

# Visual Basic 2008 Made Easy

**A Complete Tutorial for Beginners**

**LIEW VOON KIONG**

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# Chapter 1

## Introduction to Visual Basic 2008

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- ❖ A brief description of Visual Basic 2008
  - ❖ Getting to know the Visual Basic 2008 Integrated Development Environment
- 

### 1.1 A brief description of Visual Basic 2008

Visual Basic 2008 is the latest version of Visual Basic launched by Microsoft in the year 2008. It is almost similar to Visual Basic 2005 and but it has added many new features. Visual Basic has gone through many phases of development since the days of BASIC that was built for DOS . BASIC stands for Beginners' All-purpose Symbolic Instruction Code. The program code in Visual Basic resembles the English language. Different software companies had produced many different versions of BASIC for DOS, such as Microsoft QBASIC, QUICKBASIC, GWBASIC, and IBM BASICA and more. Then, Microsoft launched the first graphical BASIC which was known as Visual Basic Version1 in 1991. It is GUI based and especially developed for MS window. Since then the DOS versions of BASIC were slowly phased out and almost completely replaced by Visual Basic.

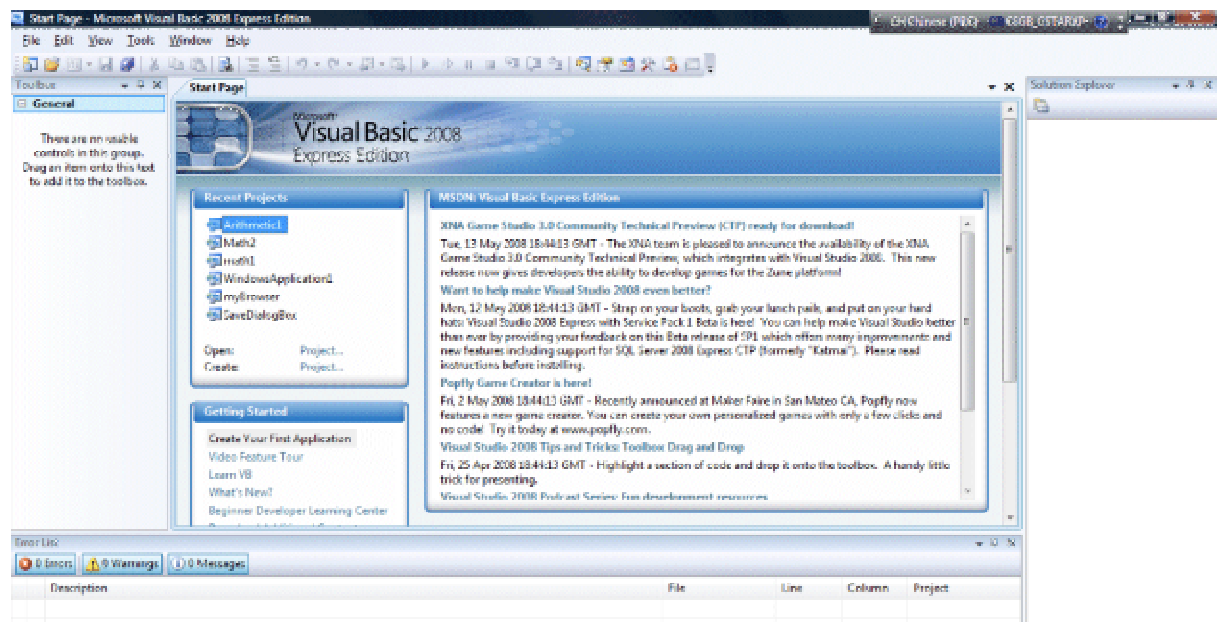
Visual Basic was initially a functional or procedural programming language until the popular Visual Basic 6. Then, Microsoft decided to make Visual Basic into more powerful object oriented programming language, Visual Basic 2005 was launched with that purpose in mind. Visual Basic 2005 is an object oriented programming language and it was to be taken over by Visual Basic 2008. Visual Basic 2008 is a full-fledged Object-Oriented Programming (OOP) Language, so it has caught up with other OOP languages such as C++, Java, C# and others. However, you don't have to know OOP to learn VB2008. In fact, if you are familiar with Visual Basic 6, you can learn VB2008 effortlessly



because the syntax and interface are almost similar. Visual Basic 2008 Express Edition is available free for download from the Microsoft site.

## 1.2 The Visual Basic 2008 Integrated Development Environment

When you launch VB2008 Express, the Integrated Development Environment will be presented to you, as shown in Figure 1-1.



**Figure 1-1: The VB2008 IDE**

The IDE consists of a few panes, namely:

- The Recent Projects Pane- it shows the list of projects that have been created by you recently.
- The Getting Started Pane- It provides some helpful tips to quickly develop your applications
- The VB Express Headlines pane- It provides latest online news about Visual Basic 2008 Express. It will announce new releases and updates.

To start creating your first application, you need to click on File on the menu bar and select New Project. The VB2008 New Project dialog box will appear, as shown in Figure 1-2

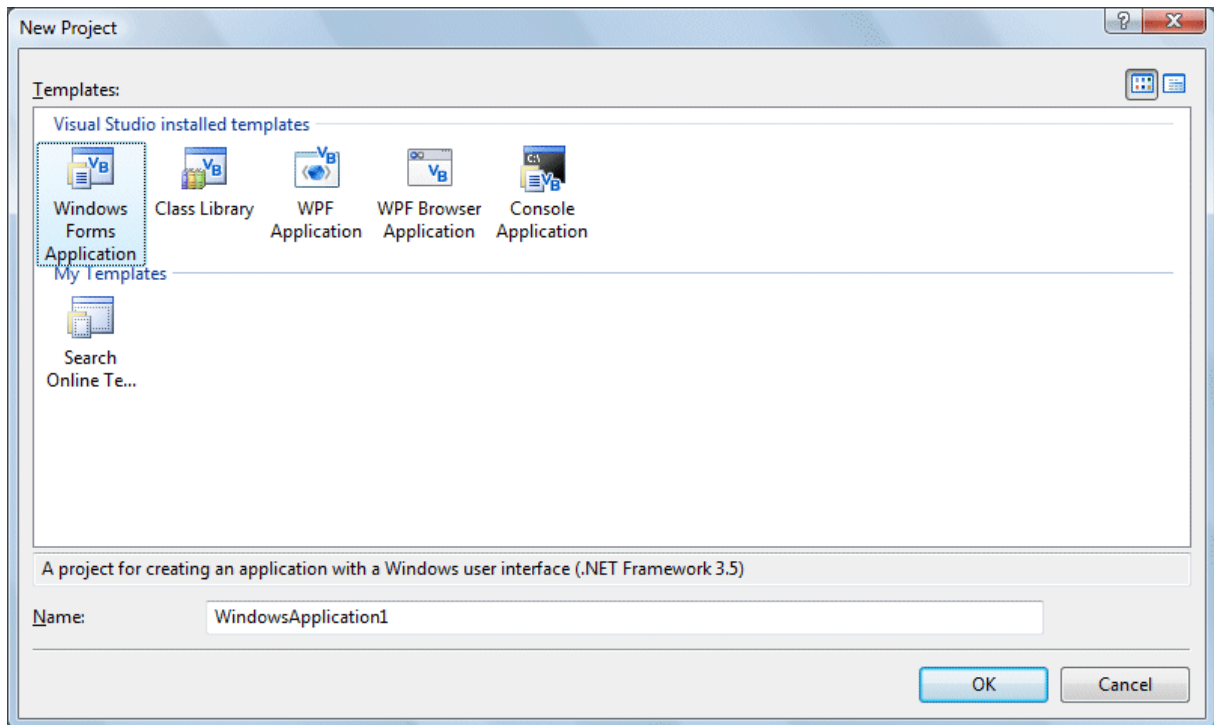


Figure 1-2: VB2008 New Project Dialog Box

The dialog box offers you five types of projects that you can create. As we are going to create a Windows application, we will select Windows Forms Application. At the bottom of this dialog box, you can change the default project name **WindowsApplication1** to some other name you like, for example, **MyFirstProgram**. After you have renamed the project, click OK to continue. The VB2008 IDE with a new Form will appear, as shown in Figure 1-3. It consists of an empty form, the common controls toolbox, the solution explorer and the Properties Window.

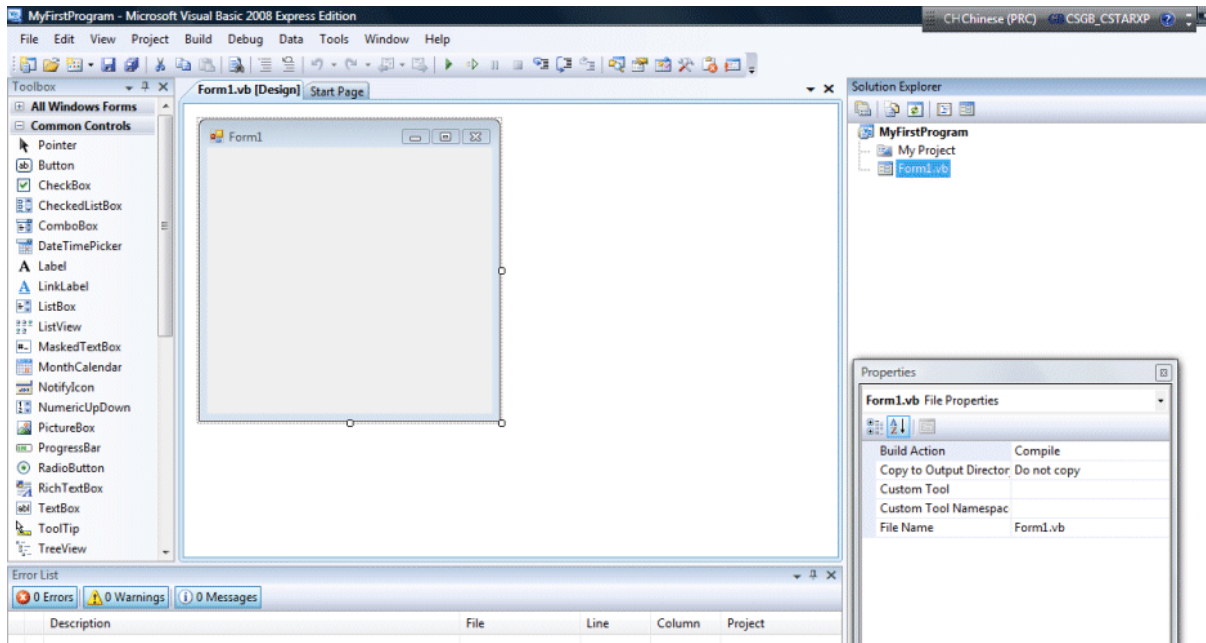


Figure 1-3: VB2008 IDE with A New Form

Now let's create your first program. First of all, drag one common button into the form and change its default name to calculate, as shown in Figure 1-4.

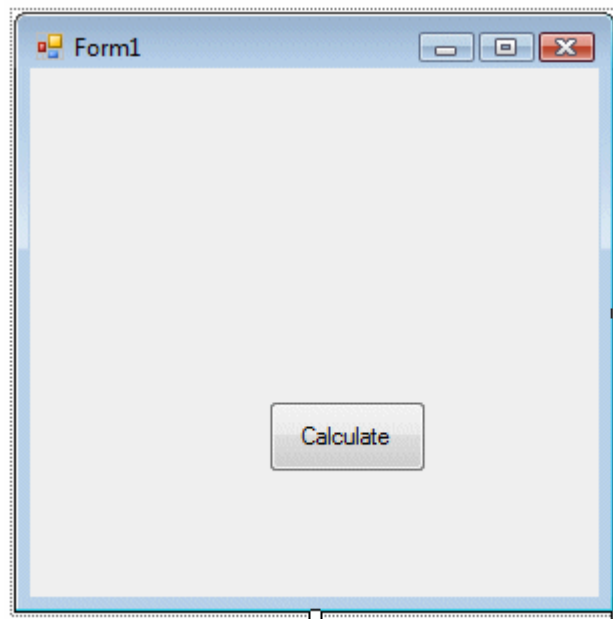


Figure 1-4 The design Interface

Next, click on the calculate button and enter the following code at the source code window as shown in Figure 1-5.

Private Sub Button1\_Click (ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click

```
Dim num1, num2, sum As Single
num1 = 100
num2 = 200
sum = num1 + num2
MsgBox (" The Sum of" & num1 & " and "& num2 & "is " & sum)
```

End Sub

Now run your first application! And you can see the follow message box showing the sum of two numbers.

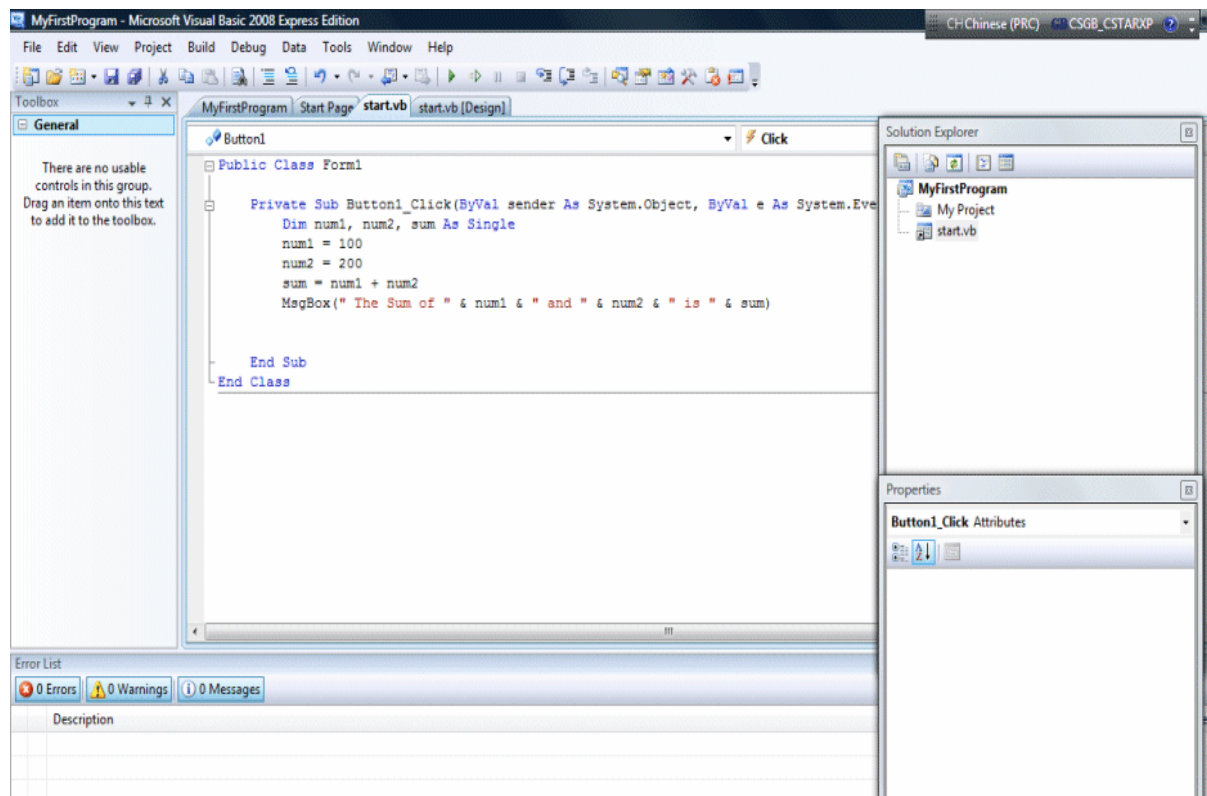
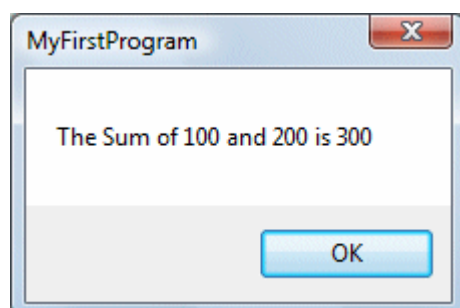


Figure 1-5: The Code window



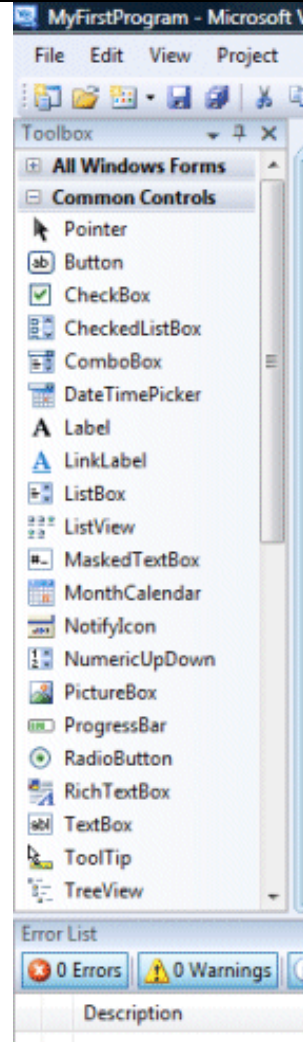
**Figure 1-6: The Output Window**

## **Chapter 2**

# **Working with Controls**

- 
- ❖ Getting to know Visual Basic 2008 controls
  - ❖ Getting to know the Control Properties.
-

The Visual Basic 2008 Common Control Toolbox consists of all the controls essential for developing a VISUAL BASIC 2008 application. Controls in VB2008 are useful tools that can be placed in the form to perform various tasks. They are used to create many kinds of Windows applications. The diagram on the right is the Toolbox that contains the controls of VB2008. They are categorized into Common Controls, Containers, Menus, Toolbars, Data, Components, Printings and Dialogs. At the moment, we will focus on the common controls. Some of the most used common controls are Button, Label, ComboBox, ListBox, PictureBox, TextBox and more, as shown in Figure 2-1



**Figure 2-1**

To insert a control into your form, you just need to drag the control and drop it into the form. You can reposition and resize it as you like. Let's examine a few programs that made use of Button, Label, TextBox, ListBox and PictureBox. You don't have to worry so much about the code because I will explain the program syntax as you progress to later Chapters.

## 2.1 Using Text Box

In this program, you insert two textboxes, three labels and one button. The two textboxes are for the users to enter two numbers, one label is to display the multiplication operator and the other label is to display the equal sign. The

last label is to display the answer. The run time interface is shown in Figure 2-2

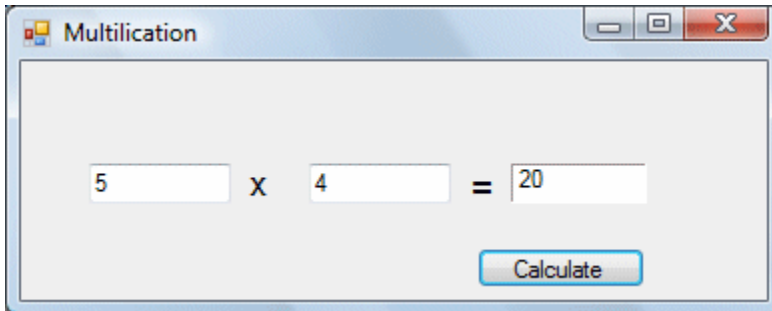


Figure 2-2 The Multiplication Program

### The Code

```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
```

```
Dim num1, num2, product As Single  
num1 = TextBox1.Text  
num2 = TextBox2.Text  
product = num1 * num2  
Label3.Text = product
```

```
End Sub
```

### 2.2 Using List Box

This program will add one item at a time as the user enters an item into the TextBox and click the Add button. In this program, you insert a TextBox and a ListBox into the Form. The function of the TextBox is to let the user enter an item one at a time and add it to the Listbox. The method to add an item to the ListBox is Add. The output interface is shown in Figure 2-3.

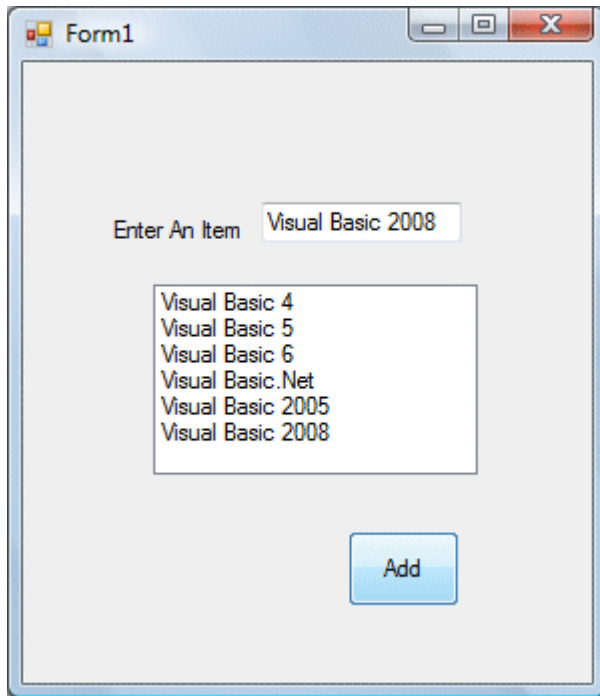


Figure 2-3: The Add Items Program

## The Code

Class Frm1

```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As  
System.EventArgs) Handles Button1.Click
```

```
    Dim item As String  
    item = TextBox1.Text
```

```
    'To add items to a listbox  
    ListBox1.Items.Add(item)
```

```
End Sub  
End Class
```



## Chapter 3

# Working with Control Properties

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❖ Setting the properties of the controls

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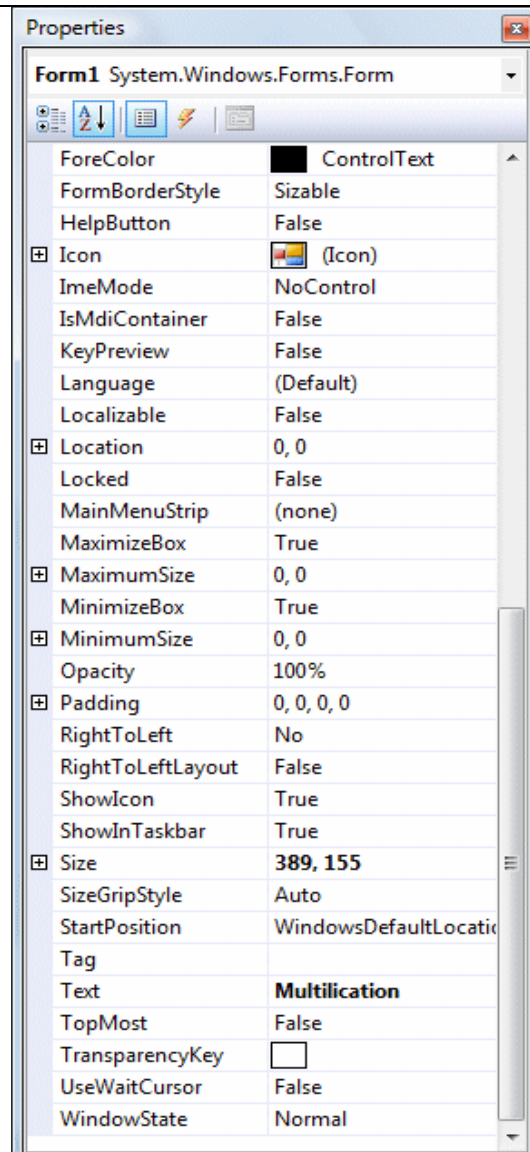
### 3.1 Setting Control Properties in the Properties Window

Before writing an event procedure for the control to response to a user's input, you have to set certain properties for the control to customize its appearance and the way it will work with the event procedure. You can set the properties of the controls in the properties window at design time or you can set the properties using code

Figure 3-1 on the right is a typical properties window for a form.

The title of the form is defined by the Text property and its default name is Form 1. To change the form's title to any name that you like, simply click in the box on the right of the Text property and type in the new name, in this example, the title is Multiplication. Notice that this title will appear on top of the windows. In the properties window, the item appears at the top part is the object currently selected (in Figure 3.1, the object selected is Form1). At the bottom part, the items listed in the left column represent the names of various properties associated with the selected object while the items listed in the right column represent the states of the properties.

Properties can be set by highlighting the items in the right column then change them by typing or selecting



**Figure 3-1: The Properties Window**

the options available. You may also alter other properties of the form such as font, location, size, foreground color, background color, MaximizeBox, MinimizeBox and more.

For example, when you select background color, the dialog box for color selection will appear, as shown in Figure 3-2. You can then select any color by clicking on one of the colors.

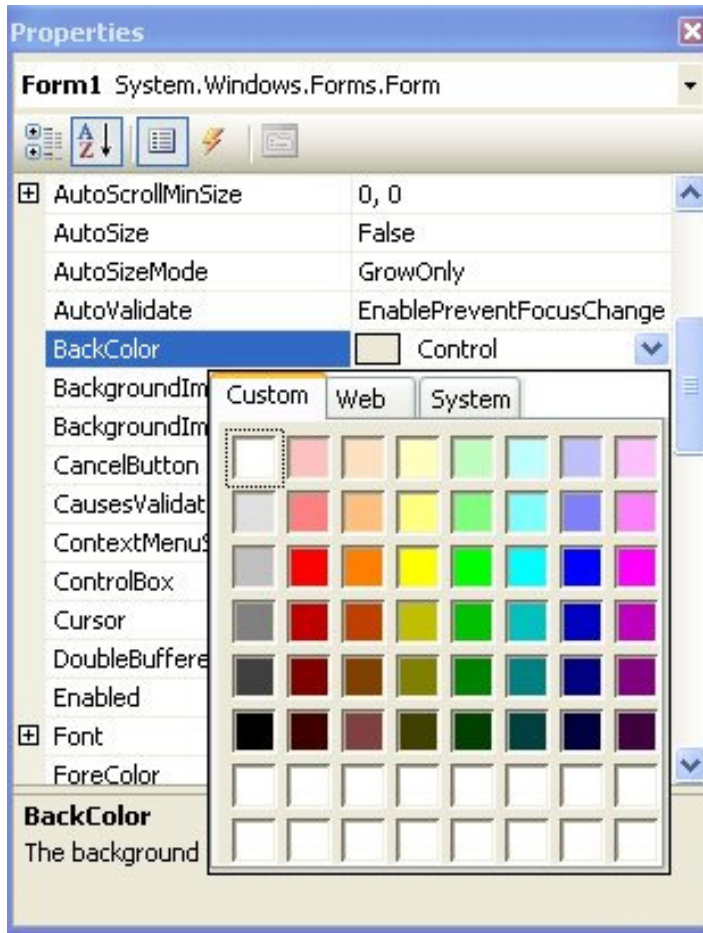


Figure 3-2: Color Selection

### 3.2 Setting Control Properties using Code

You can also change the properties of the object at run time to give special effects such as change of color, change of shape, animation effect and more. For example the following code will change the form color to yellow every time the form is loaded. VB2008 uses RGB(Red, Green, Blue) to determine the colors. The RGB code for yellow is 255,255,0. Me in the code refer to the current form and Backcolor is the property of the form's background color. The formula to assign the RGB color to the form is Color.FromArgb(255, 255, 0).

```
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles MyBase.Load
```

```
    Me.BackColor = Color.FromArgb(255, 255, 0)
```

```
End Sub
```

You may also use the follow procedure to assign the color at run time.

```
Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load
    Me.BackColor = Color.Yellow
End Sub
```

Both procedures above will load the form with a yellow background, as shown in Figure 3-3



**Figure 3-3: The form with yellow background**

Here are some of the common colors and the corresponding RGB codes. You can always experiment with other combinations, but remember the maximum number for each color is 255 and the minimum number is 0. The table below shows some of the common colors with their corresponding codes.

| Color | RGB code  | Color   | RGB code    | Color  | RGB Code      |
|-------|-----------|---------|-------------|--------|---------------|
| Red   | 255,0,0   | Yellow  | 255, 255, 0 | Orange | 255, 165, 0   |
| Green | 0,255,0   | Cyan    | 0, 255, 255 | Black  | 0, 0, 0       |
| Blue  | 0, 0, 255 | Magenta | 255, 0, 255 |        | 255, 255, 255 |

**Table 3-1: Some common colors and their corresponding RGB codes.**

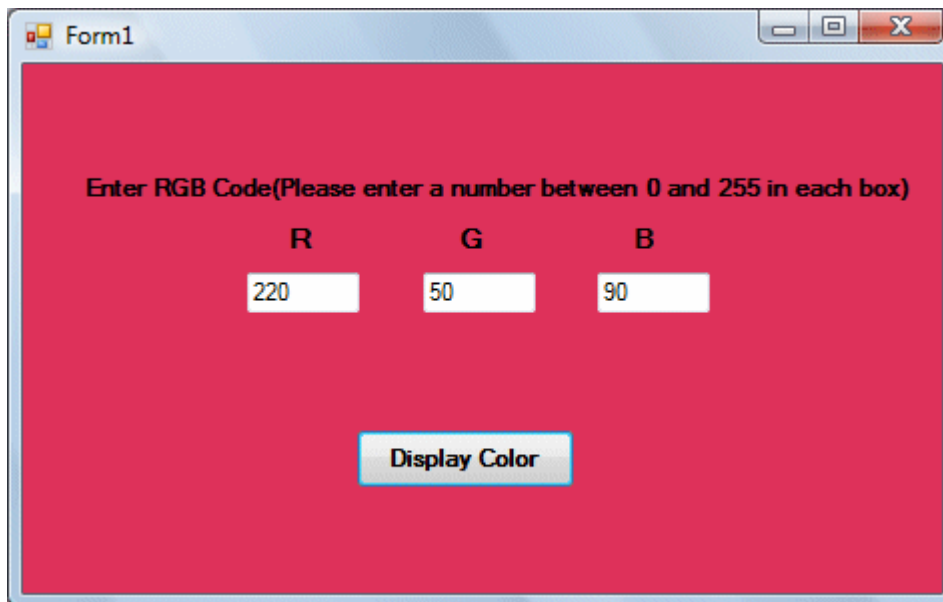
The following is a program that allows the user to enter the RGB codes into three different Textboxes and when he/she clicks the display color button, the background color of the form changes according to the RGB code. So, this program allows the user to change the color properties of the form at run time.

### The code

```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
```

```
Dim rgb1, rgb2, rgb3 As Integer
rgb1 = TextBox1.Text
rgb2 = TextBox2.Text
rgb3 = TextBox3.Text
Me.BackColor = Color.FromArgb(rgb1, rgb2, rgb3)
End Sub
```

The output interface is shown in Figure 3-4



The screenshot shows a Windows application window titled "Form1". The window has a red background. At the top, there is a label that reads "Enter RGB Code(Please enter a number between 0 and 255 in each box)". Below this label, there are three text boxes arranged horizontally, labeled "R", "G", and "B" above them. The "R" box contains the number "220", the "G" box contains "50", and the "B" box contains "90". Below these text boxes is a button labeled "Display Color".

Figure 3-4: The RGB Program