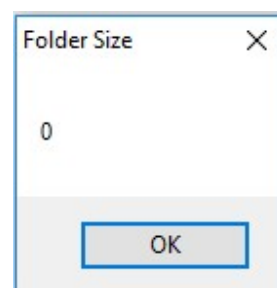
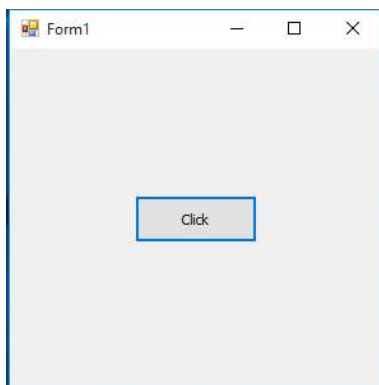
Build the following function

```
Function GetFolderSize(ByVal DirPath As String, Optional _  
ByVal IncludeSubFolders As Boolean = True) As Long  
Dim lngDirSize As Long  
Dim objFileInfo As IO.FileInfo  
Dim objDir As IO.DirectoryInfo = New IO.DirectoryInfo(DirPath)  
Dim objSubFolder As IO.DirectoryInfo  
Try  
For Each objFileInfo In objDir.GetFiles()  
lngDirSize += objFileInfo.Length  
Next  
If IncludeSubFolders Then  
For Each objSubFolder In objDir.GetDirectories()  
lngDirSize += GetFolderSize _  
(objSubFolder.FullName)  
Next  
End If  
Catch Ex As Exception  
End Try  
Return lngDirSize  
End Function
```

Double click (DC) on Button 1, then write

```
MsgBox(GetFolderSize("F:\NAJJAR"))
```

Then run your application (app) to get:





Project 15: Folder Explorer

Add to your Form project

- ❖ Button
- Button Properties

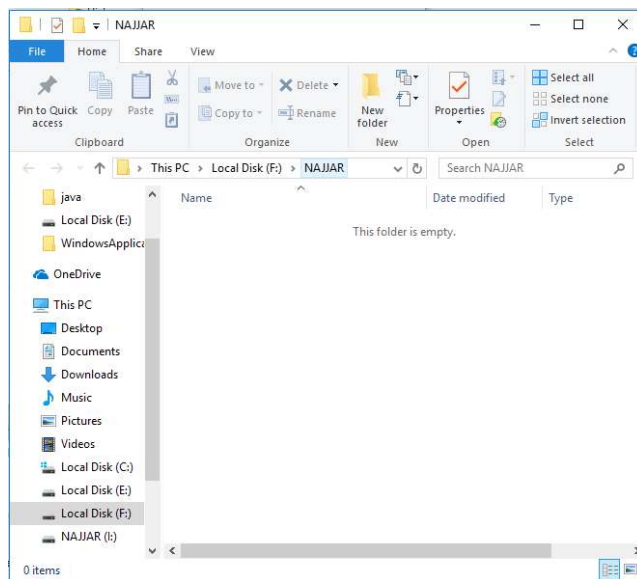
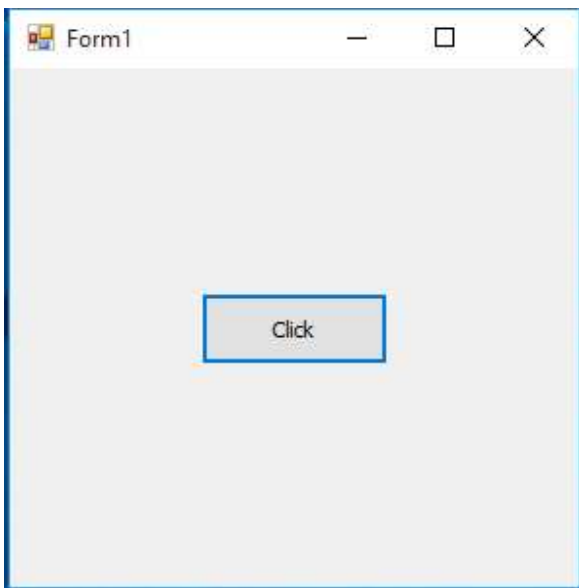
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button 1, then write

```
Process.Start("explorer.exe", "F:\NAJJAR")
```

Then run your application (app) to get:



You can try the following codes:

Double click (DC) on Button, then write

```
MsgBox(System.IO.Directory.GetLastWriteTime("F:\NAJJAR").ToString)
```

```
My.Computer.FileSystem.DeleteDirectory("C:\NAJJAR ", _  
FileIO.DeleteDirectoryOption.DeleteAllContents)
```

```
My.Computer.FileSystem.DeleteDirectory("F:\NAJJAR", FileIO.UIOption.AllDialogs,_  
FileIO.RecycleOption.SendToRecycleBin)
```

```
MsgBox(IO.Directory.GetDirectories("F:\NAJJAR").Length)
```

```
System.IO.Directory.Move("C:\NAJJAR", "C:\Fallah")
```



Project 16: Extract File Associated Icon

Add to your Form project

❖ Button

Button Properties

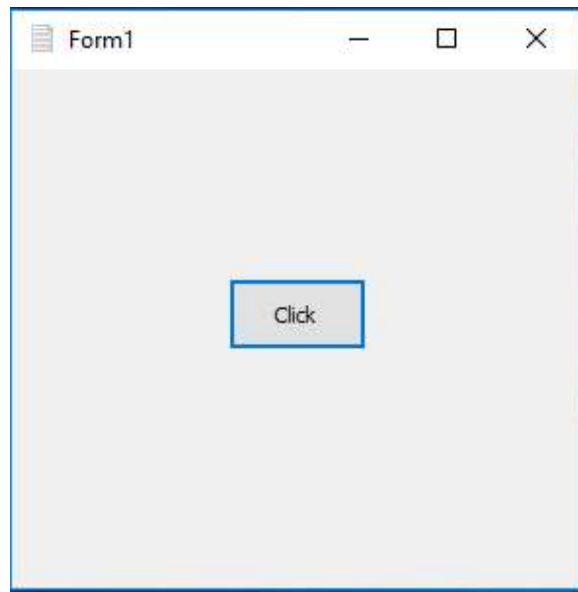
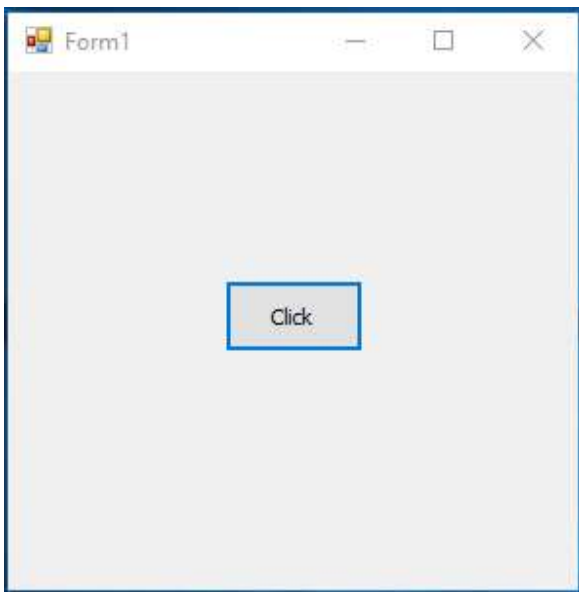
| Property | Set |
|----------|-------|
| Text | Click |

Source Code

Double click (DC) on Button 1, then write

```
Dim a As Icon  
a = Icon.ExtractAssociatedIcon(Application.StartupPath & "\NAJJAR.txt")  
Me.Icon = a
```

Then run your application (app) to get





Project 17: Set Image to PictureBox Tool

Add to your Form project

❖ PictureBox

Source Code

Double click (DC) on the form, then write

```
PictureBox1.Image = Image.FromFile(Application.StartupPath & "\\Name.png")
```

Then run your application (app) to get:





Project 18: Select image & Set it to PictureBox Tool

Add to your Form project

- ❖ Button
- ❖ PictureBox

Button Properties

| Property | Set |
|----------|-------------|
| Text | Add Picture |

Source Code

Double click (DC) on Button 1, then write

```
Dim OpenFileDialog1 As New OpenFileDialog
With OpenFileDialog1
.CheckFileExists = True
.ShowReadOnly = False
.Filter = "All Files|*.*|Bitmap Files (*)|.png;*.bmp;*.gif;*.jpg"
.FilterIndex = 2
If .ShowDialog = DialogResult.OK Then
PictureBox1.Image = Image.FromFile(.FileName)
End If
End With
```

Then run your application (app) to get





Project 19: Rotate Image

Add to your Form project

- ❖ Button
- ❖ PictureBox

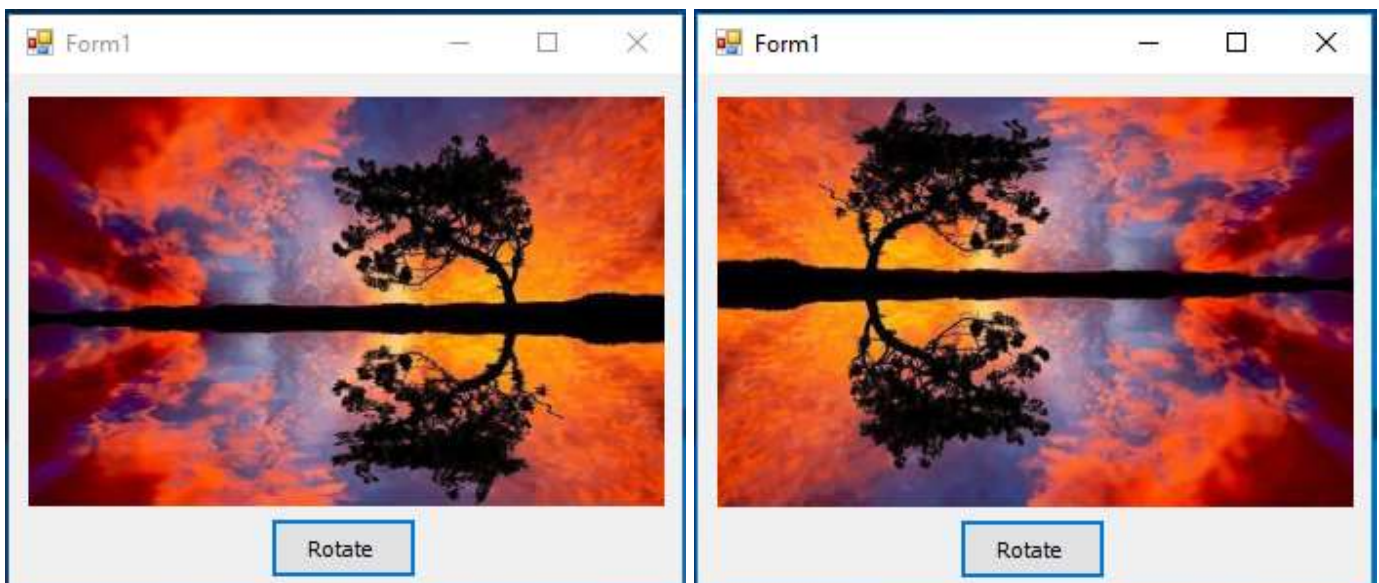
| Tool | Property | Set |
|------------|----------|---------------|
| Button | Text | Rotate |
| PictureBox | Image | Set Any Image |
| PictureBox | SizeMode | StretchImage |

Source Code

Double click (DC) on Button 1, then write

```
PictureBox1.Image.RotateFlip(RotateFlipType.RotateNoneFlipXY)  
PictureBox1.Refresh()
```

Then run your application (app) to get





Project 20: Set image to PictureBox in other Form

Add 2 Forms to your project

Add to Form1

- ❖ Button
 - ❖ PictureBox
- Properties

| Tool | Property | Set |
|------------|----------|---------------|
| Button | Text | Set Picture |
| PictureBox | Image | Set Any Image |
| PictureBox | SizeMode | StretchImage |

Add to Form2

- ❖ PictureBox
- PictureBox Properties

| Property | Set |
|----------|--------------|
| SizeMode | StretchImage |

Source Code

Double click (DC) on Button1 in Form1, then write

```
Dim Form2 As New Form2
Form2.PictureBox1.Image = Me.PictureBox1.Image
Form2.ShowDialog()
```

Then run your application (app) to get:





Project 21: Get Color Complement

Add to your Form project

- ❖ Button
- ❖ PictureBox

Button Properties

| Tool | Property | Set |
|------------|----------|---------------|
| Button | Text | Go |
| PictureBox | Image | Set Any Image |

Source Code

Double click (DC) on Button 1, then write

```
Dim bmap As New Bitmap(PictureBox1.Image)
PictureBox1.Image = bmap
Dim red, green, blue As Integer
Dim i, j As Integer
With bmap
For i = 1 To .Height - 2
For j = 1 To .Width - 2
red = CInt(.GetPixel(j, i).R)
blue = CInt(.GetPixel(j, i).B)
green = CInt(.GetPixel(j, i).G)
bmap.SetPixel(j, i, Color.FromArgb(255 - red, 255 - green, 255 - blue))
Next
PictureBox1.Refresh()
Next
PictureBox1.Refresh()
End With
```

Then run your application (app) to get





Project 22: Add a dark layer over an image

Add to your Form project

- ❖ Button
- ❖ PictureBox

Button Properties

| Tool | Property | Set |
|------------|----------|---------------|
| Button | Text | Go |
| PictureBox | Image | Set Any Image |

Source Code

Double click (DC) on Button 1, then write

```
PictureBox1.BackColor = Color.Black
Dim bmap = New Bitmap(PictureBox1.Image)
PictureBox1.Image = bmap
Dim tempbmp As New Bitmap(PictureBox1.Image)
Dim red, green, blue As Integer
Dim i, j As Integer
With tempbmp
For i = 1 To .Height - 2
For j = 1 To .Width - 2
red = CInt(.GetPixel(j, i).R)
green = CInt(.GetPixel(j, i).G)
blue = CInt(.GetPixel(j, i).B)
bmap.SetPixel(j, i, Color.FromArgb(200, red, green, blue))
Next
PictureBox1.Refresh()
Next
End With
PictureBox1.Refresh()
```

Then run your application (app) to get



You can try the following codes:

Try to Use the Following Code instead the Code that like it in Project 22

```
bmap.SetPixel(j, i, Color.FromArgb(50, red, green, blue))
```

```
PictureBox1.Image.RotateFlip(RotateFlipType.RotateNoneFlipY)  
PictureBox1.Refresh()
```

```
PictureBox1.Image.RotateFlip(RotateFlipType.RotateNoneFlipX)  
PictureBox1.Refresh()
```

```
Dim x As Bitmap = PictureBox1.Image  
x.RotateFlip(RotateFlipType.Rotate180FlipY)  
PictureBox1.Image = x
```



Project 23: Add New Button Control

Add to your Form project

❖ Button

Button Properties

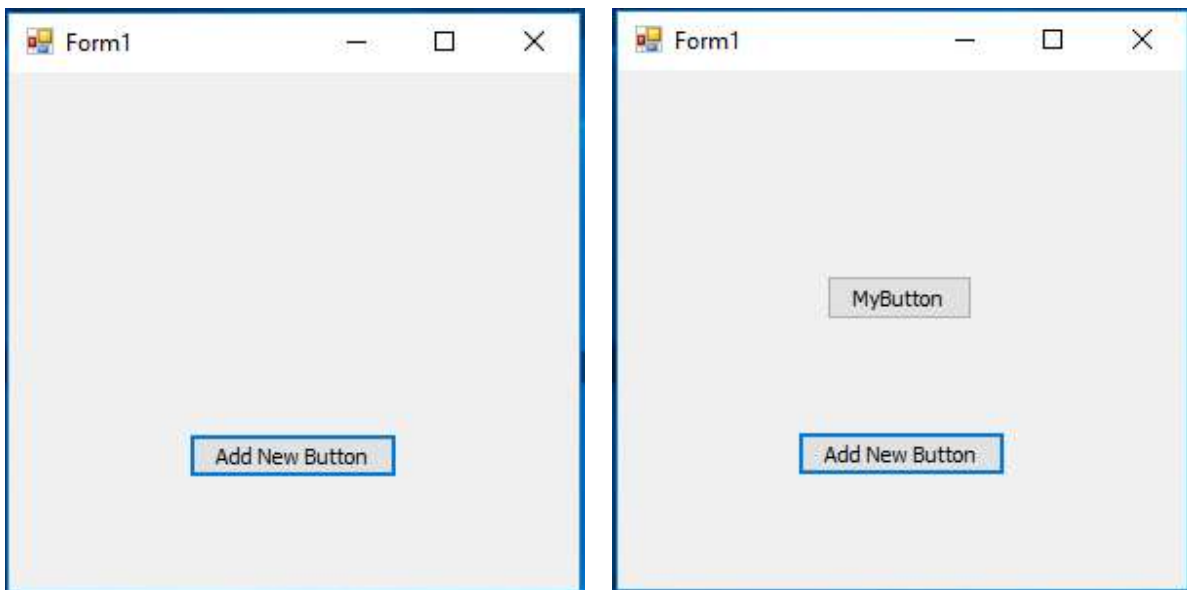
| Property | Set |
|----------|----------------|
| Text | Add New Button |

Source Code

Double click (DC) on Button 1, then write

```
Dim MyButton As New Button
MyButton.Location = New Point(107, 105)
MyButton.Text = "MyButton"
Me.Controls.Add(MyButton)
```

Then run your application (app) to get





Project 24: Change Button Shape

Add to your Form project

❖ Button

Button Properties

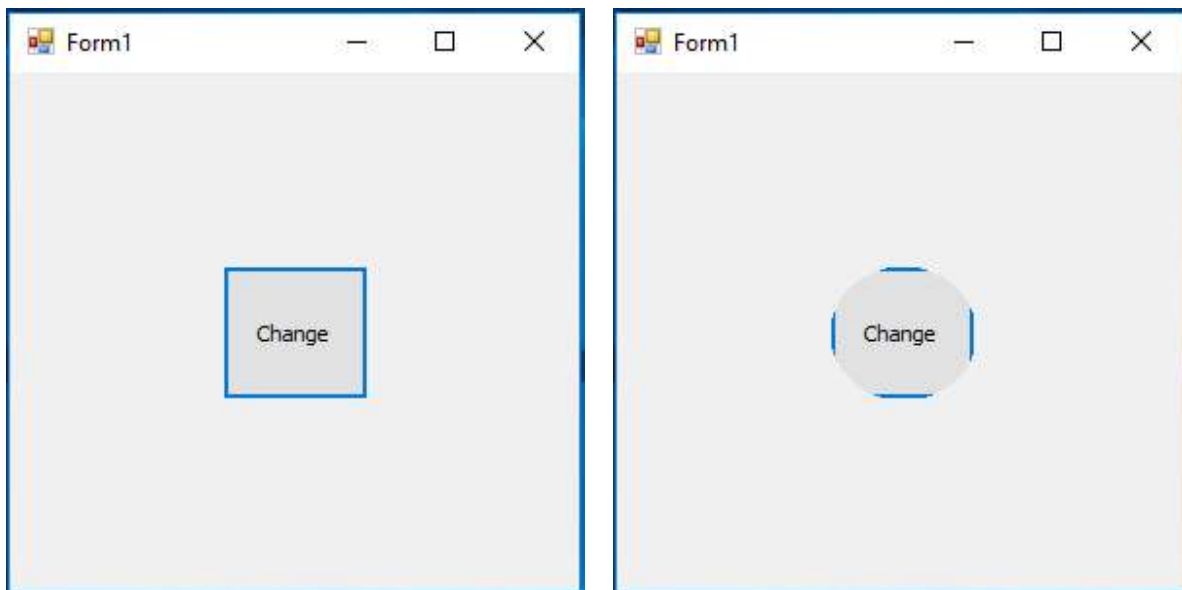
| Property | Set |
|----------|--------|
| Text | Change |

Source Code

Double click (DC) on Button 1, then write

```
Dim myGraphicsPath As New System.Drawing.  
Drawing2D.GraphicsPath()  
myGraphicsPath.AddEllipse(New RectangleF(0, 0, Me.Button1.Width, Me.Button1.Height))  
Button1.Region = New Region(myGraphicsPath)
```

Then run your application (app) to get





Project 25: Change Button Size

Add to your Form project

❖ Button

Button Properties

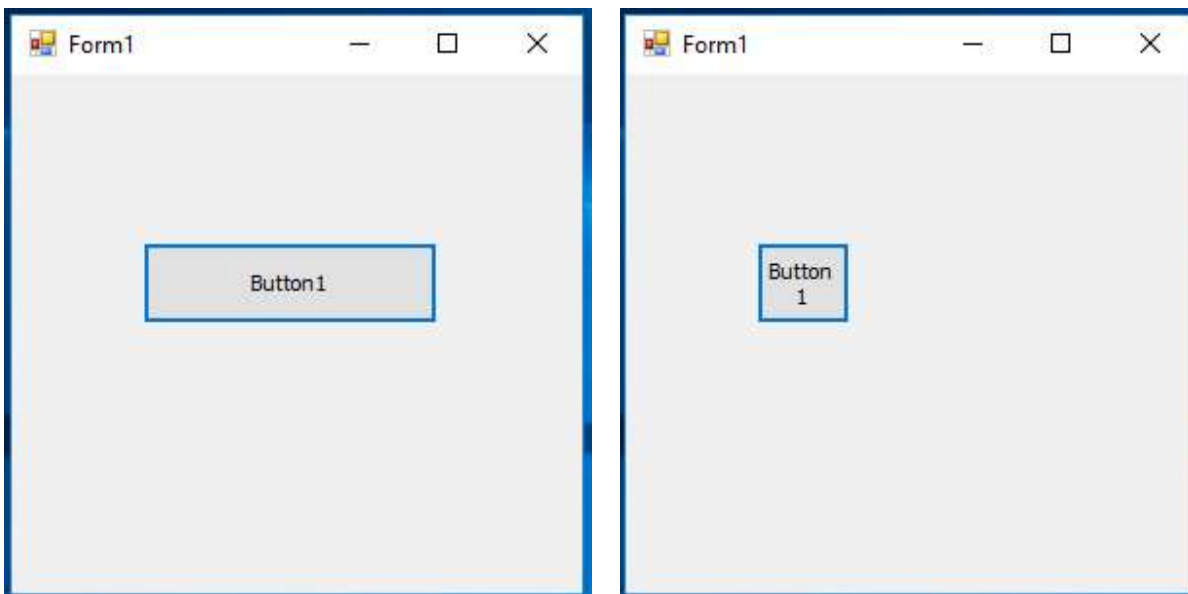
| Property | Set |
|----------|---------|
| Size | 151; 42 |

Source Code

Double click (DC) on Button 1, then write

```
Dim surface As Graphics = Button1.CreateGraphics
Dim textSize As SizeF = surface.MeasureString(" " & Button1.Text & " ", Button1.Font)
surface.Dispose()
Button1.Width = CInt(textSize.Width)
```

Then run your application (app) to get





Project 26: Write on Button

Add to your Form project

❖ Button

Button Properties

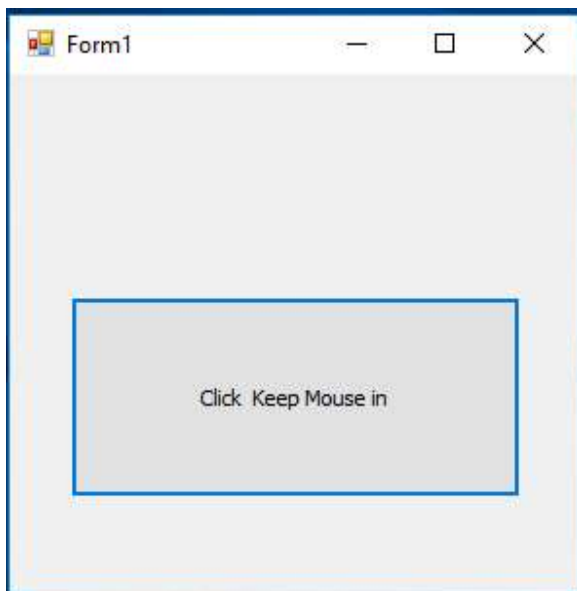
| Property | Set |
|----------|-----------------------|
| Text | Click & Keep Mouse in |

Source Code

Double click (DC) on Button 1, then write

```
Dim g As Graphics = Button1.CreateGraphics
Dim mybrush As New Drawing2D.LinearGradientBrush _
(ClientRectangle, Color.Red, Color.Yellow, Drawing2D.LinearGradientMode.Horizontal)
Dim myFont As New Font("Times New Roman", 24)
g.DrawString("", myFont, mybrush, New RectangleF(10, 10, 100, 200))
g.DrawString("اشهد ان علياً ولي الله", myFont, mybrush, 10, 10)
```

Then run your application (app) to get





Project 27: Create New TextBox

Add to your Form project

❖ Button

Button Properties

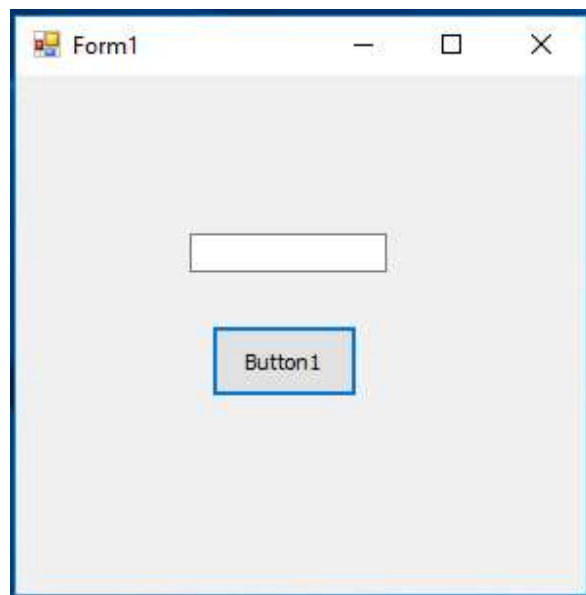
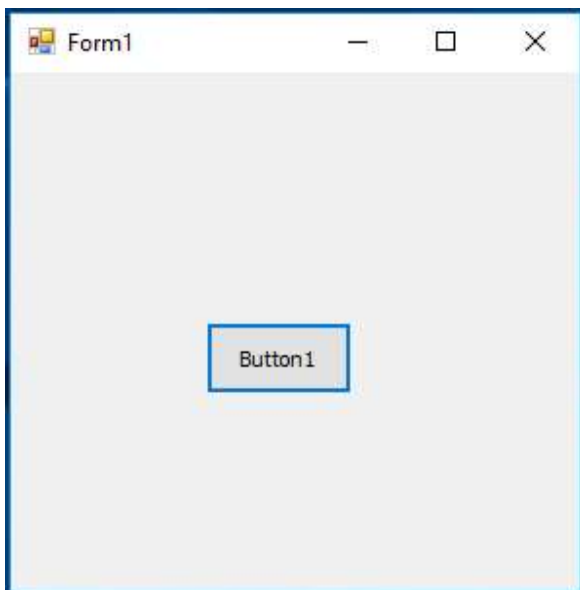
| Property | Set |
|----------|--------------------|
| Text | Create New TextBox |

Source Code

Double click (DC) on Button 1, then write

```
Dim textBox1 As New TextBox()  
textBox1.Size = New Size(101, 9)  
textBox1.Location = New Point(89, 81)  
Me.Controls.Add(textBox1)
```

Then run your application (app) to get





Project 28: Write with Arabic Language only

Add to your Form project

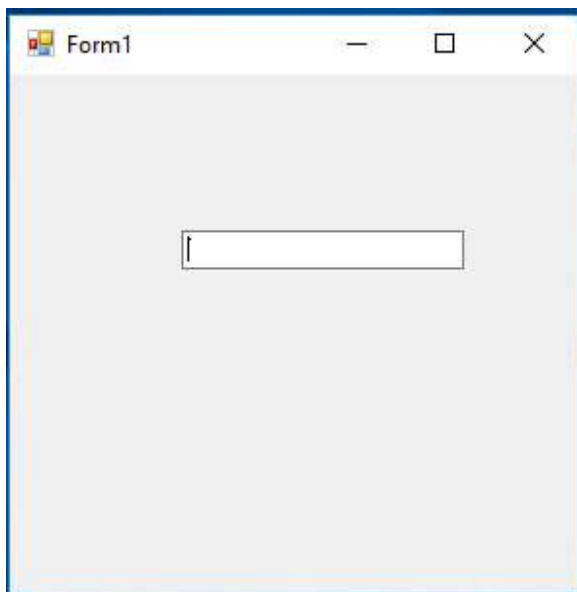
❖ TextBox

Source Code

View Code and change the method to `TextBox1_KeyPress`, then write

```
Select Case e.KeyChar  
Case "ء" To "ي", ControlChars.Back, Chr(Keys.Space)  
e.Handled = False  
Case Else  
e.Handled = True  
End Select
```

Then run your application (app) to get





Project 29: Write with English Language only

Add to your Form project

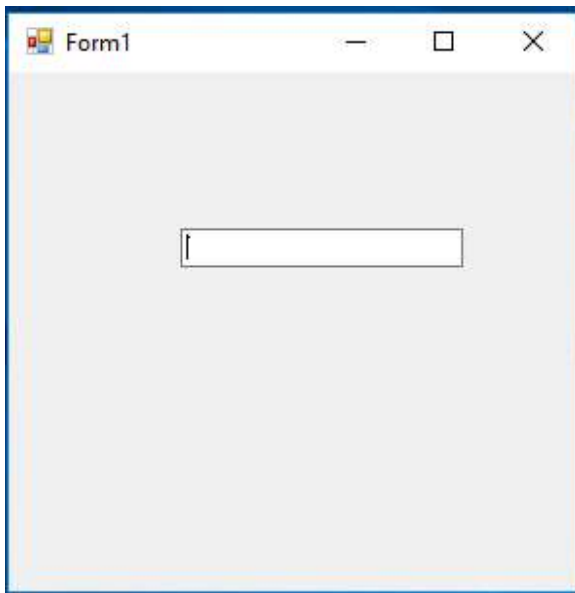
❖ TextBox

Source Code

View Code and change the method to TextBox1_KeyPress, then write

```
Select Case e.KeyChar  
Case "a" To "z", ControlChars.Back, Chr(Keys.Space)  
e.Handled = False  
Case "A" To "Z", ControlChars.Back, Chr(Keys.Space)  
e.Handled = False  
Case Else  
e.Handled = True  
End Select
```

Then run your application (app) to get





Project 30: Write with Numbers Only

Add to your Form project

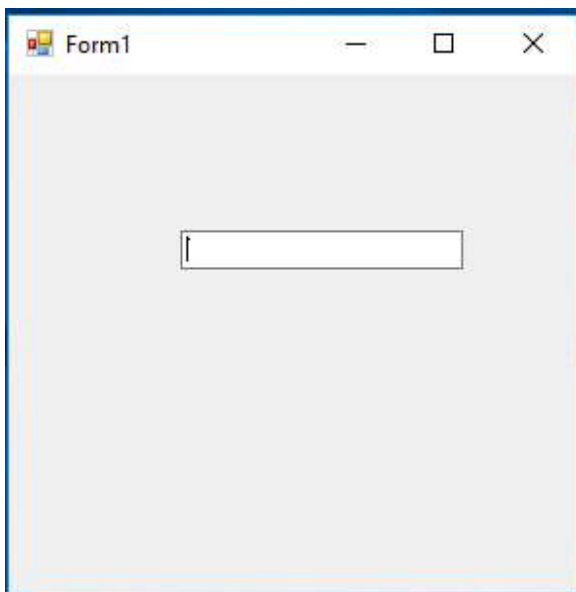
❖ TextBox

Source Code

View Code and change the method to `TextBox1_KeyPress`, then write

```
Select Case e.KeyChar  
Case "0" To "9", ControlChars.Back, Chr(Keys.Space)  
e.Handled = False  
Case Else  
e.Handled = True  
End Select
```

Then run your application (app) to get





Project 31: Number of Words in TextBox

Add to your Form project

- ❖ Button
- ❖ TextBox

Button Properties

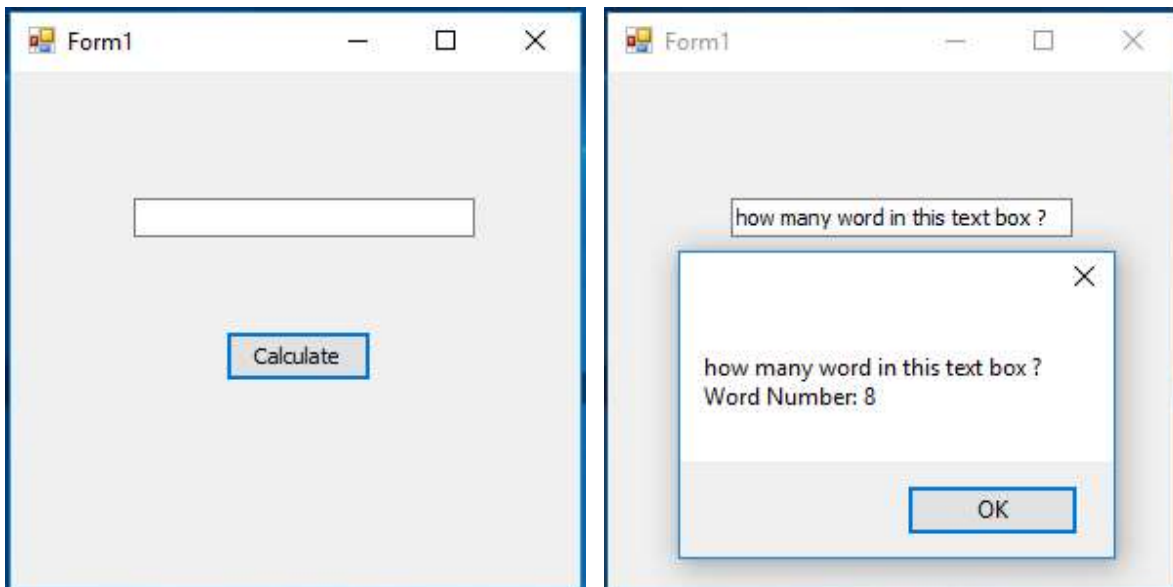
| Property | Set |
|----------|-----------|
| Text | Calculate |

Source Code

Double click (DC) on Button 1, then write

```
Dim str As String = TextBox1.Text
If str = "" Then
Else
Dim wordCount As Integer = Strings.Split(str, Strings.Space(1)).Length
MessageBox.Show((str + Constants.vbNewLine & "Word Number: ") + wordCount.ToString)
End If
```

Then run your application (app) to get





Project 32: Check if the String Exist or Not in TextBox

Add to your Form project

- ❖ Button
- ❖ TextBox

Button Properties

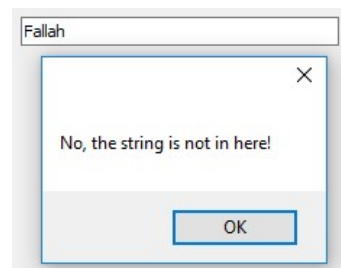
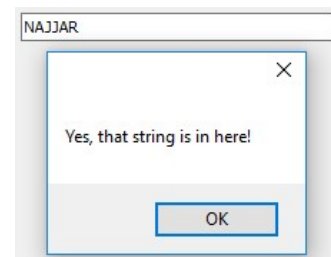
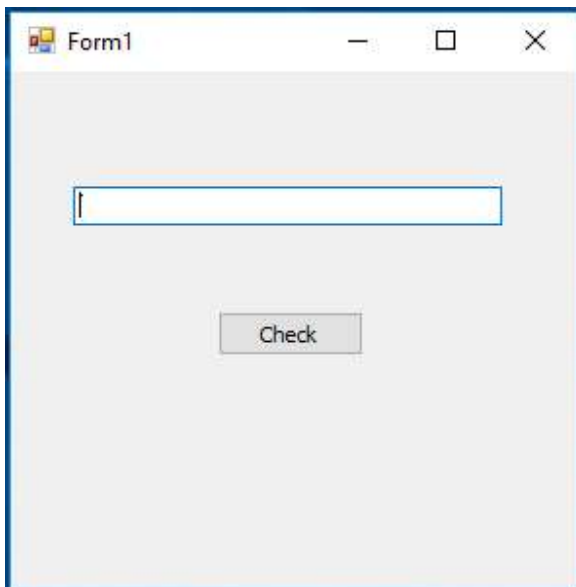
| Property | Set |
|----------|-------|
| Text | Check |

Source Code

Double click (DC) on Button 1, then write

```
Dim str As String = TextBox1.Text
Dim i As Integer = str.IndexOf("NAJJAR")
If Not i = -1 Then
    MessageBox.Show("Yes, that string is here!")
Else
    MessageBox.Show("No, the string is not here!")
End If
```

Then run your application (app) to get





Project 33: Clear Textboxes

Add to your Form project

- ❖ Button
- ❖ 5 TextBox

Button Properties

| Property | Set |
|----------|-----------|
| Text | Clear All |

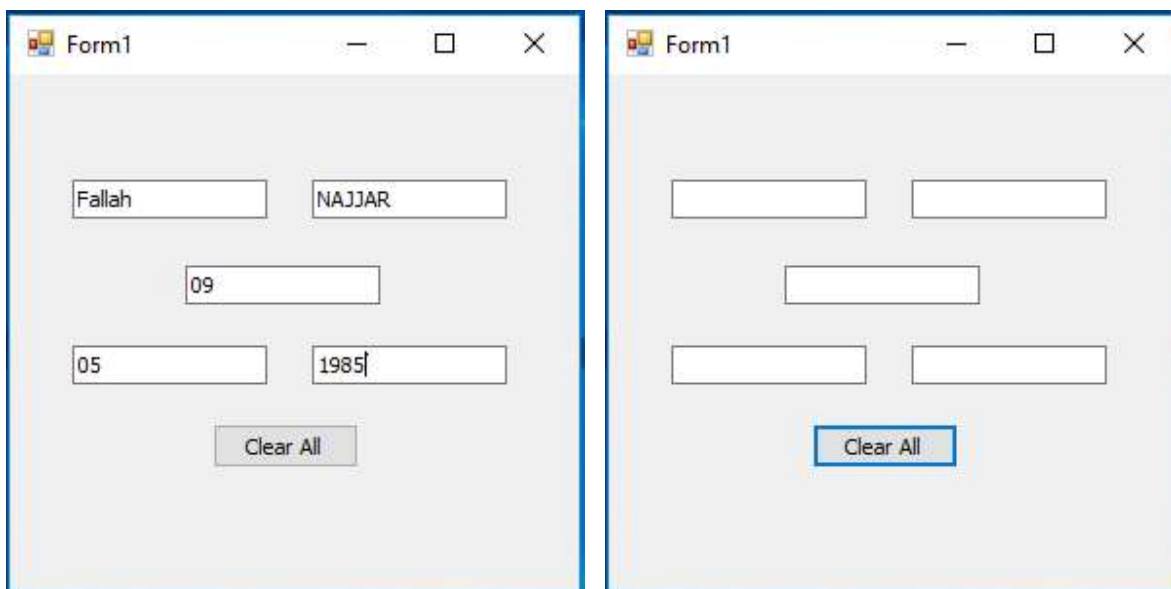
Source Code // Sub procedure

```
Public Sub ClearTextBox(ByVal Root As Control)
    For Each Ct As Control In Root.Controls
        If TypeOf Ct Is TextBox Then
            CType(Ct, TextBox).Clear()
        End If
    Next
End Sub
```

Double click (DC) on Button 1, then write

```
ClearTextBox(Me)
```

Then run your application (app) to get





Project 34: TextBox Undo

Add to your Form project

- ❖ Button
- ❖ TextBox

Button Properties

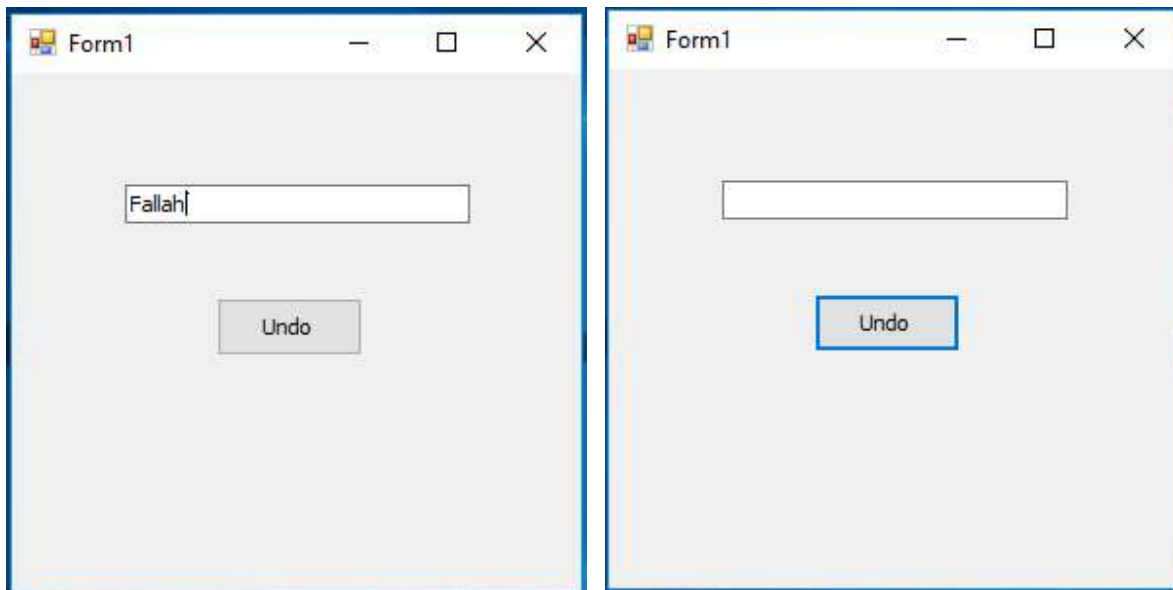
| Property | Set |
|----------|------|
| Text | Undo |

Source Code

Double click (DC) on Button 1, then write

```
If TextBox1.CanUndo Then TextBox1.Undo() End If
```

Then run your application (app) to get





Project 35: Create ComboBox

Add to your Form project

❖ Button

Button Properties

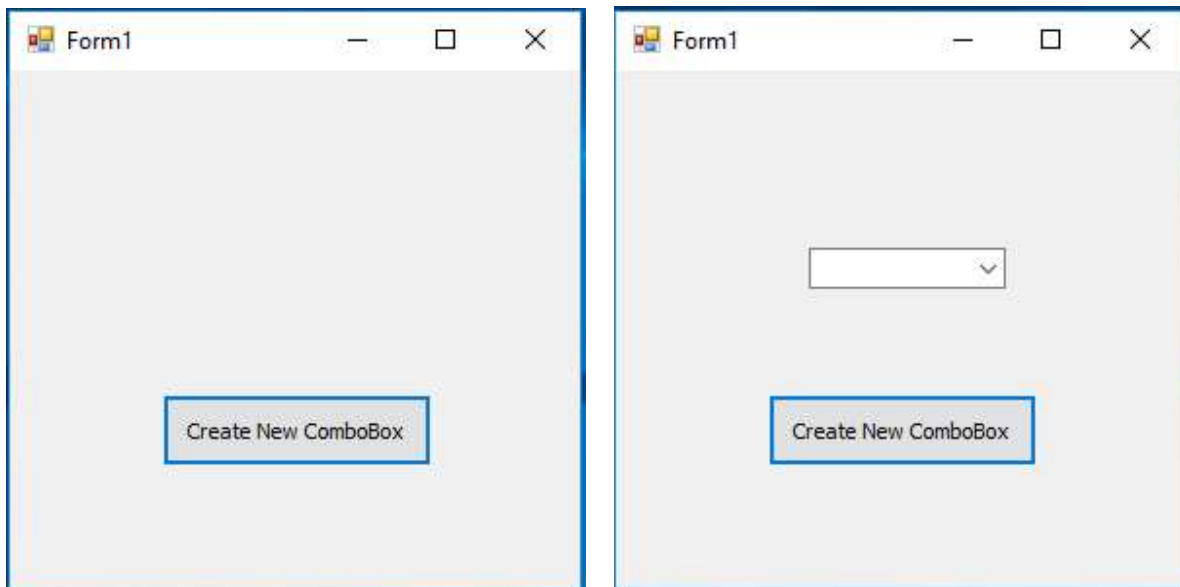
| Property | Set |
|----------|---------------------|
| Text | Create New ComboBox |

Source Code

Double click (DC) on Button 1, then write

```
Dim ComboBox1 As New ComboBox()  
ComboBox1.Size = New Size(101, 9)  
ComboBox1.Location = New Point(89, 81)  
Me.Controls.Add(ComboBox1)
```

Then run your application (app) to get





Project 36: Change ComboBox Style

Add to your Form project

- ❖ ComboBox
- ❖ 3 Button Properties

| Tool | Property | Set |
|---------|----------|----------------|
| Button1 | Text | Drop Down List |
| Button2 | Text | Drop Down |
| Button3 | Text | Simple |

Source Code

Double click (DC) on Button 1, then write

```
ComboBox1.DropDownStyle = ComboBoxStyle.DropDownList
```

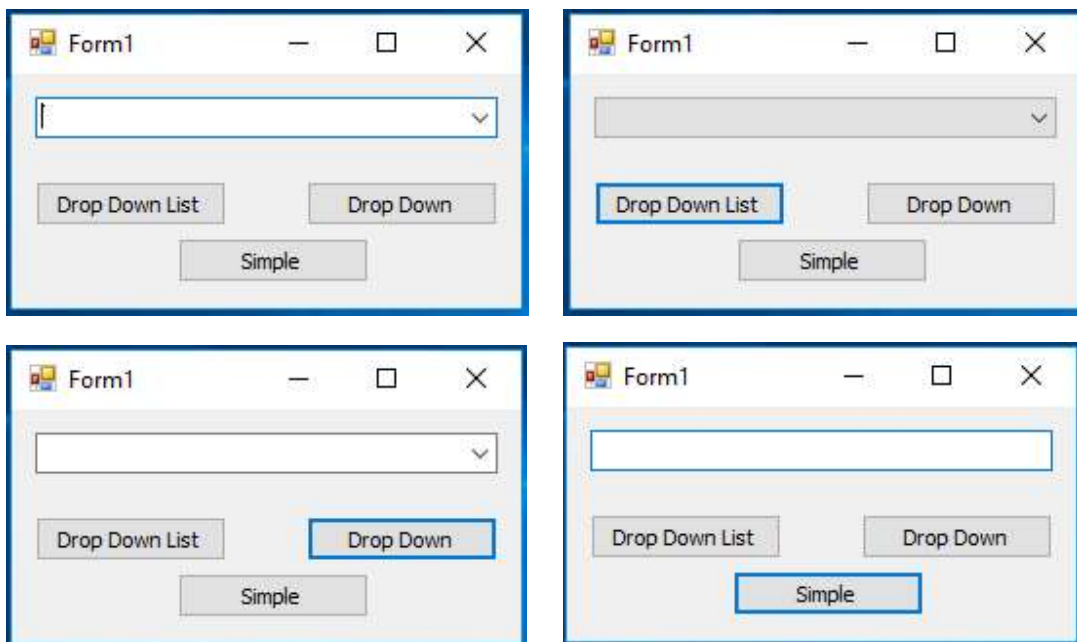
Double click (DC) on Button 1, then write

```
ComboBox1.DropDownStyle = ComboBoxStyle.DropDown
```

Double click (DC) on Button 1, then write

```
ComboBox1.DropDownStyle = ComboBoxStyle.Simple
```

Then run your application (app) to get





Project 37: Add Items to ComboBox

Add to your Form project

❖ ComboBox

❖ Button

Button Properties

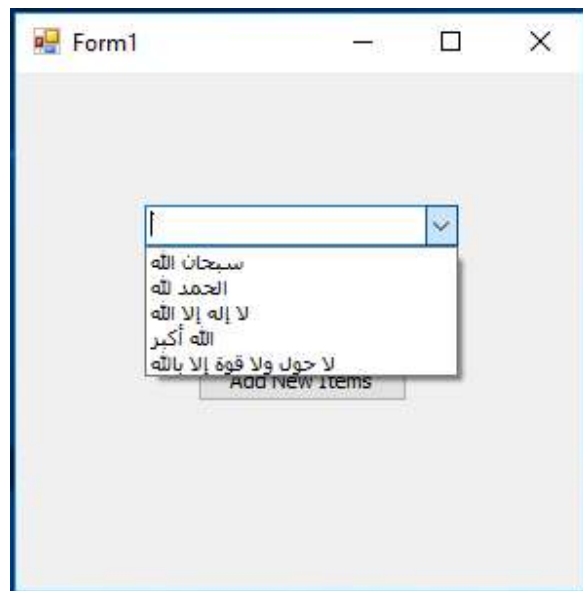
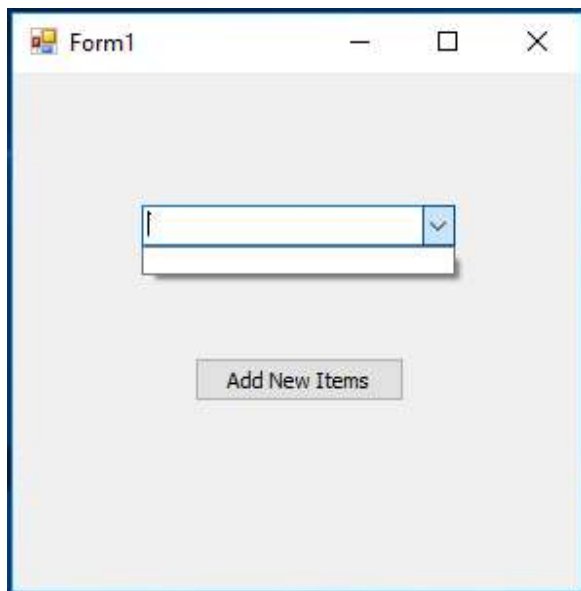
| Property | Set |
|----------|---------------|
| Text | Add New Items |

Source Code

Double click (DC) on Button 1, then write

```
ComboBox1.Items.Add("سبحان الله")  
ComboBox1.Items.Add("الحمد لله")  
ComboBox1.Items.Add("لا إله إلا الله")  
ComboBox1.Items.Add("الله أكبر")  
ComboBox1.Items.Add("لا حول ولا قوة إلا بالله")
```

Then run your application (app) to get





Project 38: Read / Save file to / from ComboBox

Add to your Form project

- ❖ ComboBox
- ❖ 2 Button

| Tool | Property | Set |
|---------|----------|------|
| Button1 | Text | Save |
| Button2 | Text | Open |

Source Code

Double click (DC) on Button 1, then write

```
Dim save As New SaveFileDialog
save.Filter = "Text File|*.txt"
If save.ShowDialog =
Windows.Forms.DialogResult.OK Then
End If
Try
FileOpen(1, save.FileName, OpenMode.Append)
For Each x In ComboBox1.Items
PrintLine(1, x)
Next
Catch
End Try
```

Double click (DC) on Button 2, then write

```
Dim openFile As New OpenFileDialog
openFile.Filter = "Text File|*.txt"
If openFile.ShowDialog = Windows.Forms. DialogResult.OK Then
Dim StreamR As New IO.StreamReader (openFile.FileName)
Dim x As String = "Fallah NAJJAR"
ComboBox1.Items.Clear()
Do
x = StreamR.ReadLine
If x <> "" Then
ComboBox1.Items.Add(x)
Else
Exit Do
End If
Loop
End If
```

You can find what are the results ...



Project 39: Create ListBox

Add to your Form project

❖ Button

Button Properties

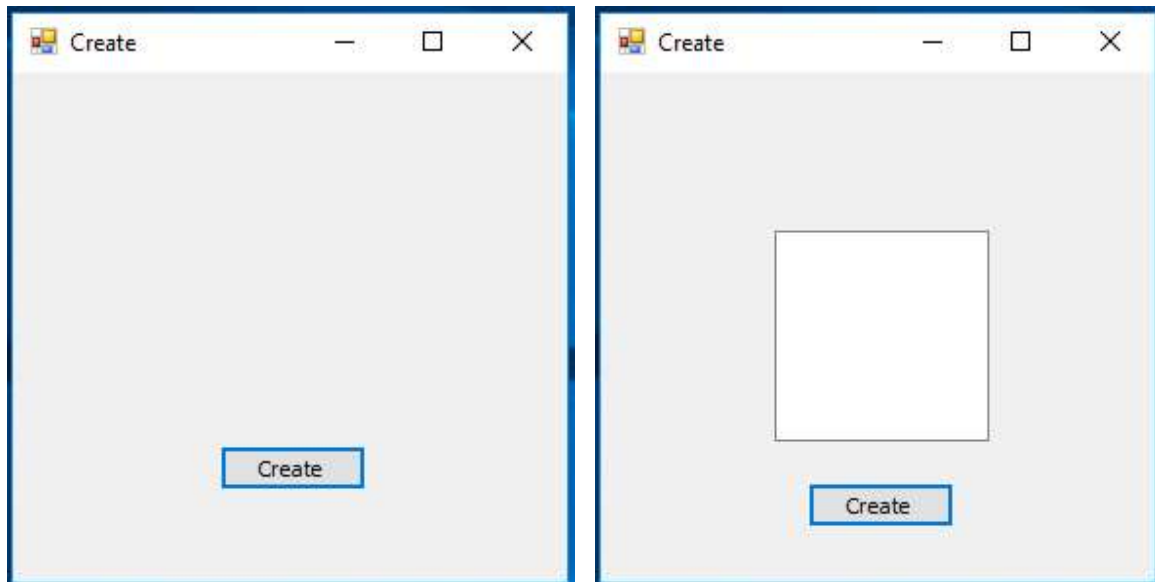
| Property | Set |
|----------|--------|
| Text | Create |

Source Code

Double click (DC) on Button 1, then write

```
Dim ListBox1 As New ListBox()  
ListBox1.Size = New Size(110, 110)  
ListBox1.Location = New Point(89, 81)  
Me.Controls.Add(ListBox1)
```

Then run your application (app) to get





Project 40: Add Items to ListBox

Add to your Form project

❖ ListBox

❖ Button

Button Properties

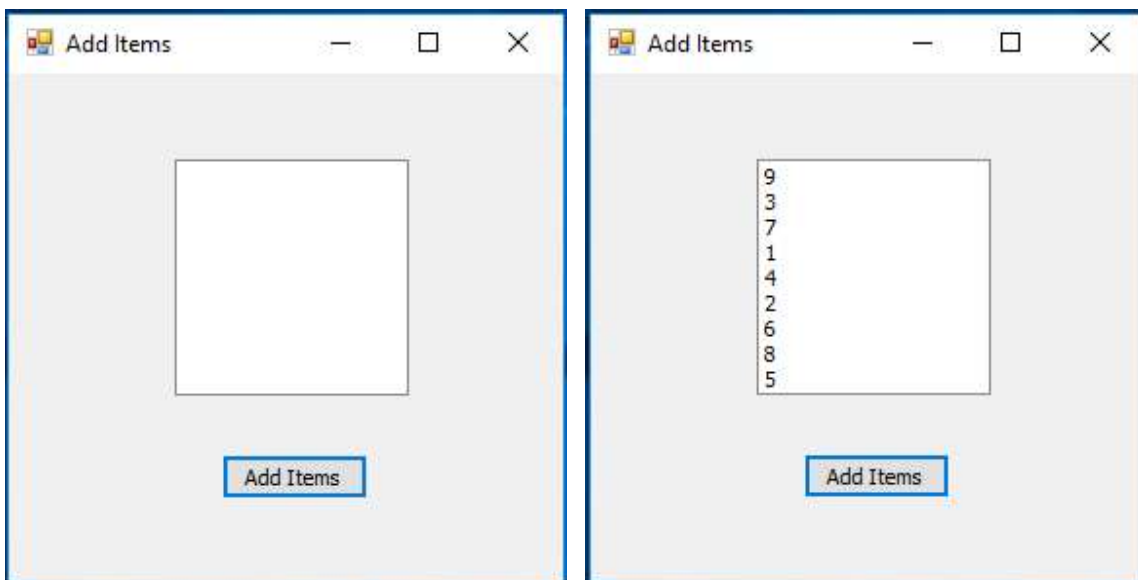
| Property | Set |
|----------|-----------|
| Text | Add Items |

Source Code

Double click (DC) on Button 1, then write

```
ListBox1.Items.Add("9")
ListBox1.Items.Add("3")
ListBox1.Items.Add("7")
ListBox1.Items.Add("1")
ListBox1.Items.Add("4")
ListBox1.Items.Add("2")
ListBox1.Items.Add("6")
ListBox1.Items.Add("8")
ListBox1.Items.Add("5")
```

Then run your application (app) to get





Project 41: Add Items to ListBox and Sort the Items ASC

Add to your Form project

- ❖ ListBox
- ❖ 2 Buttons

| Tool | Property | Set |
|---------|----------|-----------|
| Button1 | Text | Add Items |
| Button2 | Text | Sort |
| Button2 | Enabled | False |

Properties

Source Code

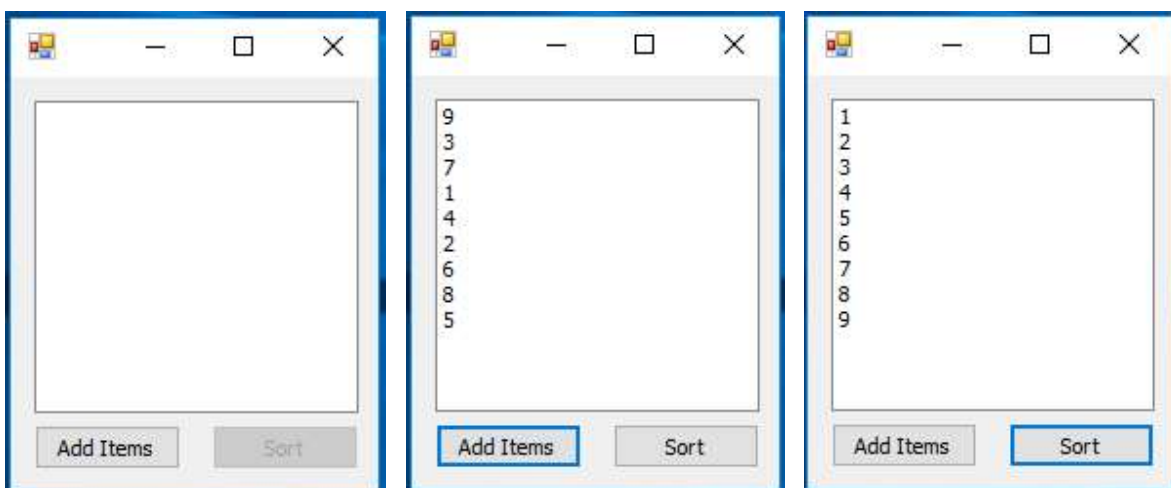
Double click (DC) on Button 1, then write

```
ListBox1.Items.Add("9")
ListBox1.Items.Add("3")
ListBox1.Items.Add("7")
ListBox1.Items.Add("1")
ListBox1.Items.Add("4")
ListBox1.Items.Add("2")
ListBox1.Items.Add("6")
ListBox1.Items.Add("8")
ListBox1.Items.Add("5")
Button2.Enabled = True
```

Double click (DC) on Button 2, then write

```
ArrayList.Adapter(ListBox1.Items).Sort()
```

Then run your application (app) to get





Project 42: Add Items to ListBox and Sort the Items DSC

Add to your Form project

- ❖ ListBox
- ❖ 2 Buttons

Properties

| Tool | Property | Set |
|---------|----------|-----------|
| Button1 | Text | Add Items |
| Button2 | Text | Sort |
| Button2 | Enabled | False |

Source Code

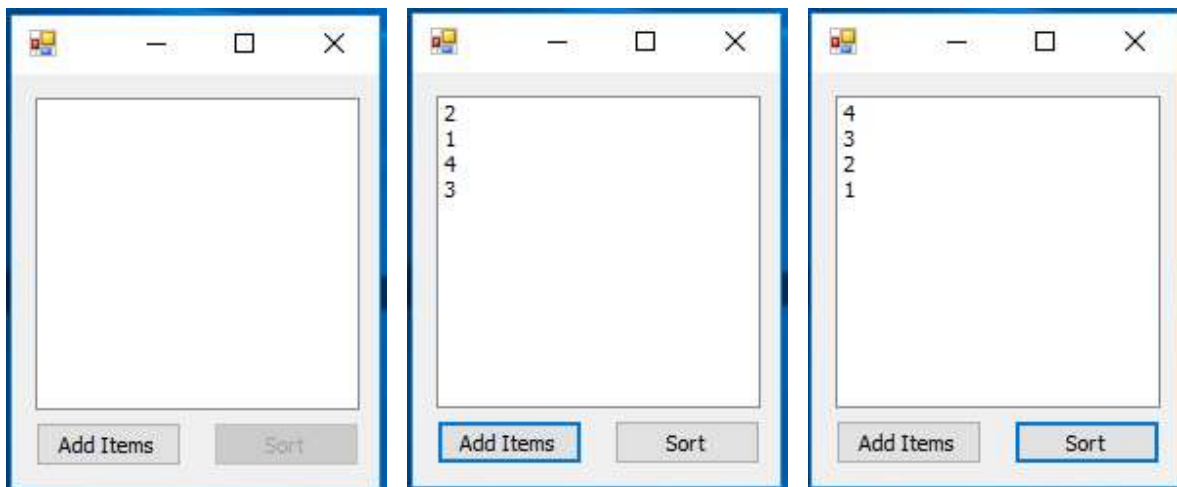
Double click (DC) on Button 1, then write

```
ListBox1.Items.Add("2")
ListBox1.Items.Add("1")
ListBox1.Items.Add("4")
ListBox1.Items.Add("3")
Button2.Enabled = True
```

Double click (DC) on Button 2, then write

```
Dim Sort_items(Me.ListBox1.Items.Count - 1) As String
For i As Integer = 0 To Me.ListBox1.Items.Count - 1
Sort_items(i) = Me.ListBox1.Items(i)
Next
Array.Sort(Sort_items)
Array.Reverse(Sort_items)
Me.ListBox1.Items.Clear()
Me.ListBox1.Items.AddRange(Sort_items)
```

Then run your application (app) to get





Project 43: Search in ListBox

Add to your Form project

- ❖ ListBox
- ❖ TextBox

Properties

| Tool | Property | Set |
|---------|----------|----------|
| ListBox | Text | ListBox1 |
| TextBox | Text | TextBox1 |

Source Code

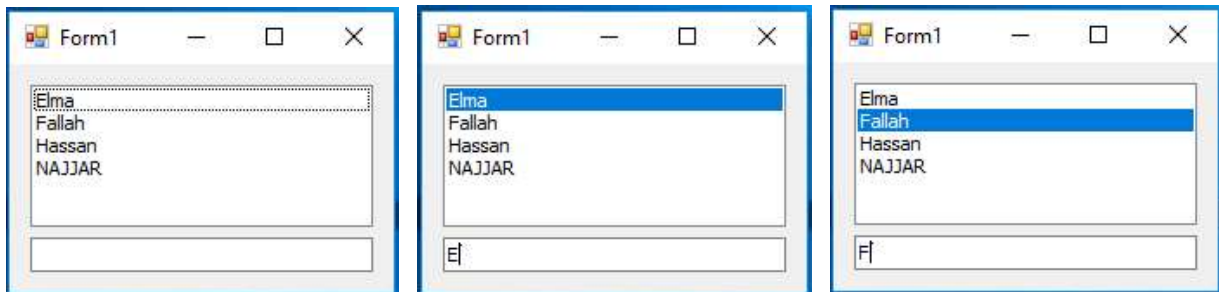
Double click (DC) on Form, then write

```
ListBox1.Items.Add("Elma")  
ListBox1.Items.Add("Fallah")  
ListBox1.Items.Add("Hassan")  
ListBox1.Items.Add("NAJJAR")
```

Double click (DC) on TextBox 1, then write

```
ListBox1.SelectedIndex = ListBox1.FindString(TextBox1.Text)
```

Then run your application (app) to get





Project 44: Read Saved File to ListBox

Add to your Form project

- ❖ ListBox
- ❖ Button

Properties

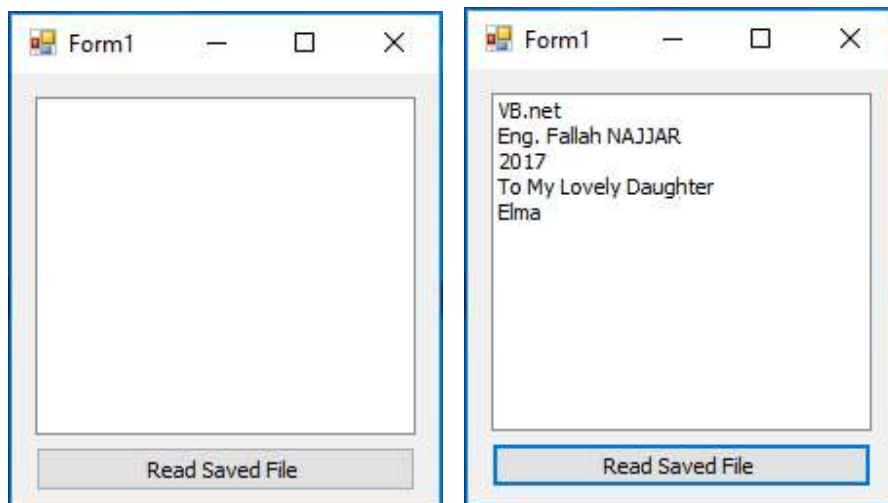
| Tool | Property | Set |
|---------|----------|-----------------|
| ListBox | Text | ListBox1 |
| Button | Text | Read Saved File |

Source Code

Double click (DC) on Button 1, then write

```
Dim Sr As IO.StreamReader
Sr = IO.File.OpenText("F:/Najjar.txt")
Do While Sr.Peek <> -1
ListBox1.Items.Add(Sr.ReadLine)
Loop
Sr.Close()
```

Then run your application (app) to





Project 45: Create TreeView

Add to your Form project

❖ Button

Button Properties

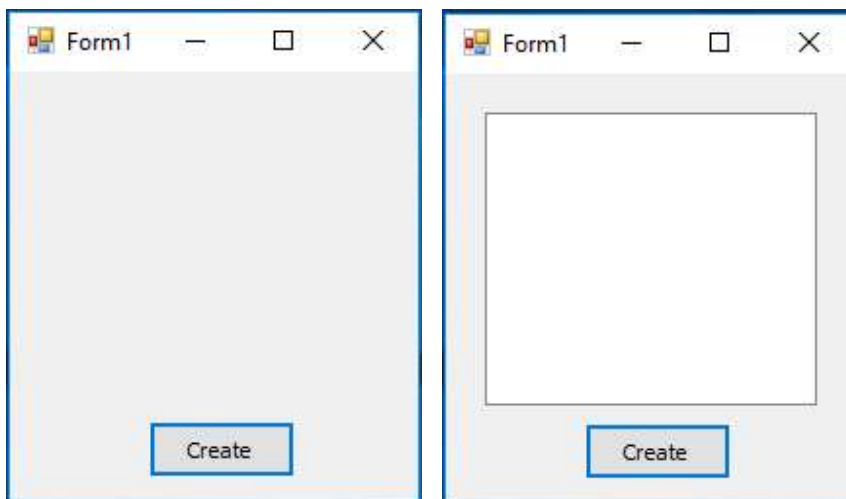
| Property | Set |
|----------|--------|
| Text | Create |

Source Code

Double click (DC) on Button 1, then write

```
Dim TreeView1 As New TreeView()  
TreeView1.Size = New Size(110, 110)  
TreeView1.Location = New Point(89, 81)  
Me.Controls.Add(TreeView1)
```

Then run your application (app) to get





Project 46: Add Items & Nodes to TreeView

Add to your Form project

❖ TreeView

❖ Button

Button Properties

| Property | Set |
|----------|-------------|
| Text | Insert Node |

Source Code

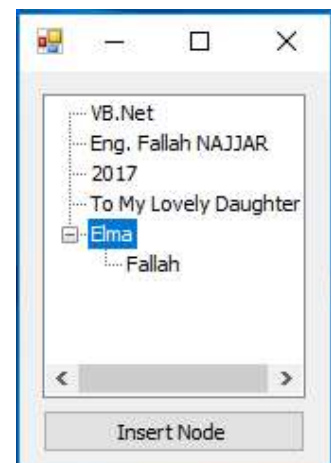
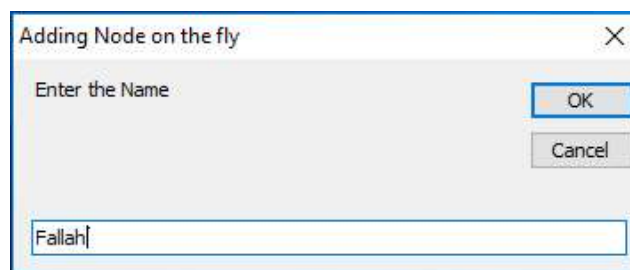
Double click (DC) on Form, then write

```
TreeView1.Nodes.Add("VB.Net")
TreeView1.Nodes.Add("Eng. Fallah NAJJAR")
TreeView1.Nodes.Add("2017")
TreeView1.Nodes.Add("To Mt Lovely Daughter")
TreeView1.Nodes.Add("Elma")
```

Double click (DC) on Button 1, then write

```
Dim strNodeName = InputBox("Enter the Name", "Adding Node on the fly", "Enter New Node")
If strNodeName <> "" Then
TreeView1.SelectedNode.Nodes.Add(strNodeName)
End If
```

Then run your application (app) to get





Project 47: Calculate how many Control Tools in the Form

Add to your Form project

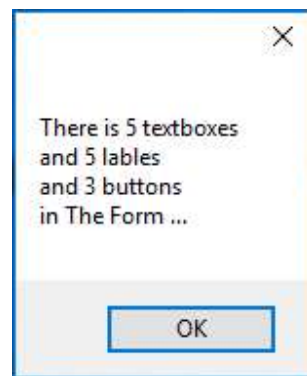
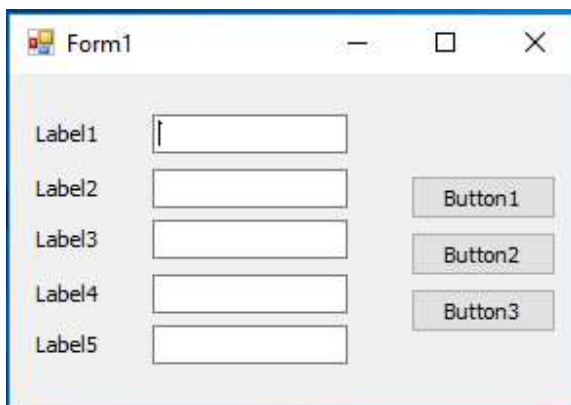
- ❖ 3 Buttons
- ❖ 5 Labels
- ❖ 5 TextBoxes

Source Code

Double click (DC) on Form, then write

```
Dim i, j, k As Integer
i = 0
j = 0
k = 0
Dim ctl As Control
For Each ctl In Me.Controls
If TypeOf ctl Is TextBox Then
i += 1
ElseIf TypeOf ctl Is Label Then
j += 1
ElseIf TypeOf ctl Is Button Then
k += 1
End If
Next
MessageBox.Show("There is " & i & " textboxes" & ControlChars.CrLf & "and " & j & " lables " & ControlChars.CrLf & "and " & k & " buttons" & ControlChars.CrLf & "in The Form ... ")
```

Then run your application (app) to get





Project 48: Add Menu to the Form

Add to your Form project

- ❖ Buttons
 - ❖ MenuStrip
- Button Properties

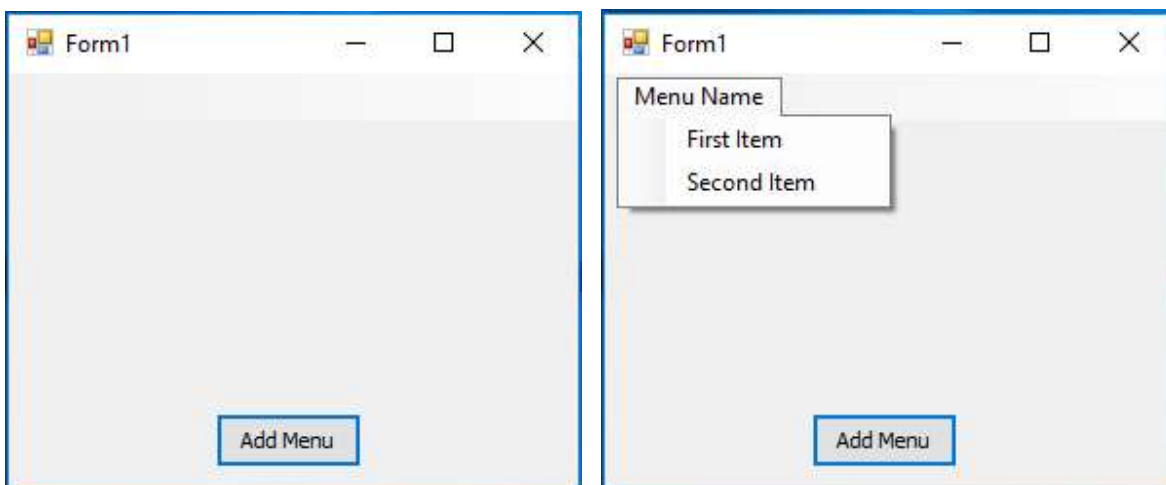
| Property | Set |
|----------|----------|
| Text | Add Menu |

Source Code

Double click (DC) on Button 1, then write

```
Dim addedMenuItem As New ToolStripMenuItem
Dim firstDropDownItem As New ToolStripMenuItem
Dim secondDropDownItem As New ToolStripMenuItem
addedMenuItem.Text = "&Menu Name"
firstDropDownItem.Text = "&First Item"
secondDropDownItem.Text = "&Second Item"
MenuStrip1.Items.Add(addedMenuItem)
addedMenuItem.DropDownItems.Add(firstDropDownItem)
addedMenuItem.DropDownItems.Add(secondDropDownItem)
```

Then run your application (app) to get





Project 49: Working with ProgressBar

Add to your Form project

- ❖ Buttons
- ❖ ProgressBar

| Property | Set |
|----------|-----|
| Text | Try |

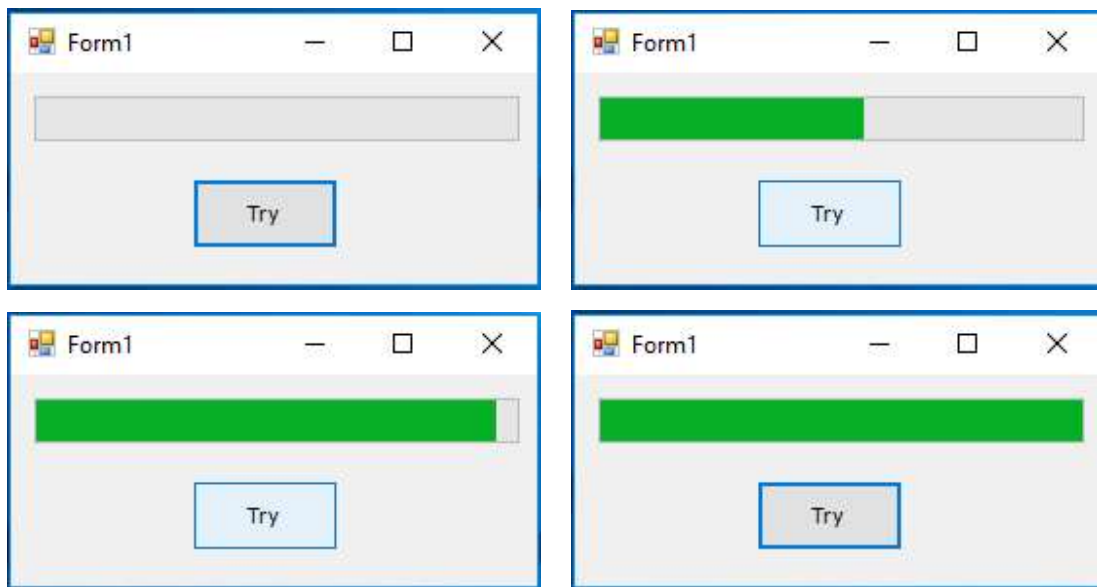
Button Properties

Source Code

Double click (DC) on Button 1, then write

```
With ProgressBar1
    .Minimum = 1
    .Maximum = 10000000
    .Value = 1
    .Step = 1
    For i As Integer = .Minimum To .Maximum
        .PerformStep()
    Next i
End With
```

Then run your application (app) to get





Project 50: Copy Picture to RichTextBox

Add to your Form project

- ❖ Button
 - ❖ RichTextBox
- Button Properties

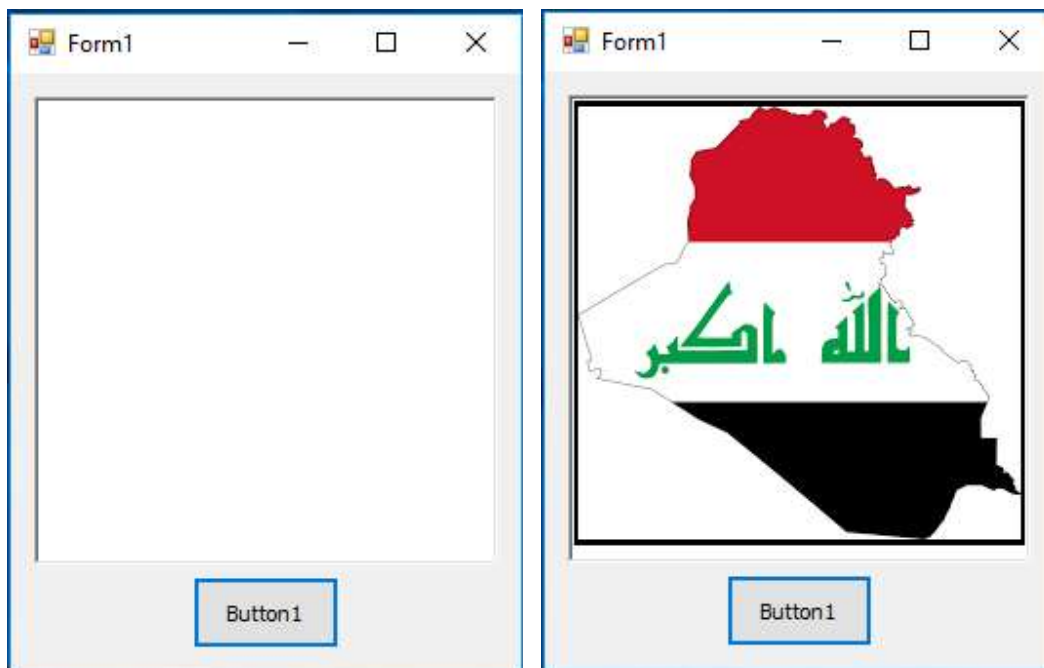
| Property | Set |
|----------|---------|
| Text | Button1 |

Source Code

Double click (DC) on Button 1, then write

```
If My.Computer.Clipboard.ContainsImage = True Then  
RichTextBox1.Paste()  
End If
```

Then run your application (app) to get





Project 51: Build and Call a Procedure with your project

Add to your Form project

❖ Button

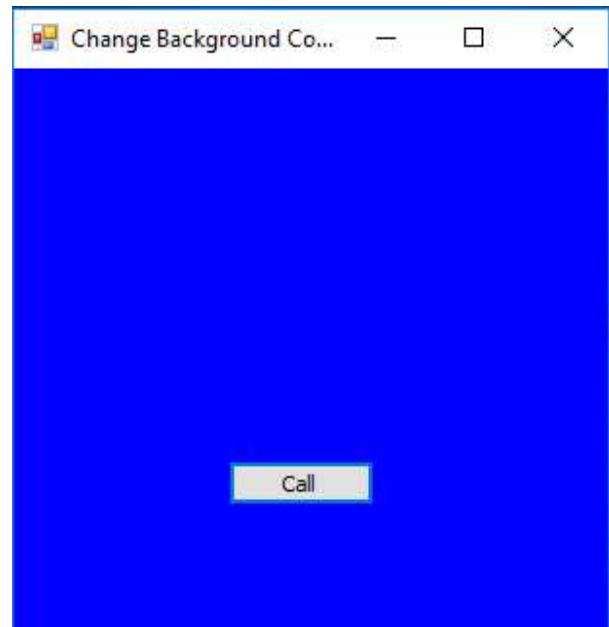
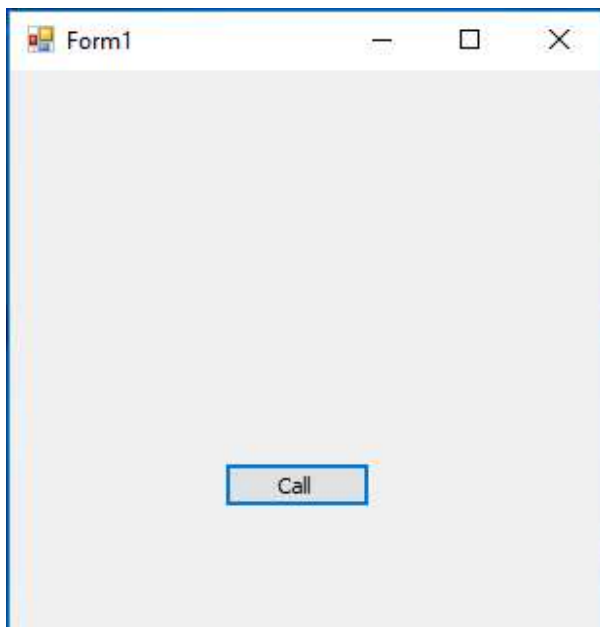
| Property | Set |
|----------|---------|
| Name | btnCall |
| Text | Call |

Source Code

Copy the Following code to your project

```
Public Class Form1
    Public Sub Change_Background_Color() 'sub procedure name
        With Me
            .BackColor = Color.Blue
            .Text = "Change Background Color"
        End With
    End Sub
    Private Sub btnCall_Click(sender As Object, e As EventArgs) Handles btnCall.Click
        Change_Background_Color() 'sub procedure calling in the btnCall click
    End Sub
End Class
```

Then run your application (app) to get





Project 52: Build and Call a Function with your project

Add to your Form project

❖ Button

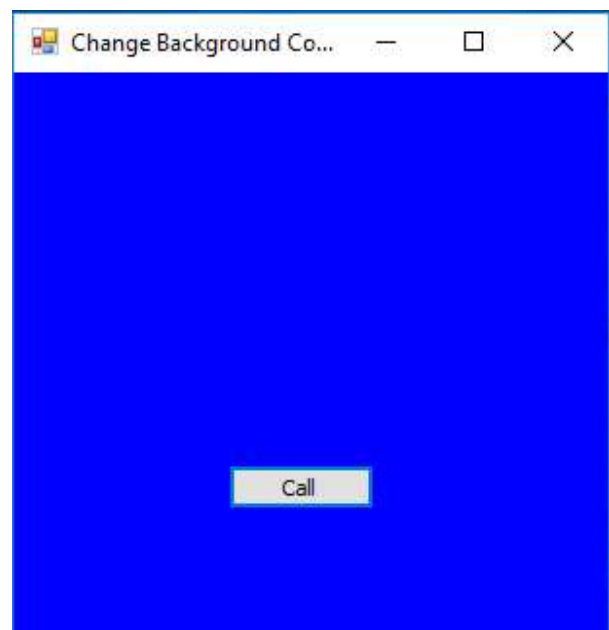
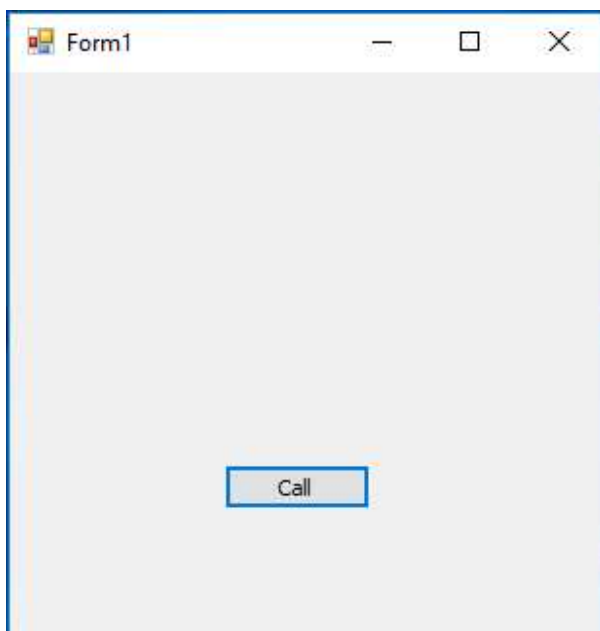
| Property | Set |
|----------|---------|
| Name | btnCall |
| Text | Call |

Source Code

Copy the Following code to your project

```
Public Class Form1
    Public Function Change_Background_Color() 'Function name
        With Me
            .BackColor = Color.Blue
            .Text = "Change Background Color"
        End With
        Return 0
    End Function
    Private Sub btnCall_Click(sender As Object, e As EventArgs) Handles btnCall.Click
        Change_Background_Color() 'Function calling in the btnCall click
    End Sub
End Class
```

Then run your application (app) to get





Project 53: Print in TextBox Using Function

Add to your Form project

- ❖ TextBox
- ❖ Button

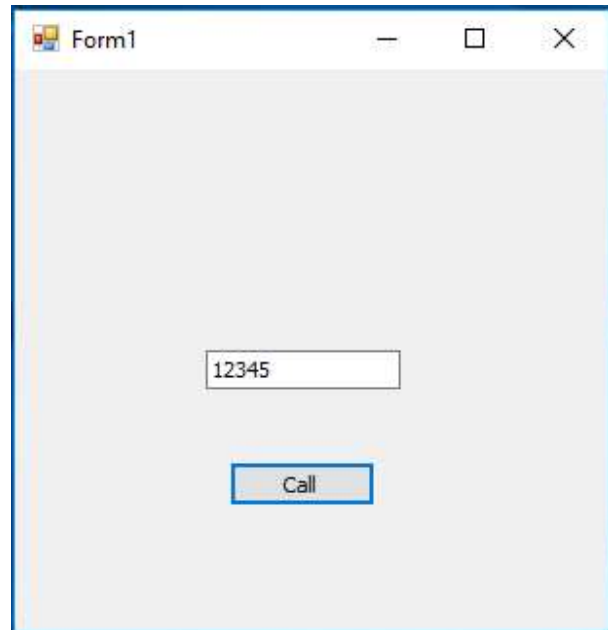
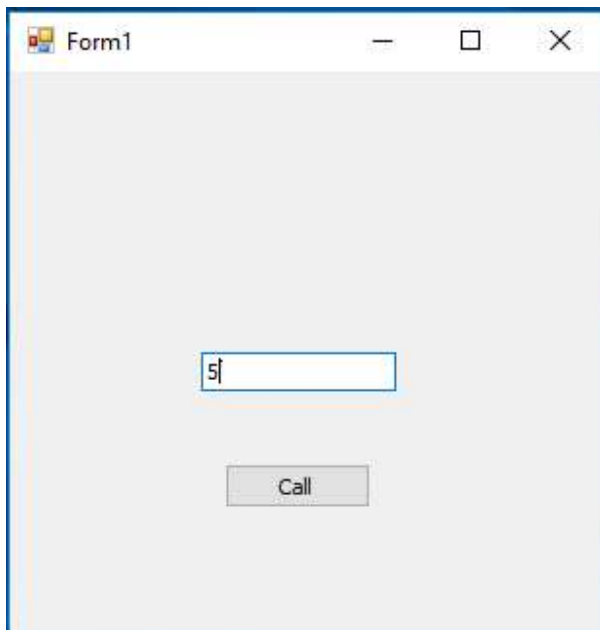
| Property | Set |
|----------|---------|
| Name | btnCall |
| Text | Call |

Source Code

Copy the Following code to your project

```
Public Class Form1
    Public Function test(ByVal No As Integer) As Integer ' function name
        TextBox1.Clear() ' clear textbox
        For i = 1 To No ' using for loop
            TextBox1.Text = TextBox1.Text & i ' save the loop results in the text
        Next ' end loop
        Return 0 ' return
    End Function ' end function
    Private Sub btnCall_Click(sender As Object, e As EventArgs) Handles btnCall.Click
        Dim No As Integer ' an integer
        No = Val(TextBox1.Text) ' take the content of textbox
        test(No) ' Call the Function
    End Sub
End Class
```

Then run your application (app) to get

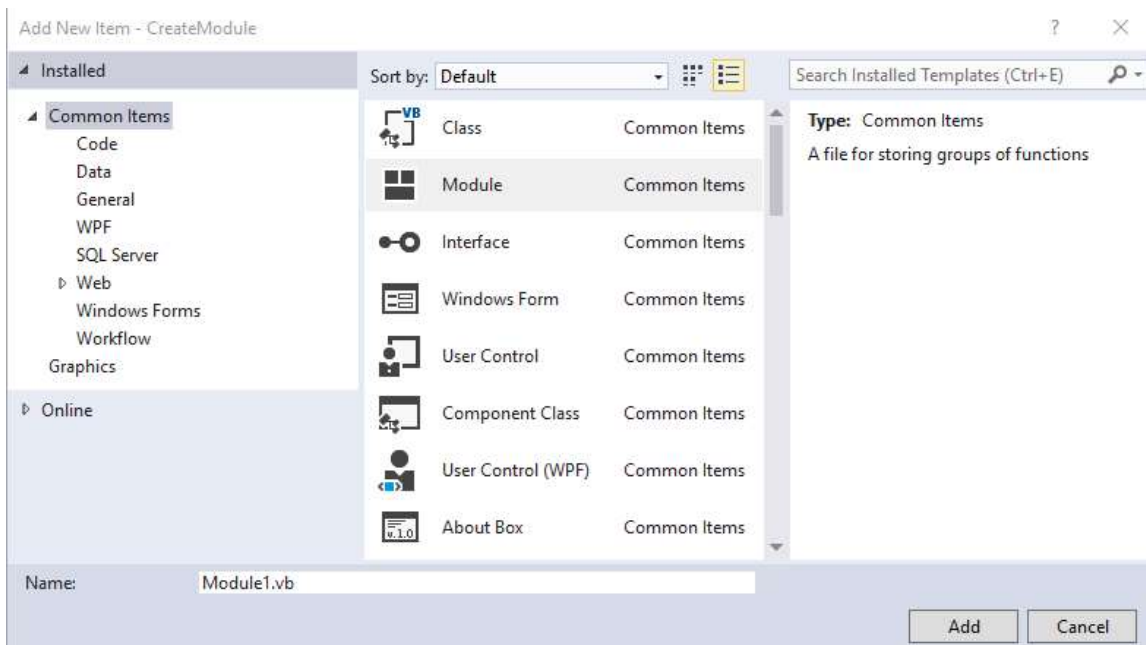
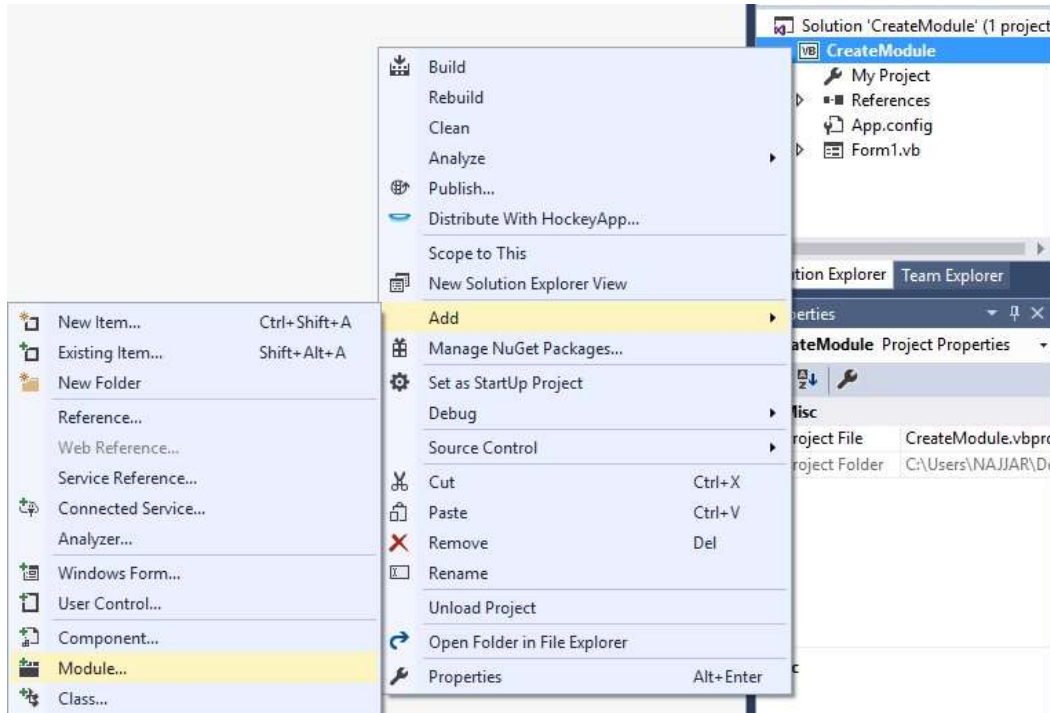




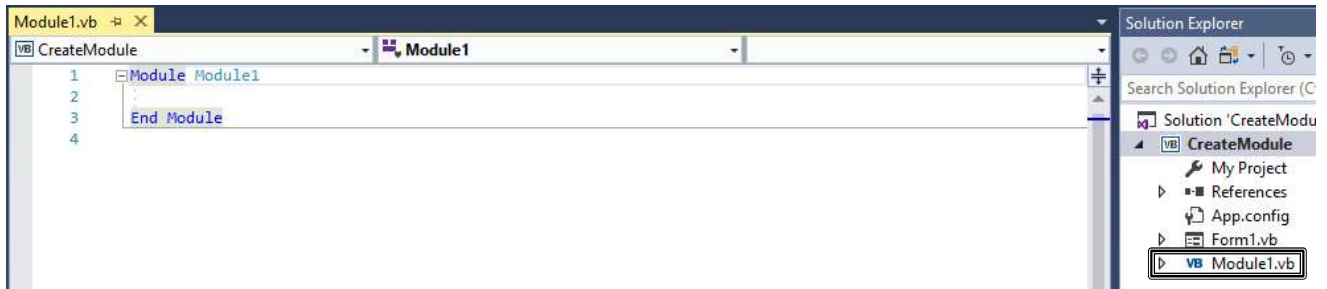
Project 54: Working with Module

Open New project it name is CreateModule

From Solution Explorer R.C. on the name of the project → Add → Module



Select Modula → Add



Then Add to your Form project

❖ TextBox

❖ Button

Button Properties

| Property | Set |
|----------|---------|
| Name | btnCall |
| Text | Call |

Source Code

Copy the Following code to your Module

```
Module Module1
    Public No As Integer
    Public Function test(ByRef No) As Boolean
        Form1.TextBox1.Clear()
        For i = 1 To No
            Form1.TextBox1.Text = Form1.TextBox1.Text & i
        Next
        Return True
    End Function
End Module
```

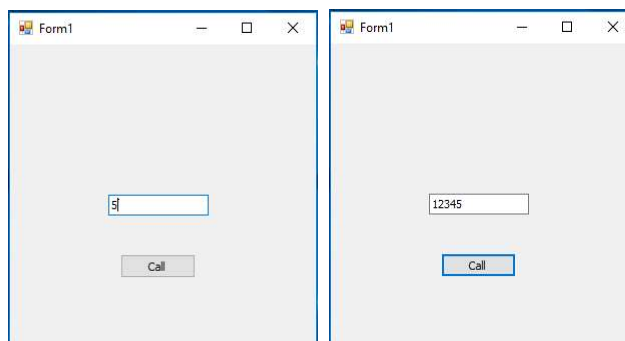
' an integer
' function name
' clear textbox
' using for loop
' save the loop results in the text
' end loop
' return

Double click (DC) on Button 1, then write

```
No = Val(TextBox1.Text)
test(No)
```

' take the content of textbox
' Call the Function

Then run your application (app) to get

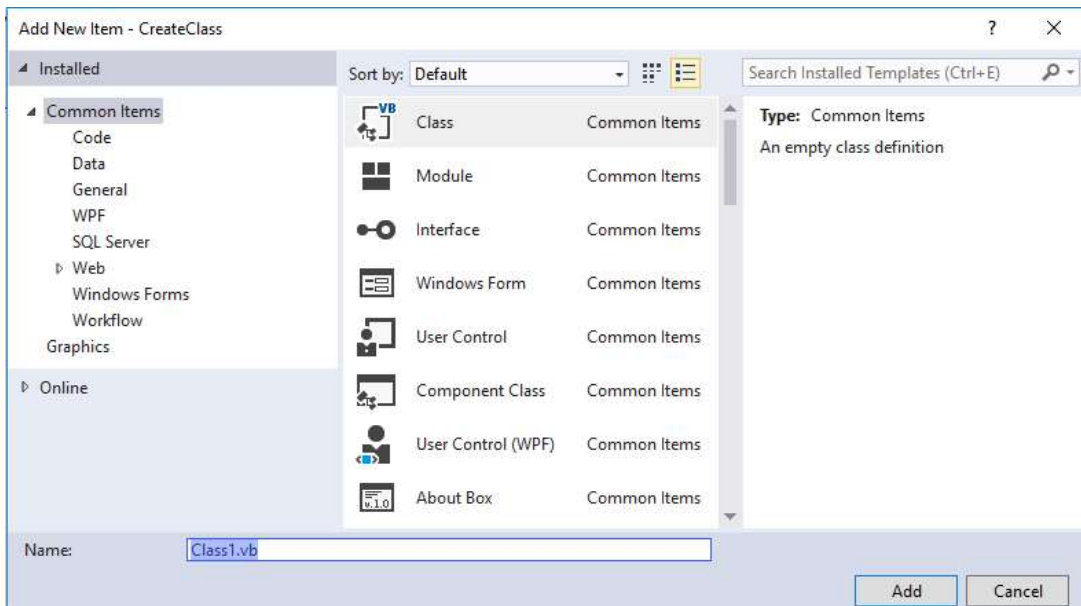
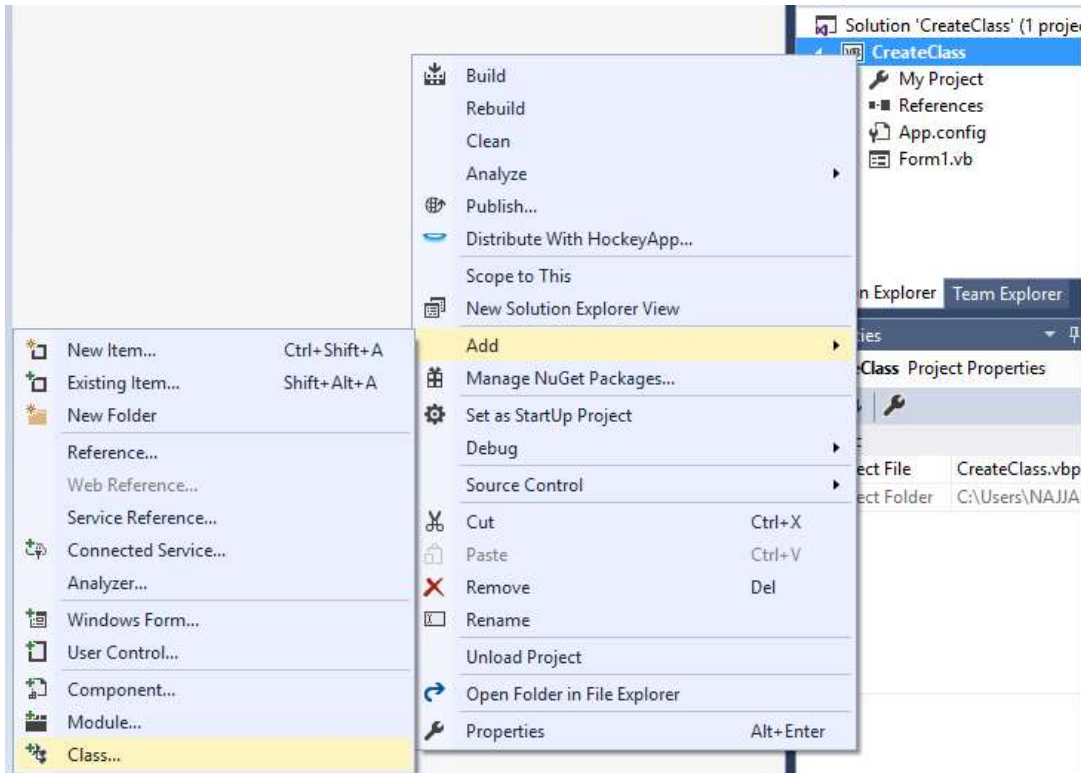




Project 55: Working with Class

Open New project it name is CreateClass

From Solution Explorer R.C. on the name of the project → Add → Class



Select Class → Add



Then Add to your Form project

- ❖ TextBox

- ❖ Button

Button Properties

| Property | Set |
|----------|---------|
| Name | btnCall |
| Text | Call |

Source Code

Copy the Following code to your added Class

```
Public Class Class1
    Public Function test(ByVal No) As Boolean
        Form1.TextBox1.Clear()
        For i = 1 To No
            Form1.TextBox1.Text = Form1.TextBox1.Text & i
        Next
        Return True
    End Function
End Class
```

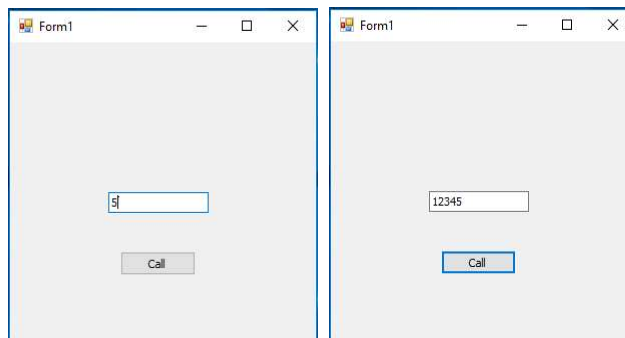
' function name
' clear textbox
' using for loop
' save the loop results in the text
' end loop
' return

Replace All Code // Ctrl + A → Ctrl + V

```
Public Class Form1
    Public No As Integer
    Dim class1 As New Class1
    Private Sub btnCall_Click(sender As Object, e As EventArgs) Handles btnCall.Click
        No = Val(TextBox1.Text)
        class1.test(No)
    End Sub
End Class
```

' an integer
' define class
' take the content of textbox
' Call the Function

Then run your application (app) to get





Project 56: How to Use TabControl

Open New project it name is CreateClass

From Solution Explorer R.C. on the name of the project → Add → Class

Add to your Form project

❖ TabControl

By default, when we add TabControl, two TabPages will appear each one could have its own control tools. You can run your project to see that.

❖ Add to TabPage1

- ✓ 2 TextBoxes
- ✓ 2 Buttons
- ✓ 2 Labels

❖ Add to TabPage2

- ✓ Button

Properties

| Tools | Property | Set |
|----------|---------------|--------------|
| Form1 | StartPosition | CenterScreen |
| Form1 | Text | TabControl |
| Form1 | AcceptButton | btnLogin |
| Form1 | CancelButton | btnCancel |
| TabPage1 | | |
| Button1 | Name | btnLogin |
| Button1 | Text | Login |
| Button2 | Name | btnCancel |
| Button2 | Text | Cancel |
| Label1 | Text | Username: |
| Label2 | Text | Password: |
| TabPage2 | | |
| Button1 | Name | btnGo |
| Button1 | Text | Go |

Note that, you can add more than two TabPages just in case you need it

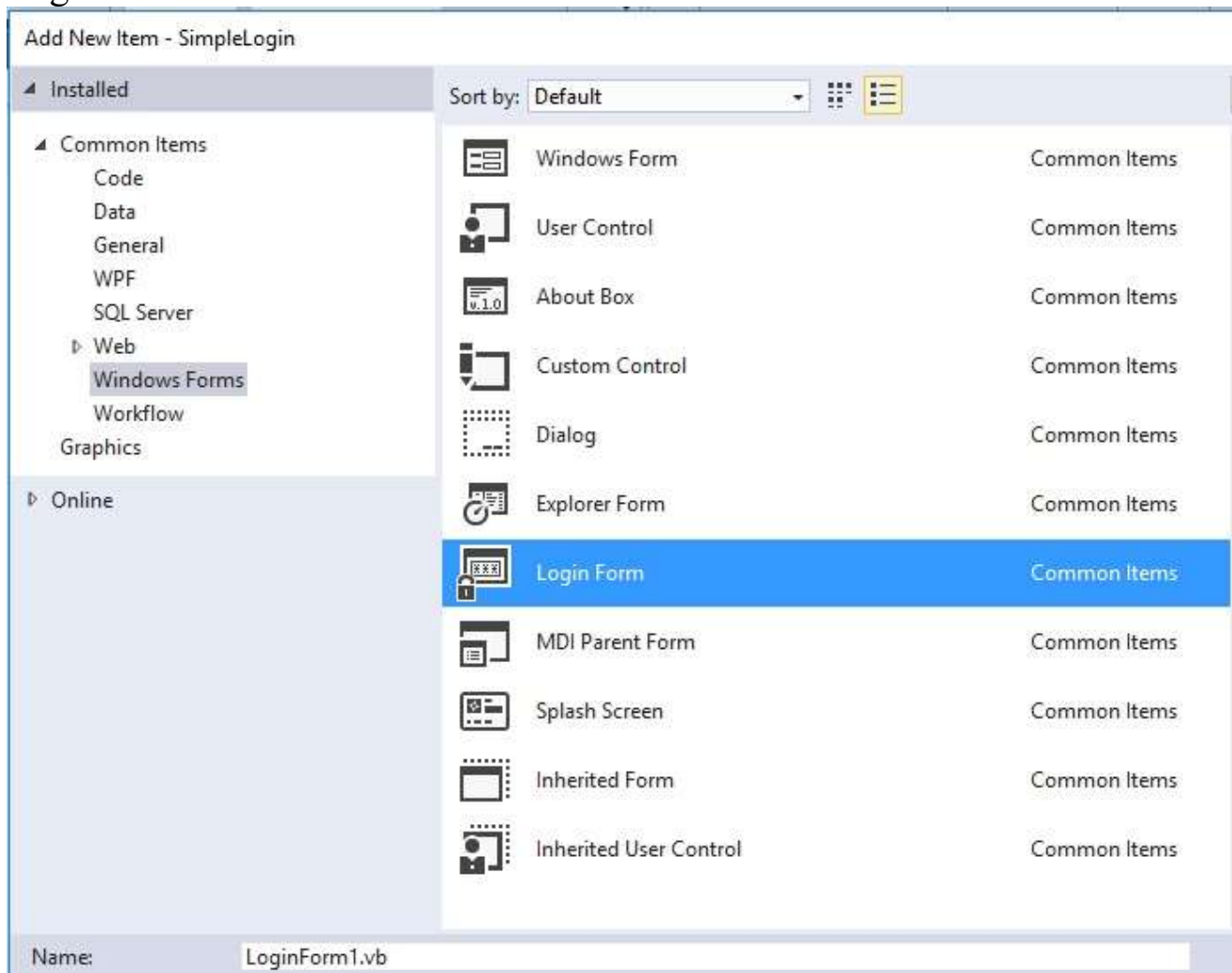


Project 57: Simple Login Form

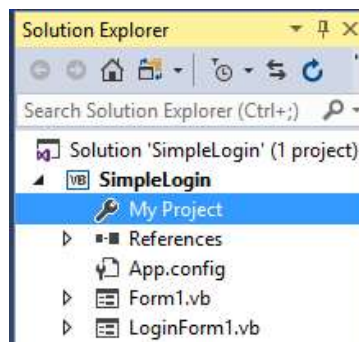
Open New project its name is SimpleLogin

From Solution Explorer

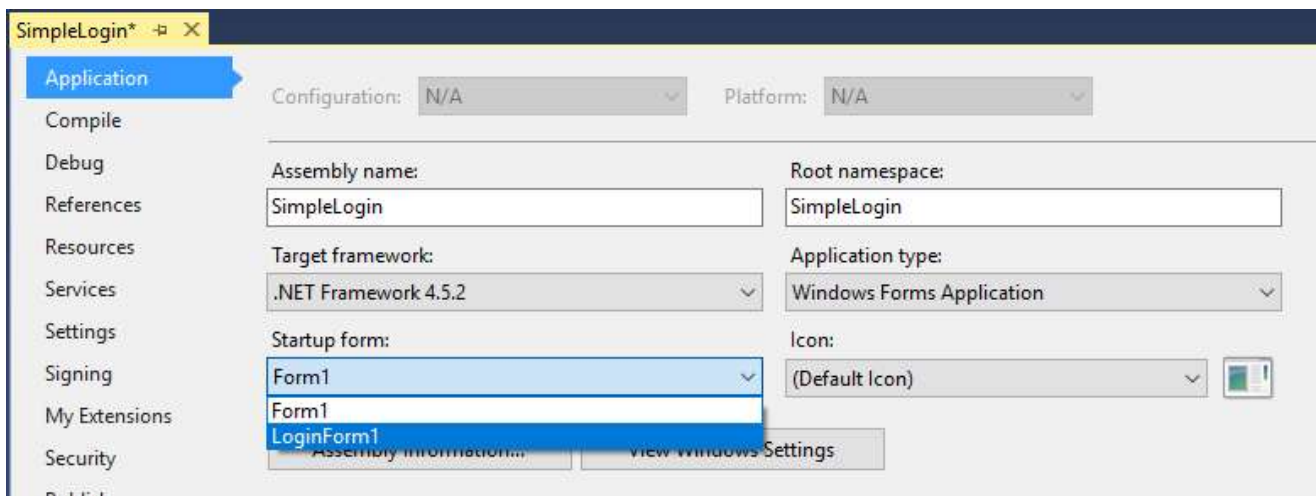
R.C. on the name of the project → Add → New Item → Windows Forms → Login Form → Add



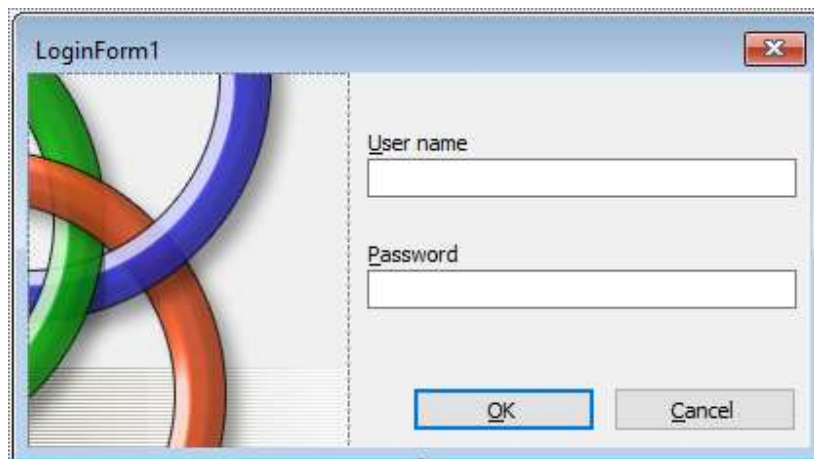
D.C. On My Project



Application → Startup Form → LoginForm1



You'll get the following Form1



Copy this code to Ok Button

```
If UsernameTextBox.Text = "1" And PasswordTextBox.Text = "1" Then
    MsgBox("Successfully Login",, "Welcome")
    Me.Hide()
    Form1.Show()
Else
    MsgBox("Wrong Username Or Password",, "Wrong")
End If
```

Copy this code to Cancel Button

```
Me.Close()
```


Then run your application (app) to get



LoginForm1

User name
1

Password
*

OK Cancel



Welcome

Successfully Login

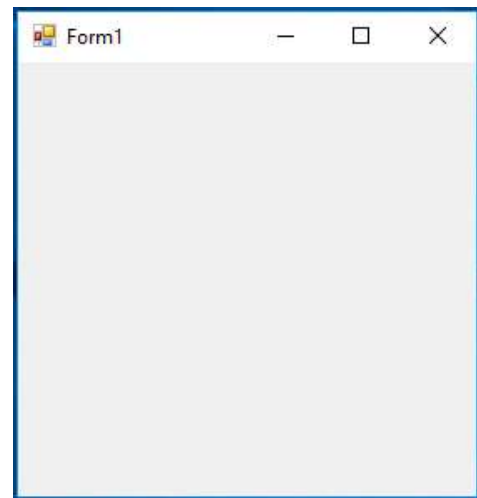
OK



Wrong

Wrong Username Or Password

OK



Form1

Both Username and Password Are 1.

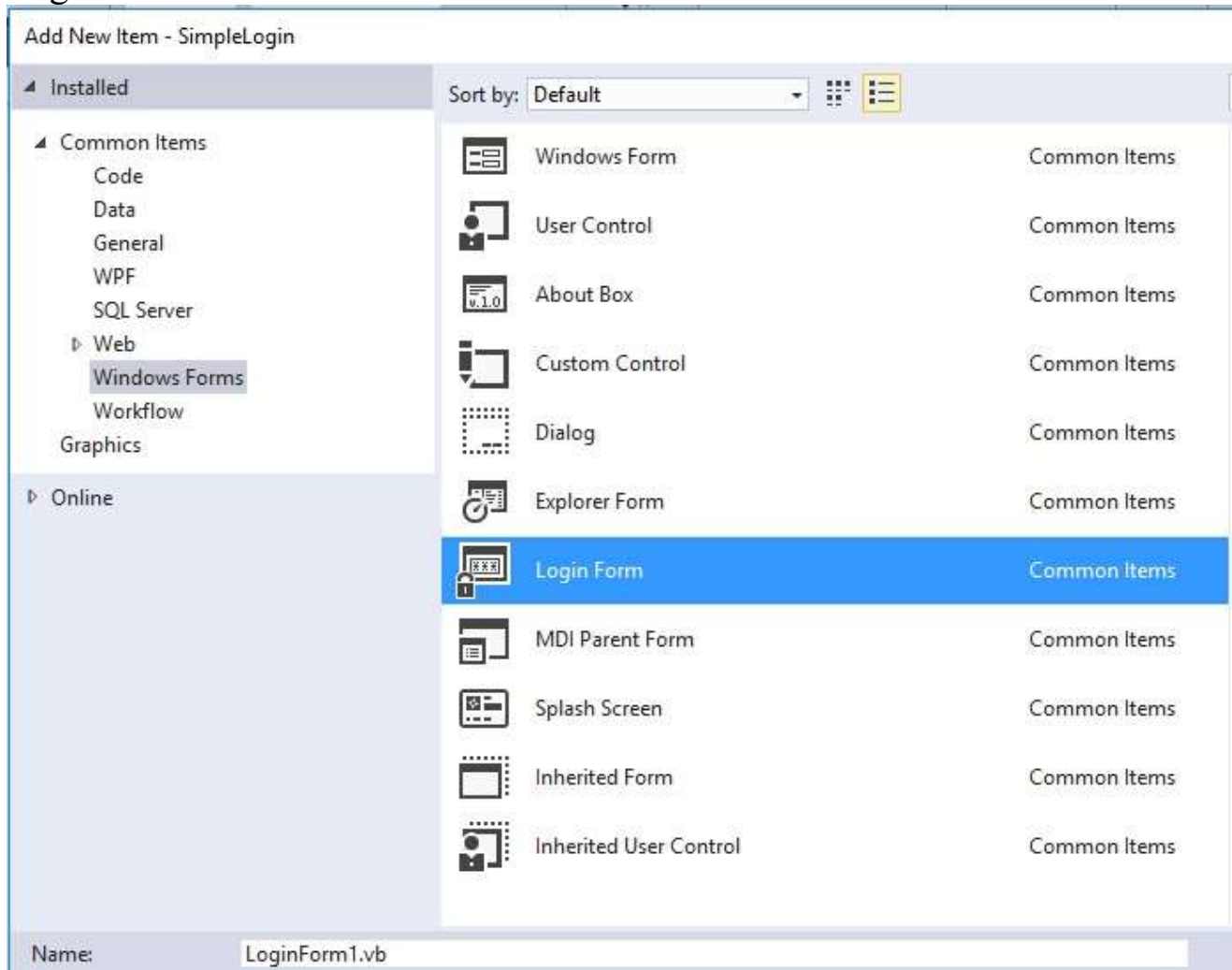


Project 58: Advanced Login Form

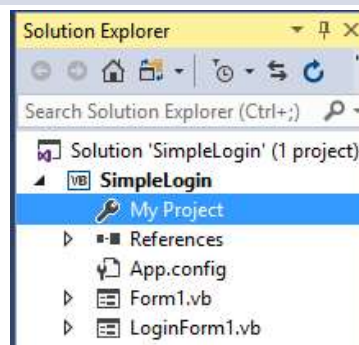
Open New project its name is SimpleLogin

From Solution Explorer

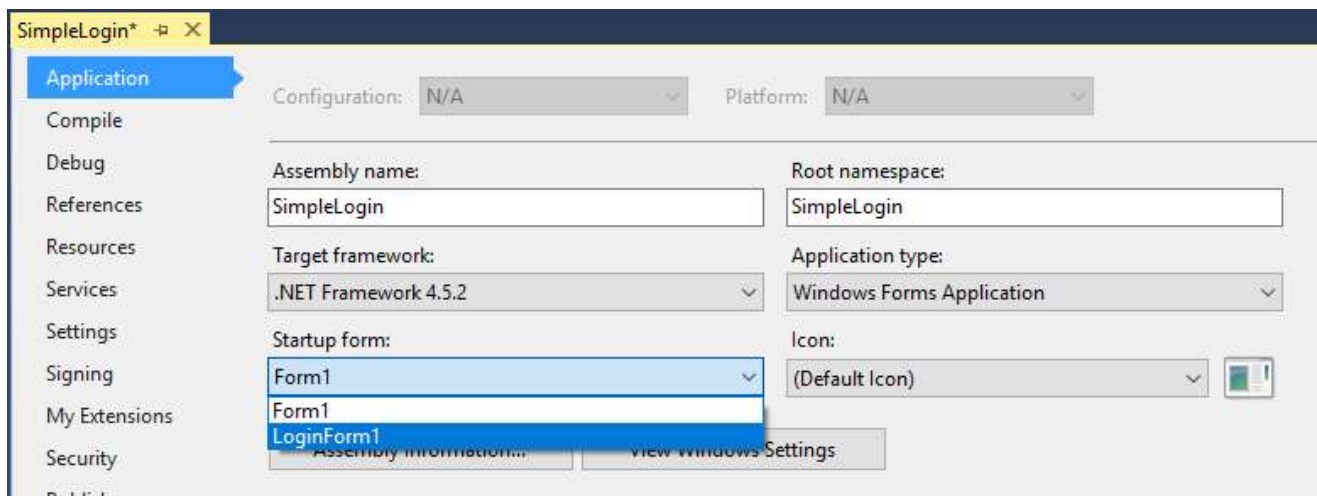
R.C. on the name of the project → Add → New Item → Windows Forms → Login Form → Add



D.C. On My Project

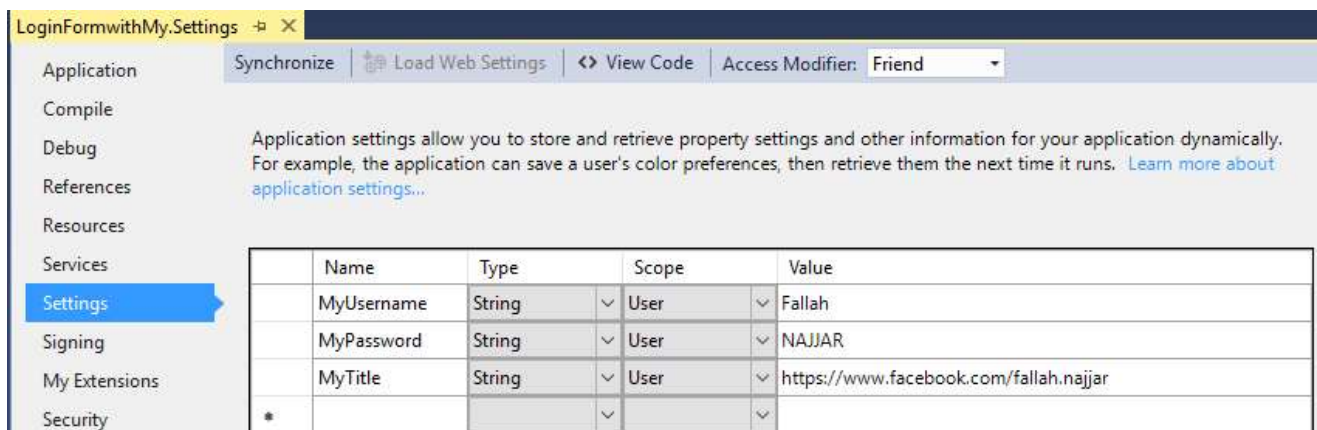


Application → Startup Form → LoginForm1



Then go to Settings and write

| Name | Value |
|------------|---|
| MyUsername | Fallah |
| MyPassword | NAJJAR |
| MyTitle | http://www.facebook.com/fallah.najjar |



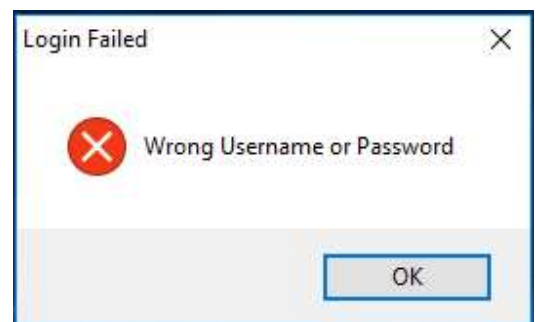
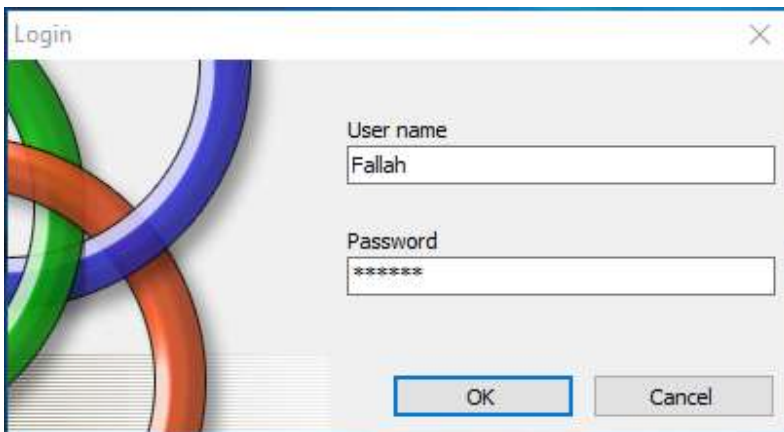
Copy this code to Ok Button

```
If txtUsername.Text = My.Settings.MyUsername And txtPassword.Text = My.Settings.MyPassword Then
    MessageBox.Show("Successfully Login!", My.Settings.MyTitle, MessageBoxButtons.OK)
'clear inputs
txtUsername.Clear()
txtPassword.Clear()
Form1.Show()
Form1.txtUser.Focus()
Me.Hide()
Else
    MessageBox.Show("Wrong Username or Password", "Login Failed", MessageBoxButtons.OK,
    MessageBoxIcon.Error)
'clear inputs
txtUsername.Clear()
txtPassword.Clear()
txtUsername.Focus()
End If
```

Copy this code to Cancel Button

```
Me.Close()
```

Then run your application (app) to get












Project 59: Advanced SQL Database Connection

Add to your Form project

- ❖ 4 Labels
- ❖ 6 Buttons (Add, Save, Delete, Update, View, and Exit)
- ❖ 3 TextBoxes
- ❖ DateTimePicker
- ❖ DataGridView

Properties

| Tools | Property | Set |
|---------|---------------|---|
| Form1 | StartPosition | CenterScreen |
| Form1 | Text | Home |
| Form1 | Icon |  |
| Form1 | Name | frmHome |
| Button1 | Name | btnAdd |
| Button1 | Text | " " |
| Button1 | Image |  |
| Button2 | Name | btnSave |
| Button2 | Text | " " |
| Button2 | Image |  |
| Button3 | Name | btnUpdate |
| Button3 | Text | " " |
| Button3 | Image |  |
| Button4 | Name | btnDelete |
| Button4 | Text | " " |
| Button4 | Image |  |
| Button5 | Name | btnView |
| Button5 | Text | " " |
| Button5 | Image |  |
| Button6 | Name | btnExit |
| Button6 | Text | " " |
| Button6 | Image |  |
| Label1 | Text | Id: |
| Label2 | Text | FName: |
| Label3 | Text | LName: |
| Label4 | Text | BirthDay: |
| DGV | Name | Info_tblDataGridView |

Create SQL Database as Follow

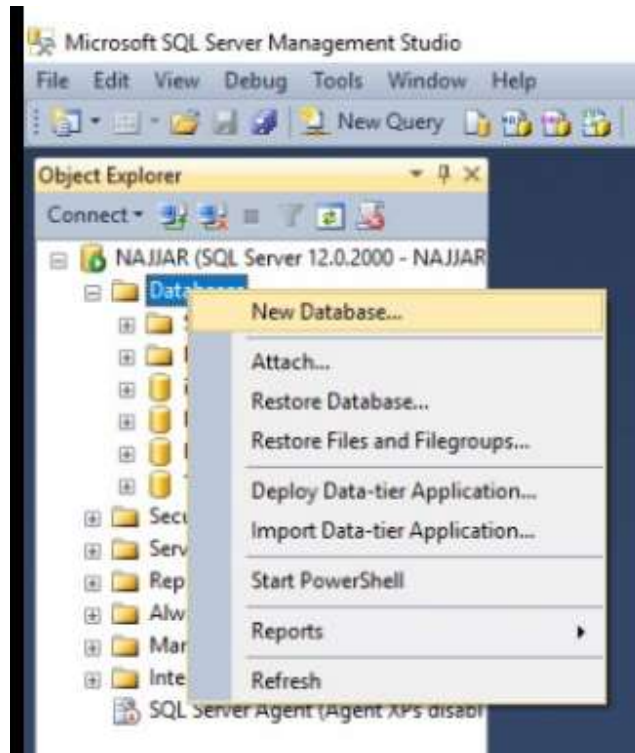
- ❖ Open Microsoft SQL Server Management Studio (any Version)



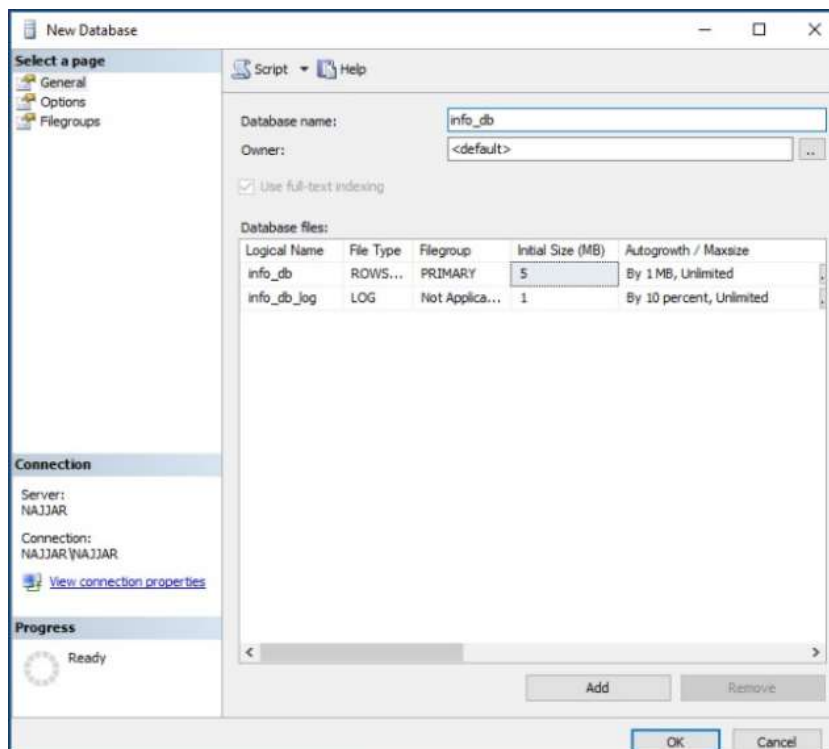
- ❖ Connect to your server



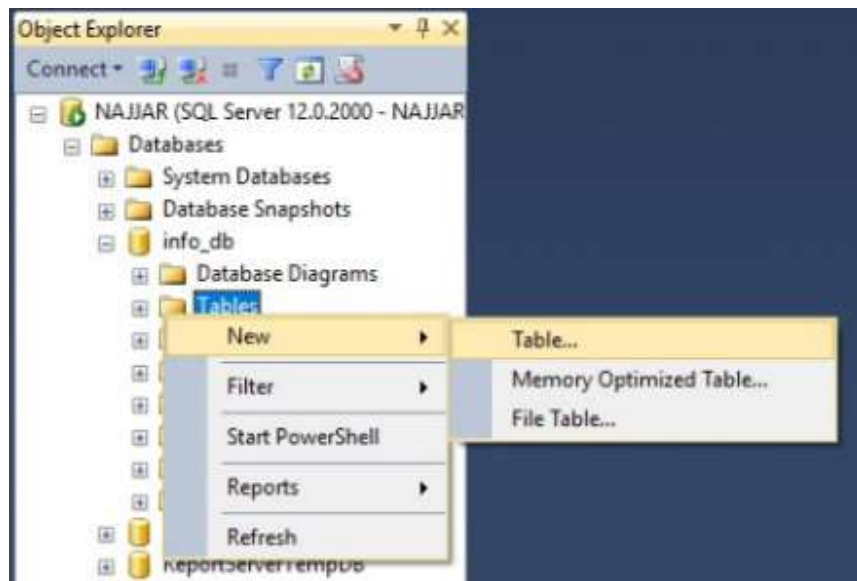
❖ Create New DB → R.C. on Database → New Database



❖ Type Database Name → OK (in our case) info_db

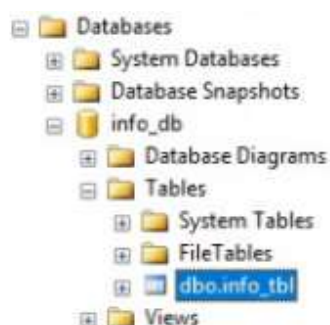
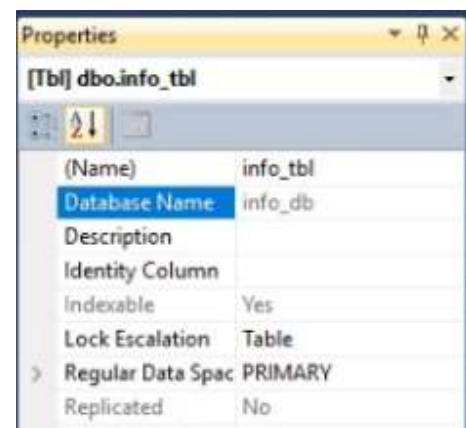


❖ Create New Table → R.C. on Tables → New → Table



❖ Design your Table Fields → save Table (in our case) info_tbl

| Column Name | Data Type | Allow Nulls |
|-------------|--------------|-------------------------------------|
| id | int | <input checked="" type="checkbox"/> |
| f_name | nvarchar(50) | <input checked="" type="checkbox"/> |
| l_name | nvarchar(50) | <input checked="" type="checkbox"/> |
| dob | nvarchar(50) | <input checked="" type="checkbox"/> |
| | | <input type="checkbox"/> |



❖ You are ready to write your code connection and control DB.

Copy the codes to your project

```
Imports System.Data
Imports System.Data.SqlClient
Public Class frmDB
'Connect to DB
Public conn As New SqlConnection("Server= najjar; Database = info_db; integrated security =
true")
'Get data to DGV
Public Function FillDataFun() As DataTable
Dim dtInfo As New DataTable
Dim FillData As String = "Select * From info_tbl"
Using comm1 As New SqlCommand(FillData, conn)
conn.Open()
Dim reader As SqlDataReader = comm1.ExecuteReader
dtInfo.Load(reader)
conn.Close()
End Using
Return dtInfo
End Function
' Query reader
Public Sub ExcuteQuery(query As String)
Dim comm As New SqlCommand(query, conn)
conn.Open()
comm.ExecuteNonQuery()
conn.Close()
End Sub
'Get Max id to reset id
Public Sub autoId()
Try
Dim comm As New SqlCommand("SELECT MAX(id) FROM info_tbl", conn)
conn.Open()
Dim dr As SqlDataReader = comm.ExecuteReader

If dr.Read = True Then
Me.txtID.Text = dr.Item(0) + 1
Else
Exit Sub
End If
Catch ex As Exception
End Try
conn.Close()
End Sub
'Clear all textboxes
Public Sub txtClear()
txtFname.Clear()
txtLname.Clear()
End Sub
'Load data to DGV
Private Sub frmDB_Load(sender As Object, e As EventArgs) Handles MyBase.Load
Info_tblDataGridView.DataSource = FillDataFun()
End Sub
```

```

'Save new record
Private Sub btnSave_Click(sender As Object, e As EventArgs) Handles btnSave.Click
If txtFname.Text = "" Or txtLname.Text = "" Then
MsgBox("Enter Required Data",, "Warning")
Else
Dim InsertQuery As String = "INSERT INTO info_tbl (id,f_name,l_name,dob) VALUES('" & txtID.Text
& "','" & txtFname.Text & "','" & txtLname.Text & "','" & dtDOB.Value.ToString & "')"
ExcuteQuery(InsertQuery)
Info_tblDataGridView.DataSource = FillDataFun()
txtClear()
dtDOB.Value = Today
End If
txtID.Focus()
Call autoId()
End Sub
>Delete record
Private Sub btnDelete_Click(sender As Object, e As EventArgs) Handles btnDelete.Click
Dim DeleteQuery As String = "DELETE FROM info_tbl WHERE id='" & txtID.Text & "'"
ExcuteQuery(DeleteQuery)
Info_tblDataGridView.DataSource = FillDataFun()
txtClear()
End Sub
>Update record
Private Sub btnUpdate_Click(sender As Object, e As EventArgs) Handles btnUpdate.Click
Dim UpdateQuery As String = "UPDATE info_tbl SET id= '" & txtID.Text & "',f_name= '" &
txtFname.Text & "',l_name ='" & txtLname.Text & "',dob = '" & dtDOB.Value.ToString & "'" WHERE
id = '" & txtID.Text & "'"
ExcuteQuery(UpdateQuery)
Info_tblDataGridView.DataSource = FillDataFun()
txtClear()
End Sub
>Get data from DGV to textboxes
Private Sub Info_tblDataGridView_CellClick(sender As Object, e As DataGridViewCellEventArgs)
Handles Info_tblDataGridView.CellClick
Dim index As Integer
index = e.RowIndex
Dim SelectedRow As DataGridViewRow
Info_tblDataGridView.SelectionMode = DataGridViewSelectionMode.FullRowSelect
Try
SelectedRow = Info_tblDataGridView.Rows(index)
txtID.Text = SelectedRow.Cells(0).Value.ToString()
txtFname.Text = SelectedRow.Cells(1).Value.ToString()
txtLname.Text = SelectedRow.Cells(2).Value.ToString()
dtDOB.Value = Convert.ToDateTime(SelectedRow.Cells(3).Value)
Catch ex As Exception
End Try
End Sub
Private Sub btnExit_Click(sender As Object, e As EventArgs) Handles btnExit.Click
End
End Sub
Private Sub btnAdd_Click(sender As Object, e As EventArgs) Handles btnAdd.Click
txtClear()
autoId()
End Sub

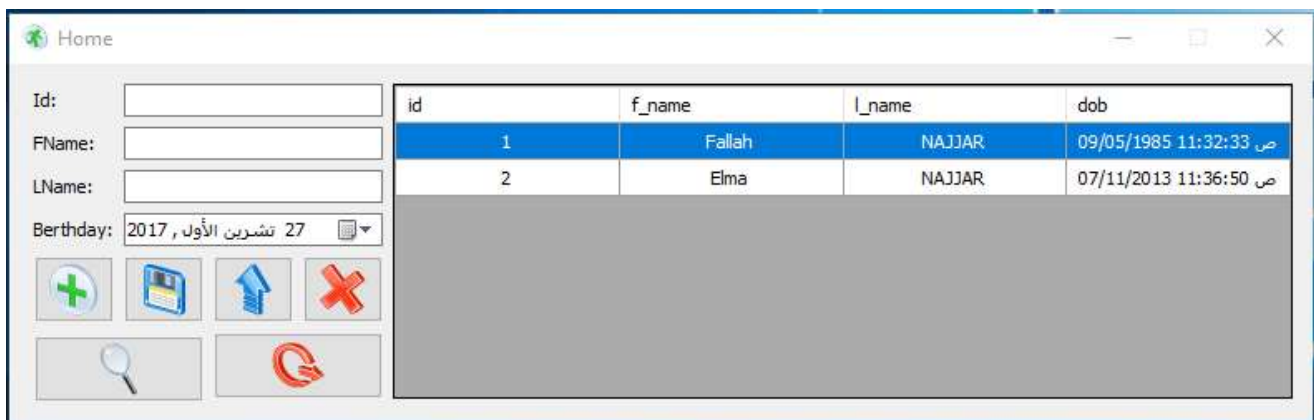
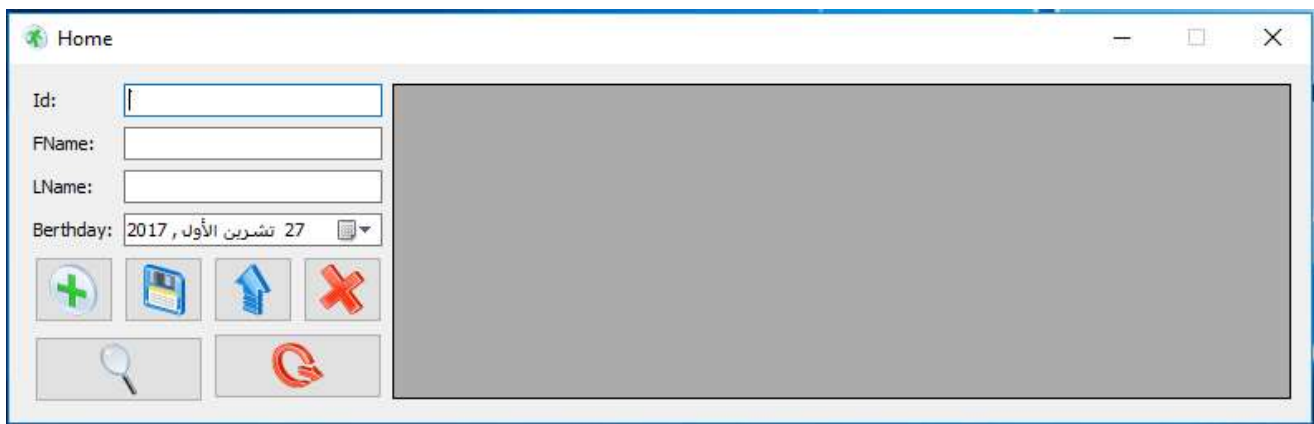
```

```

Private Sub btnView_Click(sender As Object, e As EventArgs) Handles btnView.Click
Dim CountQuery As String = "Select COUNT(id) From info_tbl"
conn.Open()
Dim Command = New SqlCommand(CountQuery, conn)
Dim sqlReader As SqlDataReader = Command.ExecuteReader()
While sqlReader.Read()
MsgBox("Count =" & sqlReader.Item(0))
End While
sqlReader.Close()
Command.Dispose()
conn.Close()
End Sub
End Class

```

Then run your application (app) to get





Project 60: Working with Excel

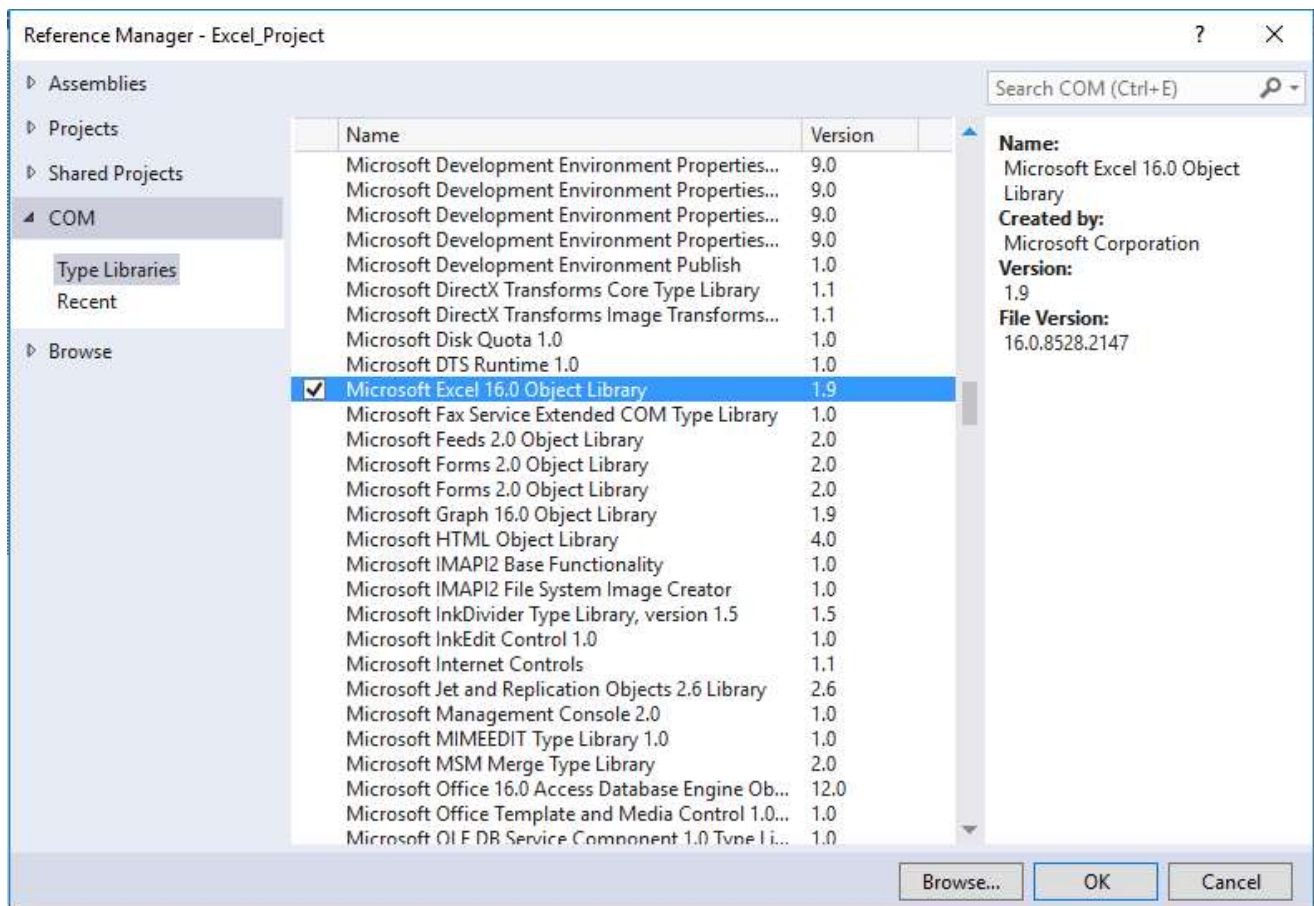
Add to your Form project

❖ Button1

| Property | Set |
|----------|---------|
| Name | Button1 |
| Text | Open |

Add a reference to Microsoft Excel Object Library to your project.

R.C. on references → Add reference → COM → Microsoft Excel 16.0 → OK

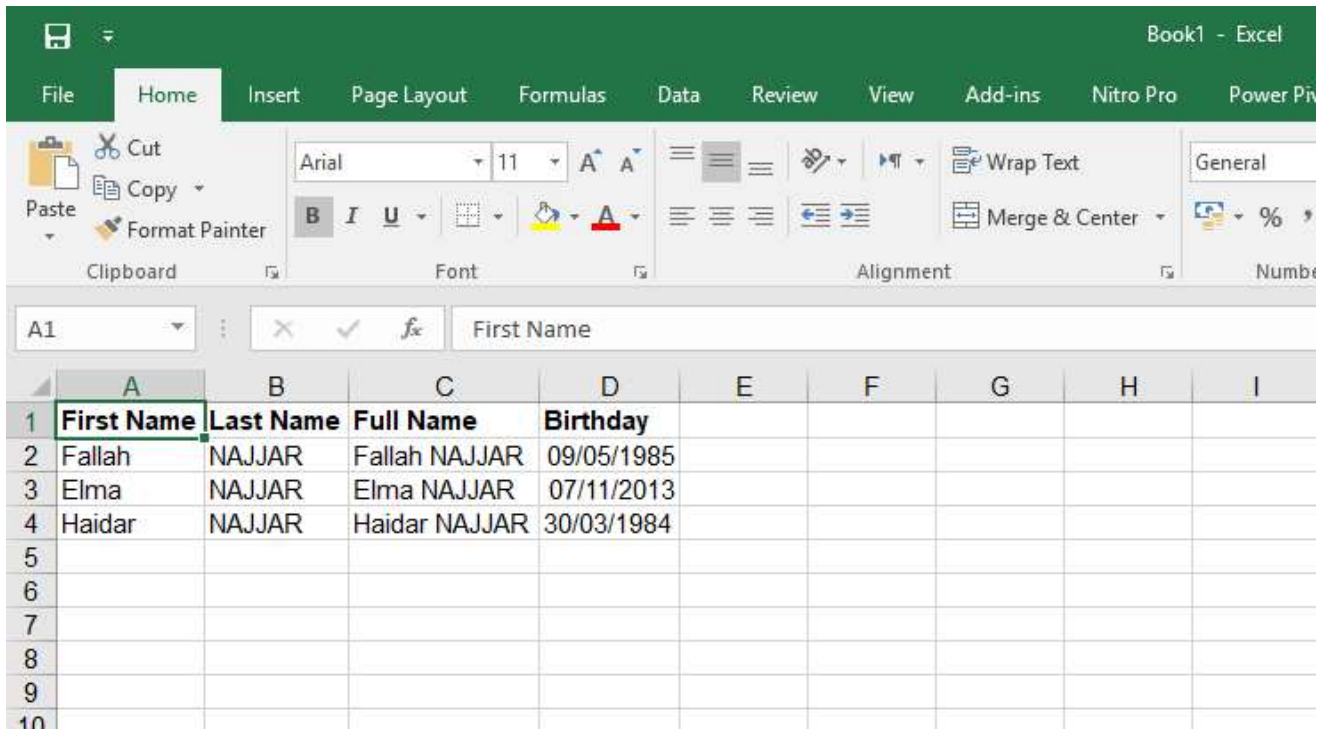


Source Code

Copy the Following code to your project

```
Imports Excel = Microsoft.Office.Interop.Excel
Public Class Form1
    Private Sub Button1_Click(sender As Object, e As EventArgs) Handles Button1.Click
        Dim AppEx As Excel.Application
        Dim WBEx As Excel.Workbook
        Dim SHTEx As Excel.Worksheet
        Dim RngEx As Excel.Range
        AppEx = CreateObject("Excel.Application") ' Start Excel and get Application object.
        AppEx.Visible = True
        WBEx = AppEx.Workbooks.Add ' Add a new workbook.
        SHTEx = WBEx.ActiveSheet
        SHTEx.Cells(1, 1).Value = "First Name" ' Add table headers going cell by cell.
        SHTEx.Cells(1, 2).Value = "Last Name"
        SHTEx.Cells(1, 3).Value = "Full Name"
        SHTEx.Cells(1, 4).Value = "Birthday"
        With SHTEx.Range("A1", "D1") ' Format A1:D1 as bold, vertical alignment = center.
            .Font.Bold = True
            .VerticalAlignment = Excel.XlVAlign.xlVAlignCenter
        End With
        Dim Info(3, 2) As String ' Create an array to set multiple values at once.
        Info(0, 0) = "Fallah"
        Info(0, 1) = "NAJJAR"
        Info(1, 0) = "Elma"
        Info(1, 1) = "NAJJAR"
        Info(2, 0) = "Haidar"
        Info(2, 1) = "NAJJAR"
        ' Fill A2:B6 with an array of values (First and Last Names).
        SHTEx.Range("A2", "B4").Value = Info
        ' Fill C2:C4 with a relative formula (=A2 & " " & B2).
        RngEx = SHTEx.Range("C2", "C4")
        RngEx.Formula = "=A2 & " " " & B2"
        With SHTEx ' Fill Cell (D2:D4) values
            .Cells(2, 4).Value = "09/05/1985"
            .Cells(3, 4).Value = "07/11/2013"
            .Cells(4, 4).Value = "30/03/1984"
        End With
        ' AutoFit columns A:D.
        RngEx = SHTEx.Range("A1", "D1")
        RngEx.EntireColumn.AutoFit()
        ' Make sure Excel is visible and give the user control of Excel's lifetime.
        AppEx.Visible = True
        AppEx.UserControl = True
        RngEx = Nothing ' Release object references.
        SHTEx = Nothing
        WBEx = Nothing
        AppEx.Quit()
        AppEx = Nothing
    Exit Sub
Err_Handler:
    MsgBox(Err.Description, vbCritical, "Error: " & Err.Number)
End Sub
End Class
```

Then run your application (app) to get



The screenshot shows the Microsoft Excel interface with the 'Home' tab selected. The spreadsheet contains the following data:

| | A | B | C | D | E | F | G | H | I |
|----|-------------------|------------------|------------------|-----------------|---|---|---|---|---|
| 1 | First Name | Last Name | Full Name | Birthday | | | | | |
| 2 | Fallah | NAJJAR | Fallah NAJJAR | 09/05/1985 | | | | | |
| 3 | Elma | NAJJAR | Elma NAJJAR | 07/11/2013 | | | | | |
| 4 | Haidar | NAJJAR | Haidar NAJJAR | 30/03/1984 | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |



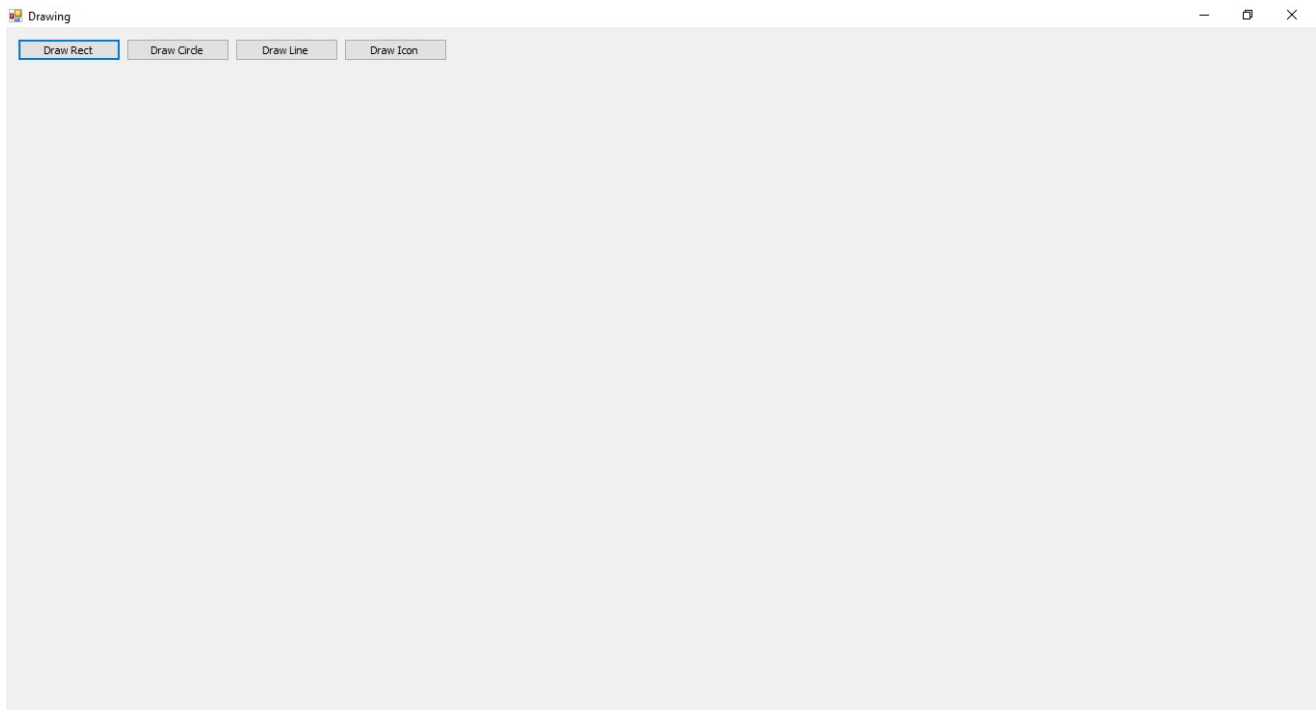
Project 61: Drawing

Add to your Form project

❖ 4 Buttons

Properties

| Tools | Property | Set |
|---------|-------------|---------------|
| Form1 | WindowState | Maximized |
| Form1 | Text | Drawing |
| Button1 | Name | btnDrawRect |
| Button1 | Text | Draw Rect |
| Button2 | Name | btnDrawCircle |
| Button2 | Text | Draw Circle |
| Button3 | Name | btnDrawLine |
| Button3 | Text | Draw Line |
| Button4 | Name | btnDrawIcon |
| Button4 | Text | Draw Icon |



Source Code

Copy the Following code to your project

```
Private Sub btnDrawRect_Click(sender As Object, e As EventArgs) Handles btnDrawRect.Click
    Dim rnd As New Random(), rndCol As New Random(DateTime.Now.Ticks Mod ((rnd.Next) + 1))
    Dim numShapes = rnd.Next(1, 1), bIsCircleOrSquare As Boolean = (rnd.Next Mod 2)
    Using g = Me.CreateGraphics()
        Dim diam = rnd.Next(55, Math.Min(255, ClientSize.Width))
        While numShapes > 0
            Using b As New SolidBrush(Color.FromArgb(rndCol.Next(100, 256), rndCol.Next(256),
                rndCol.Next(256), rndCol.Next(256)))
                Dim x = rnd.Next(ClientSize.Width - diam), y = rnd.Next(ClientSize.Height - diam)
                g.FillRectangle(b, x, y, diam, diam)
                g.DrawRectangle(Pens.Black, x, y, diam, diam)
            End Using
            numShapes -= 1
        End While
    End Using
End Sub
```

```
Private Sub btnDrawCircle_Click(sender As Object, e As EventArgs) Handles btnDrawCircle.Click
    Dim rnd As New Random(), rndCol As New Random(DateTime.Now.Ticks Mod ((rnd.Next) + 1))
    Dim numShapes = rnd.Next(1, 1), bIsCircleOrSquare As Boolean = (rnd.Next Mod 2)
    Using g = Me.CreateGraphics()
        Dim diam = rnd.Next(55, Math.Min(255, ClientSize.Width))
        While numShapes > 0
            Using b As New SolidBrush(Color.FromArgb(rndCol.Next(100, 256), rndCol.Next(256),
                rndCol.Next(256), rndCol.Next(256)))
                Dim x = rnd.Next(ClientSize.Width - diam), y = rnd.Next(ClientSize.Height - diam)
                g.FillEllipse(b, x, y, diam, diam)
                g.DrawEllipse(Pens.Black, x, y, diam, diam)
            End Using
            numShapes -= 1
        End While
    End Using
End Sub
```

```
Private Sub btnDrawLine_Click(sender As Object, e As EventArgs) Handles btnDrawLine.Click
    Dim rnd As New Random(), rndCol As New Random(DateTime.Now.Ticks Mod ((rnd.Next) + 1))
    Dim numShapes = rnd.Next(1, 1), bIsCircleOrSquare As Boolean = (rnd.Next Mod 2)
    Using g = Me.CreateGraphics()
        Dim diam = rnd.Next(55, Math.Min(255, ClientSize.Width))
        While numShapes > 0
            Using b As New SolidBrush(Color.FromArgb(rndCol.Next(100, 256), rndCol.Next(256),
                rndCol.Next(256), rndCol.Next(256)))
                Dim x = rnd.Next(ClientSize.Width - diam), y = rnd.Next(ClientSize.Height - diam)
                g.DrawLine(Pens.Red, x, y, diam, diam)
            End Using
            numShapes -= 1
        End While
    End Using
End Sub
```

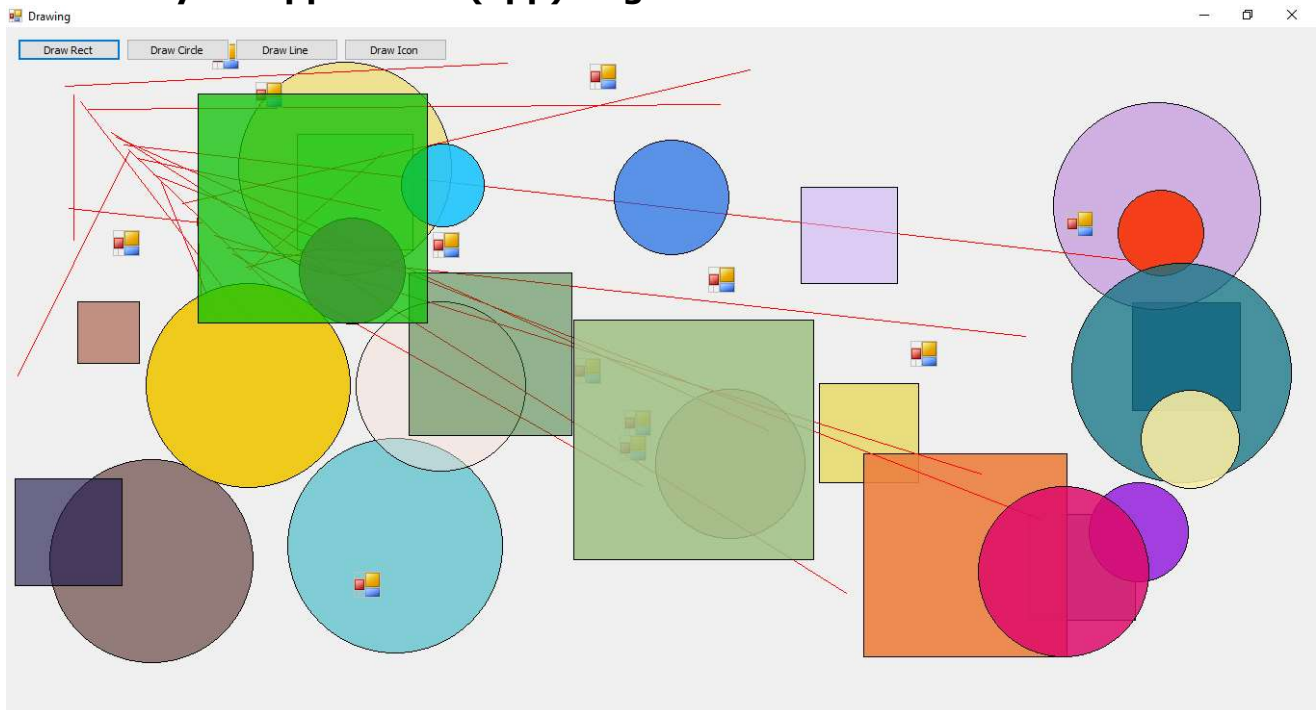


```

Private Sub btnDrawIcon_Click(sender As Object, e As EventArgs) Handles btnDrawIcon.Click
    Dim rnd As New Random(), rndCol As New Random(DateTime.Now.Ticks Mod ((rnd.Next) + 1))
    Dim numShapes = rnd.Next(1, 1), bIsCircleOrSquare As Boolean = (rnd.Next Mod 2)
    Dim icon1 As Icon = Me.Icon
    Using g = Me.CreateGraphics()
        Dim diam = rnd.Next(55, Math.Min(255, ClientSize.Width))
        While numShapes > 0
            Using b As New SolidBrush(Color.FromArgb(rndCol.Next(100, 256), rndCol.Next(256),
                rndCol.Next(256), rndCol.Next(256)))
                Dim x = rnd.Next(ClientSize.Width - diam), y = rnd.Next(ClientSize.Height - diam)
                g.DrawIcon(icon1, x, y)
            End Using
            numShapes -= 1
        End While
    End Using
End Sub

```

Then run your application (app) to get






Project 62: ProgressBarEx

Add to your Form project

❖ ProgressBarEx

You can download the ProgressBarEx.DLL from here  and add it to your project as follow:

Right click on Toolbox → Choose Items → COM Components → Browse → ProgressBarEx.DLL

❖ Button



Properties

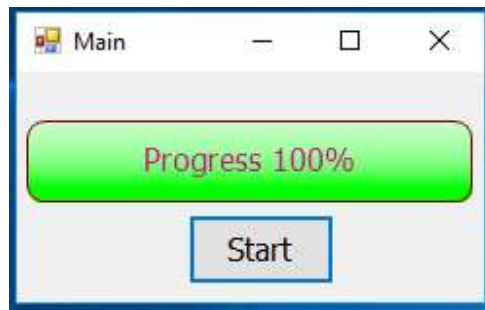
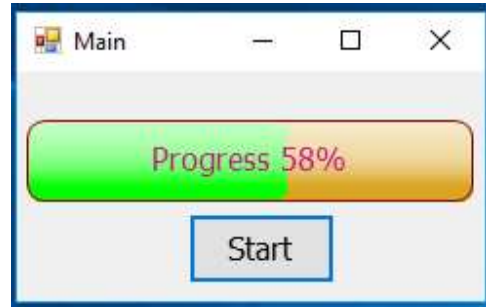
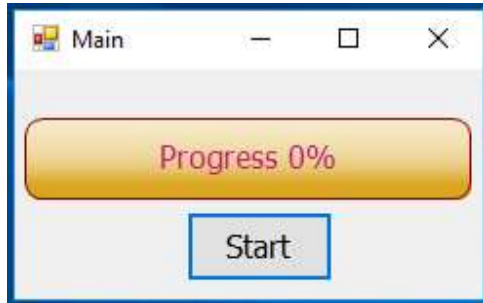
| Tools | Property | Set |
|----------------|------------------|-----------------|
| ProgressBarEx1 | Background Color | Goldenrod |
| ProgressBarEx1 | Border Color | DarkRed |
| ProgressBarEx1 | Progress Color | Lime |
| ProgressBarEx1 | Fore Color | MediumVioletRed |
| ProgressBarEx1 | Show Percentage | True |
| ProgressBarEx1 | Show Text | True |
| ProgressBarEx1 | Text | Progress |
| Button1 | Name | btnStart |
| Button1 | Text | Start |

Source Code

Double click (DC) on the Form, then replase all with the following code

```
Public Class frmMain
    Private WithEvents tmr As New Timer With {.Interval = 75}
    Private Sub tmr_Tick(ByVal sender As Object, ByVal e As System.EventArgs) Handles tmr.Tick
        ProgressBarEx1.Value += 1
        If ProgressBarEx1.Value = 100 Then
            tmr.Stop()
        End If
    End Sub
    Private Sub btnStart_Click(sender As Object, e As EventArgs) Handles btnStart.Click
        ProgressBarEx1.Value = 0
        tmr.Start()
    End Sub
End Class
```

Then run your application (app) to get



About Me

Fallah H. N. NAJJAR 09/05/1985

Diploma Computer Diploma / Technical Institute / Najaf

B.Sc. Software Engineer / Imam Jafar Al-Sadiq University

M.Sc. Computer Science / Kufa University

With greetings / Eng. Fallah Najjar

download each project from the download picture above each project name
or download all projects from below



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