LAB GOALS

> More on classes:
> To learn how to create new classes.   Public vs. Private, Constructors, Overloading, Overriding, Inheritance

Step 1:   Creating a new Class called Student:

```vbnet
Public Class Student
    Public Name As String
    Public Email As String
    Private Password As String

    'set the private data of a given object
    Public Sub setPassword(ByRef ThePassword As String)
        Password = ThePassword
    End Sub

    'Overloaded Method, set the private to a default value
    Public Sub setPassword()
        Password = "Default"
    End Sub
    'return the private data from the object
    Public Function getPassword() As String
        Return (Password)
    End Function

    ' Constructor for this class will be called whenever
    ' a new object is instantiated.
    Public Sub New()
        Name = "No Name"
        Email = "No Email"
        Password = "No Password"
    End Sub

    ' Overloaded Constructor
    Public Sub New(ByVal TheName As String, ByVal TheEmail As String)
        Name = TheName
        Email = TheEmail
        Password = "*******"
    End Sub

    ' Overridable PrintName()
    Public Overridable Sub PrintName()
        Console.WriteLine("Student: {0,-20}", Name)
    End Sub
End Class
```

Step 2: Using the new Student class in our program:

```vbnet
Option Explicit On
Option Strict On

Module Module1

    Sub Main()

        Dim MyStudent As New Student     ' Declare a new object of type student


        MyStudent.Name = "Mary Clark"          'set the public property
        MyStudent.Email = "mclark@iusb.edu"
        MyStudent.setPassword("*******")   'Setting the private parameter


        Console.WriteLine("{0,-20}{1,-20}{2,10}", "Name", "Email", "Password")
        Console.Write("{0,-20}", MyStudent.Name) 'left justify within 20 spaces
        Console.Write("{0,-20}", MyStudent.Email)
        Console.WriteLine("{0,10}", MyStudent.getPassword()) 'Extracting the value of a private variable.
        '----------------------------------------

        'Using the overloaded constructor.
        Dim AnotherStudent As New Student("Jack Clark", "jclark@iusb.edu")

        Console.Write("{0,-20}", AnotherStudent.Name)
        Console.Write("{0,-20}", AnotherStudent.Email)
        Console.WriteLine("{0,10}", AnotherStudent.getPassword()) 'Extracting the value of a private variable.
        Console.WriteLine()
        '----------------------------------------

        Console.ReadLine()
    End Sub

End Module
```