CS375 Homework 4 Due: April 23, 2010

I. Type the following Visual Basic .Net program uses old Visual Basic 6.0 commands: LCase, Split, Len, and Mid$. You are to rewrite the code using appropriate .Net replacements and save the code in a word file. Note: The creation of a string array should be handled in a .Net form. Also indicate what the program outputs. (10 points)

```
Module HW3Sp08
    Sub Main()
      Dim sentence As String
      Console.Write(" Enter a sentence: ")
                'Mom and Dad are coming at noon there names are Bob and Amanda
      sentence = LCase(Console.ReadLine)
      Call Tokenize(sentence)
    End Sub

   Private Sub Tokenize(ByVal sentence As String)
      Dim s() As String, j As Integer
      s = Split(sentence)
      For j = 0 To s.GetUpperBound(0)
         If Unknown(s(j)) Then
            Console.WriteLine(s(j))
         End If
      Next j
   End Sub

   Private Function Unknown(ByVal s As String) As Boolean
      Dim length As Integer, j As Integer, first As String, last As String
      length = Len(s)
      If length = 1 Then
         Return False
         Exit Function
      End If
      For j = 1 To length
         If Mid$(s, j, 1) <> Mid$(s, length, 1) Then
            Return False
            Exit Function
         End If
         length = length - 1
      Next j
      Return True
   End Function
End Module
```

II. Write a Visual Basic .Net encryption program using the rot13 algorithm which rotates each character by 13 positions in the alphabet. Thus, 'a' corresponds to 'n'; 'x' corresponds to 'k'. Rot13 is an example of symmetric key encryption. With symmetric key encryption, both the encrypter and decrypter use the same key: (10 points)
An example: User enters the message- Meet me at the ABC Warehouse at Midnight. The coded response is zrrg zr ng gur nop jnerubhfr hg zvqavtug.
Send homework results (zipped) to cs375@cs.ua.ed on the due date.