Name:_____ **CSI/Chapter 3 – Section 3.4**

In Exercises 1 through 22, determine the output displayed in the text box or list box by the lines of code.

1.
```
txtBox.Text = "Visual Basic"
```

2.
```
lstBox.Items.Add("Hello")
```

3.
```
Dim var As String
var = "Ernie"
lstBox.Items.Add(var)
```

4.
```
Dim var As String
var = "Bert"
txtBox.Text = var
```

5.
```
txtBox.Text = "f" & "lute
```

6.
```
lstBox.Items.Add("a" & "cute")
```

7.
```
Dim var As Double
var = 123
txtBox.Text = CStr(var)
```

8.
```
Dim var As Double
var = 3
txtBox.Text = CStr(var + 5)
```

9.
```
txtBox.Text = "Your age is " & 21 & "."
```

10.
```
txtBox.Text = "Fred has " & 2 & " children."
```

11.
```
Dim r, b As String
r = "A ROSE"
b = " IS "
txtBox.Text = r & b & r & b & r
```

12.
```
Dim s As String, n As Integer
s = "trombones"
n = 76
txtBox.Text = n & " " & s
```

13.
```
Dim num As Double
txtBox.Text = "5"
num = 0.5 + CDbl(txtBox.Text)
txtBox.Text = CStr(num)
```

14.
```
Dim num As Integer = 2
txtBox.Text = CStr(num)
txtBox.Text = CStr(1 + CInt(txtBox.Text))
```

15.
```
txtBox.Text = "good"
txtBox.Text &= "bye"
```

16.
```
Dim var As String = "eight"
var &= "h"
txtBox.Text = var
```

17.
```
Dim var As String = "WALLA"
var &= var
txtBox.Text = var
```

18.
```
txtBox.Text = "mur"
txtBox.Text &= txtBox.Text
```

19.
```
With lstBox.Items
      .Add("aBc".ToUpper)
      .Add("Wallless".IndexOf("lll"))
      .Add("five".Length)
      .Add(" 55 ".Trim & " mph")
      .Add("UNDERSTUDY".Substring(5, 3))
End With
```

20.
```
With lstBox.Items
      .Add("8 Ball".ToLower)
      .Add("colonel".IndexOf("k"))
      .Add("23.45".Length)
      .Add("revolutionary".Substring(1))
      .Add("whippersnapper".IndexOf("pp", 5))
End With
```

21.
```
Dim a As Integer = 4
Dim b As Integer = 2
Dim c As String = "Municipality"
Dim d As String = "pal"
With lstOutput.Items
      .Add(c.Length)
      .Add(c.ToUpper)
      .Add(c.Substring(a, b) & c.Substring(5 * b))
      .Add(c.IndexOf(d))
End With
```

22.
```
Dim m As Integer = 4
Dim n As Integer = 3
Dim s As String = "Microsoft"
Dim t As String = "soft"
With lstOutput.Items
      .Add(s.Length)
     Add(s.ToLower)
      .Add(s.Substring(m, n - 1))
      .Add(s.IndexOf(t))
End With
```

23. How many positions does a string of eight characters have?

24. What is the highest numbered position for a string of eight characters?

25. (True or False) If n is the length of `str`, then `str.Substring(n - 1)` is the string consisting of the last character of `str`.

26. (True or False) If n is the length of `str`, then `str.Substring(n - 2)` is the string consisting of the last two characters of `str`.

In Exercises 27 through 32, identify any errors.

27.
```
Dim phoneNumber As Double
phoneNumber = "234-5678"
txtBox.Text = "My phone number is " & phoneNumber
```

28.
```
Dim quote As String
quote = I came to Casablanca for the waters.
txtBox.Text = quote & ": " & "Bogart"
```

29.
```
Dim end As String
end = "happily ever after."
txtBox.Text = "They lived " & end
```

30.
```
Dim hiyo As String
hiyo = "Silver"
txtBox = "Hi-Yo " & hiYo
```

31.
```
Dim num As Double = 1234
txtBox.Text = Str(num.IndexOf("2"))
```

32.
```
Dim num As Integer = 45
txtBox.Text = Str(num.Length)
```

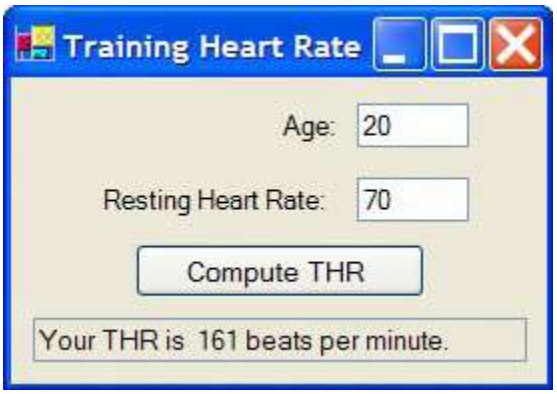
Name:_____ **CSI/Chapter 3 – Section 3.4**

SECTION 3.4 – LAB: **write an event procedure to solve the problem and display the answer in a list box. The program should use variables for each of the quantities.**

1. The following steps compute the price of ketchup:
   a. Declare all variables used in steps (b)(d).
   b. Assign "ketchup" to the variable item.
   c. Assign 1.80 to the variable regularPrice.
   d. Assign .27 to the variable discount.

2. The American College of Sports Medicine recommends that you maintain your training heart rate during an aerobic workout. Your training heart rate is computed as `.7 * (220 - a) + .3 * r`, where `a` is your age and `r` is your resting heart rate (your pulse when you first awaken). Write a program to request a person's age and resting heart rate and then calculate the training heart rate. (Determine your training heart rate.)

   A sample run is shown below

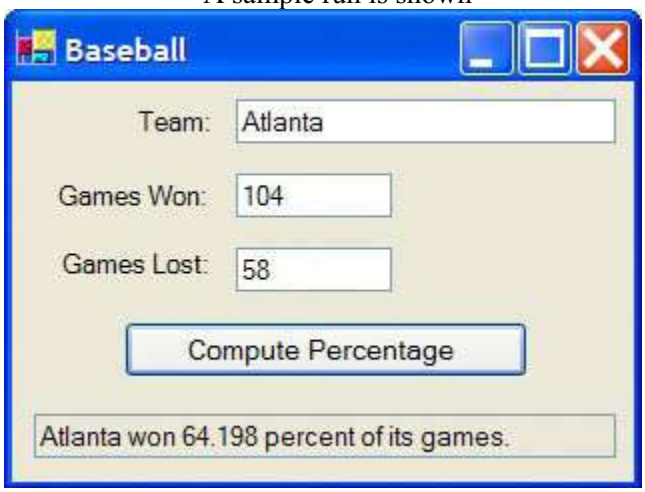


3. The number of calories burned per hour by bicycling, jogging, and swimming are 200, 475, and 275, respectively. A person loses 1 pound of weight for each 3500 calories burned. Write a program that allows the user to input the number of hours spent at each activity and then calculates the number of pounds worked off.

   A sample run is shown below

4. Write a program to request the name of a baseball team, the number of games won, and the number of games lost as input, and then display the name of the team and the percentage of games won.

A sample run is shown



5. Calculate the amount of a waiter's tip, given the amount of the bill and the percentage tip as input. (Test the program with $20 and 15 percent.)

6. Calculate a baseball player's batting average, given his times at bat and number of hits as input.
   Note: Batting averages are displayed to three decimal places.

7. Write a program that requests a (complete) phone number in a text box (the person will enter the phone number in the following manner: 1-631-367-6900) and then displays the area code in another text box when a button is pressed.

8. Write a program that requests a letter, converts it to uppercase, and gives its first position in the sentence "THE QUICK BROWN FOX JUMPS OVER A LAZY DOG." For example, if the user responds by typing b into the text box, then the message "B first occurs in position 10." is displayed.

9. Write a program that requests a positive number containing a decimal point as input and then displays the number of digits to the left of the decimal point and the number of digits to the right of the decimal point.

10. Write a program that contains a button and a read-only text box on the form, with the text box initially containing 0. Each time the button is pressed, the number in the text box should increase by 1.