The test will be taken in 2 parts: 1) An 80 pt written test which will be timed. It can be found under Test 3 under the Tests menu item. Scroll down to the bottom under the Chapter quizzes to find Test 3. It will consist of multiple choice, true false and short answer coding. 2) A 20 pt coding part which will not be timed. It can be found under Test 3 Coding under the Assignments menu item. The coding will be similar to your Lab assignment except that it will be submitted by 11:59 pm of the last night of the test. Read the instructions for the coding, write and test the project in VB.NET, then zip the project by right-clicking and selecting Send To…, Compressed Folder. Submit the compressed file to Test 3 Coding under the Assignments. Both parts of the test must be completed by 11:59 pm of the last night of the test.

Chapter 6:

1. How many forms can a project have? The number of forms allowed in a Visual Basic project is virtually unlimited.
2. When you have a project with multiple forms, each form is a separate class in the project and is stored in a separate file in the project.
3. What is the first form a project displays called? the startup object.
4. When does the form's Load event occur? The form's Activate event? The Load event occurs when the form is first loaded, the Activate event occurs each time the form is displayed.
5. How would you display an About boxes? typically displayed by selecting About from the Help menu.
6. How can you delete Forms? By right-clicking and choosing Delete. This deletes it from the project and deletes the file from the disk. If you only want to remove it from the project but not delete the file from the disk choose Exclude from project; from the Project menu.
7. Can you use forms in multiple projects? Yes.
8. If you have many forms in your project and you are sure you won't need a form again, what should you use when making the form disappear? Close method.
9. If you need the user to respond to a form before continuing, how should you display the form? modal.
10. If you need to have a form disappear and you want it removed from memory what method should you use? Close.
11. If you need to have a form disappear but remain available in memory what method should you use? Hide.
12. If forms are hidden, is it possible to have multiple forms in system memory and no forms appearing on the screen? Yes.
13. What is the logo or window that appears on the screen when a program is loading called? the Splash Screen.
14. If the programmer adds a Splash Screen template to a project, will it automatically be displayed on the screen? No you have to set up the form as the splash form and add code to the FormClosing event to hold the form on the screen while the program begins loading.
15. Should you close or hide an About box? A summary form? The About box should be closed but a form that displays summary information may simply be hidden.
16. If you want to make sure that the focus is in the correct object when a form displays, in what form event should you write the code? Activated.
17. In a project with multiple forms, what form is the first form loaded into the computer's memory and is the first to display on the desktop? startup form.
18. In order to add a new blank form to a project, what menu item would you select? Project, Add Windows Form.
19. In order to add a template for a splash screen to a project, what menu item would you select? Project, Add Windows Form or Project, Add New Item.
20. When adding a form from another project, you should copy the form's files into the project folder by using what? Select Add Existing Item from the Project menu.
21. When copying form files from another project, what files do you need to copy? Only copy the file with the .vb file extension and VB will automatically copy the form files with the Designer.vb extension and the .resx extension.

22. When using multiple forms, is it possible to have objects with the same name, such as ExitButton, on each form? Yes, the controls and variables on each form are independent of the other forms.

23. In order to make a variable available to other forms in a project, how must it be declared? As a Friend variable.

24. Professional applications use what type of form to tell the user that the program is loading and starting? Splash screen.

25. What is available in most Windows programs and usually displays information about the program version as well as the company name? Can this information be changed? The About form, Yes.

26. What is found in the Project Designer and contains the information about the program title, program version, programmer, and company? Can this information be modified? The assembly information, Yes.

27. What method is used to display a form? Show.

28. How can the project's assembly information be retrieved? By using the My.Application object.

29. How would you add a form from another project into your project? Select Project, Add Existing Item.

30. What would you use to make a variable available to all classes in a project? Friend.

31. What would you use if you want to display a form as modal and require the user to respond to the form that is displayed before continuing? ShowDialog method.

32. What method would you use to display a form as modeless? What does modeless mean? Show method, that the user does not have to respond to the form in any way in order to be able to continue with the program.

33. What allows the programmer to be very creative when displaying summary information and company logos? Creating a Summary form instead of using a MessageBox.

34. Do most Windows programs contain an About box? Yes.

35. If a variable is an accumulator and the value of the variable only needed one procedure, how would you declare the variable? The variable should be declared as Static at the procedure level.

36. If a variable is declared with a Dim statement in a sub procedure, what statements have access to the variable? Only the statements within the procedure where it is declared.

37. If a variable is declared with a Friend statement as module level, what statements have access to the variable? All other forms in the project will have access to that variable.

38. How would you declare variables that are available only to the one form? Use Private.

39. Variables that are declared locally and that will retain their values for multiple calls to the procedure should be declared as what? Static.

40. What happens when a form is displayed as modal? The user is prevented from accessing any other form, even if another form is visible.

41. When you create and run an application, where is the project's executable file stored? In the project's bin\Debug folder.

42. What is the correct order of events that occur when a form is displayed? Load event and then the Activated event.

43. Know the correct statement to declare a variable that will keep track of the number of books sold at a school bookstore and that will be available in order to display the total on a summary form. Friend TotalBooksInteger As Integer.

44. The following statements about forms are true: You can have just one form in a project. You can add an existing form from another project into your project. The number of forms in a project is virtually unlimited.

45. The following statements are true about variables: Module-level variables retain their values and are often used as counters and accumulators. Counters and accumulators declared with the Static statement may only be used within the procedure where they are declared. Variables declared as Friend may be used in any procedure in any form in the project. Variables declared as Private cannot be used on another form.
46. How can you remove a form from a project? Selecting the form's name in the Solution Explorer window and clicking the delete key or right-clicking on the form's name in the Solution Explorer window and choosing Delete.

Chapter 7:

1. What are the different styles for combo boxes? Simple, DropDownList, DropDownList.
2. What type of variables are commonly referred to as switches or flags? What values can they hold? Boolean variables, True or False
3. How do you add scroll bars to list boxes and combo boxes? You don’t have to do anything. If the size of the list/combo box is large enough on the form for the entire list to be displayed you will not have any scroll bars. If the size of the list/combo box is not large enough on the form then scroll bars will automatically be added.
4. What control contains a text box as part of the control? a combo box
5. What is the difference between the Text property of a combo boxes and the Text property of a list box? They both have a Text property but the Text property of the combo box can be set or removed at design time and the Text property of the list box can only be accessed during run time. The Text property of the 1st 2 types of combo boxes can be accessed during run time if the user enters a string in the Text box portion of the box. The user cannot enter anything into the Text property of the last style of combo box or the list box.
6. What control would you use from the toolbox to create list boxes on a form? List Box
7. What type(s) of data can list boxes and combo boxes hold? The list/combo box can hold either numeric or alphabetic data but even though you type numbers into the list, they are treated as strings just like the Text box
8. What are list boxes and combo boxes used for? to hold a list of values
9. What types of values can list boxes and combo boxes hold? string values only
10. What property is used to add items to a list box or combo box during design-time? Use the Properties window and enter the items in the Items property
11. How can items be added to the list of a list box or combo box during design time? Using the Items property
12. How can you enter values for the items in the list of a list box or combo box at design time? At run time? in the Items property in the Properties window, using the Items.Add method in a procedure
13. How do you add scroll bars to list boxes and combo boxes? They are automatically added by the computer when the list is larger than the area in which you are displaying the list
14. What method can you use to add items to the list of a list box or combo box during run time? use the Items.Add method
15. How can you add the information that appears in a list box or combo box when it is first displayed? using the Form_Load procedure (or any event procedure that is called before the form is displayed) and the list/combo box Items.Add method, during design time in the Items property of the list/combo box
16. How are Items in the list of a list box or combo box placed in alphabetical order? By setting the Sort property to True
17. Know how to add elements to a list box or combo box given the element to be added and the name of the list/combo box SchoolsListBox.Items.Add(“Greenville Technical College”) InventoryComboBox.Items.Add(“Light bulb”)
18. What method of a text box in order to select the text in the text box? SelectAll
19. What is the SelectedIndex property of the first item in the list of a list box or combo box? 0
20. What is the value of the SelectedIndex property if the user has not selected an item from a combo box? -1
21. What is the value of the SelectedIndex property if the user has selected the last item in the list of a combo box with four items? 3 or ObjectName.Items.Count – 1
22. What do you do in order to make a specific item in the list appear selected? Assign the index of the item to the SelectedIndex property of a list box
23. Know the code to deselect all items in a list. NamesListBox.SelectedIndex = -1, NamesListBox.Text = ""
24. What is the property used to determine the number of items in a list box or combo box given the name of the list/combo box?  
   ObjectName.Items.Count

25. How can an individual item be deleted from a list box or combo box?  
   ObjectName.Items.RemoveAt method and specify the index of the item or use the ObjectName.Items.Remove method and specify the text to remove

26. What is the code to delete the selected item from a list box or combo box?  
   ObjectName.Items.RemoveAt(ObjectName.SelectedIndex)  or ObjectName.Items.Remove(ObjectName.Text)  
   Ex.  
   SchoolListBox.Items.RemoveAt(SchoolsListBox.SelectedIndex),  
   SizeComboBox.Items.Remove(SizeComboBox.Text)

27. Know the code for printing the selected item from a combo box or a list box to the output window.  
   Debug.WriteLine(ObjectName.Items(ObjectName.SelectedIndex).ToString()) or  
   Debug.WriteLine(ObjectName.Text)  
   Ex:  
   Debug.WriteLine(SchoolsListBox.Items(SchoolsListBox.SelectedIndex).ToString()) or Debug.WriteLine(ColorsComboBox.Text)

28. Know the code that will display the selected name in SchoolLabel.  
   SchoolLabel.Text =  
   SchoolsComboBox.Text or the code,  
   SchoolLabel.Text =  
   SchoolsComboBox.Items(SchoolsComboBox.SelectedIndex)

29. What is the Clear method used for in a list or combo box?  
   To empty all of the contents of a list or combo box.

30. If a list contains 15 items, what will the Count property return and what will the highest SelectedIndex property be?  
   Count will be 15, and the highest SelectedIndex will be 14

31. Which text box event occurs when the user presses the tab key and the text box gets the focus?  
   the Enter event

32. Which text box event occurs each time the user types a character into a text box?  
   the TextChanged event

33. What is the process of repeating a series of instructions called?  
   Looping

34. What are a group of instructions that are repeated in a Do/Loop called?  
   a loop

35. What is a single execution of a group of instructions inside a Do/Loop called?  
   an iteration

36. The statements inside of a Do/Loop might never be executed when?  
   if a Do Until statement is used that tests at the top of the loop and the condition is true the first time it is tested or a Do While statement is used that tests at the top of the loop and the condition is false the first time it is tested

37. The statements in a loop may never be performed if a loop begins with Do Until or a Do While.

38. What statement can be used to skip to the next iteration of a Do loop?  
   The Continue statement

39. What 2 loops will test the condition at the top of the loop?  
   A loop that begins with Do Until or a Do While

40. What 2 loops will test the condition at the bottom of the loop?  
   A loop that begins with Do and ends with Loop Until condition or Loop While condition

41. What are Boolean variables commonly referred to in VB?  
   They are commonly referred to as flags or switches.

42. What can the counter or loop index in a For/Next statement be?  
   The counter/loop index can be a variable but not a constant.

43. What can the loop index variable in a For/Next statement be called?  
   Must it be an integer?  
   You can use any name for the variable as long as you declare it before you use it with a Dim statement.  
   The datatype may be an integer but it does not have to be.  
   It just has to be numeric.

44. When is the counter tested in a FOR/NEXT statement?  
   at the beginning of each loop in the FOR statement

45. When is the counter incremented in a FOR/NEXT statement?  
   In the NEXT statement

46. When does a For/Next statement terminate iteration?  
   In the For statement, when the counter is greater than the final value (assume a positive step value)

47. Know the rules for setting up both positive and negative For/Next loops.  
   The format for a For loop is:  
   For LoopIndex = InitialValue To TestValue [Step Increment]  
   : `Loop steps  
   Next LoopIndex  
   If the Increment value is positive or not given (defaults to Step 1) then the InitialValue must be less than or equal to TestValue for the loop steps to execute
If the Increment value is negative then the InitialValue must be greater than or equal to TestValue for the loop steps to execute.

48. What happens if the rules above are not followed and you have an InitialValue that is greater than the TestValue for a positive Increment? The loop steps will not be executed at all.
   Example: For ValueInteger = 10 To 1

49. What happens when the statements in a For/Next loop is incorrectly indented? It will make the program difficult to read and understand.

50. What statement can be used to terminate a For/Next loop before the loop index reaches its final value? Exit For

51. What happens if the rules above are not followed and you have a negative Increment and the InitialValue is less than the Test Value? The loop steps will not be executed at all.
   Example: For ValueInteger = 1 to 10 Step -1.

52. What happens when the statements in a For/Next loop is incorrectly indented? It will make the program difficult to read and understand.

53. What statement can be used to terminate a For/Next loop before the loop index reaches its final value? Exit For

54. What happens if the rules above are not followed and you have a negative Increment and the InitialValue is less than the Test Value? The loop steps will not be executed at all.
   Example: For ValueInteger = 1 to 10 Step -1.

55. What will incorrect indentation of the statements in For/Next loops do? It will make the program difficult to read and understand but will not affect the execution of the loop.

56. Be able to determine the value of a variable inside of the loop after a for loop is executed.
   
   For CountInteger = 1 to 10 Step 2
     TotalInteger += CountInteger
   Next CountInteger

   The value of CountInteger after the for loop is finished executing is 11. The value of TotalInteger is 25.

57. Be able to determine how many times the statements inside a given For/Next loop will be executed.
   For IndexInteger = 3 to 15 Step 3
     'Statement in loop
   Next IndexInteger

   5 times

58. What is the value of IndexInteger after the code in the loop below is completed?
   
   For IndexInteger = 3 to 15 Step 3
     'Statement in loop
   Next IndexInteger

   The value of IndexInteger after the for loop is 18

59. What is the value of IndexInteger after the code in the loop below is completed?
   
   For IndexInteger = 3 to 15 Step 3
     'Statement in loop
   Next IndexInteger

   The value of IndexInteger is 10 because the loop value is positive (Step 1 assumed) and InitialValue is not less than or equal to the TestValue, the loop steps will not be executed at all.

60. What property can you use to determine the index of the selected item in a comb box or list box? The SelectedIndex property.

61. The methods and events of what control can be used to set up output for the printer? PrintDocument

62. Which control's methods and events can be used for directing output to the printer? PrintDocument

63. To start printing output, what method would you execute? The Print method of the PrintDocument component.

64. The PrintDocument's PrintPage event is fired once for each page to be printed. What is this technique referred to as? Callback

65. In a graphics page, what must you specify for each element on the page? The X and Y coordinates

66. What do the X and Y coordinates define on a graphics page? The upper-left corner of an element

67. What method is used to send a line of text to the graphics page? DrawString

68. Which method would you use to send a line of text to the graphics page? DrawString

69. What structure would you use to print the contents of a list box or combo box? a For/Next loop

70. Know how to write the code to print the selected item from a list box or combo box.
   
66. What is used for viewing print output on the screen? With it the user can then choose to print or cancel. Print Preview
67. What are local variables that retain their value for the life of a project, rather than being reinitialized each time the procedure is called referred to as? Static variables.

Chapter 8:
1. What is an array? A list or series of individual variables all referenced with the same names, a series of values, all stored in the same variable.
2. What are arrays sometimes referred to as? tables or subscripted variables
3. What can a subscript also be called? an index
4. An array is a set of variables. What is each individual variable called? An element
5. How are the individual variables in an array accessed? By their index or subscript which is their position in the array.
6. How can you declare an array and specify the number of elements? Using a Dim statement.
7. Can the Dim statement be used to specify initial values for the array elements? Yes
8. How are the number of individual variables in an array specified? With a Dim statement
9. When an array is initialized with the Dim Statement, what does the index starts at? 0
10. When you declare an array, what is used in the parentheses after the arrayname? the upper subscript of the array
11. Know the code for declaring an array with ten elements: Dim NameString(9).
12. Know the code for initializing an array at the time of declaration. Dim NameString() As String = {"John", "Susan", "George", "Julia"}
13. How many elements are in the following array? Dim NameString(20) as String - 21 elements
14. The message “Index was outside the bounds of the array.” indicates what? that the subscript is a value greater than the number of elements declared in the array's Dim statement, that the subscript has reached a value lower than the number of elements declared in the array's Dim statement, or that the subscript is not contained in the array
15. What happens when a subscript is used that is not a valid element in an array? An exception is automatically thrown
16. Does each element in an array have its own unique data type or are the data types for all of elements the same? They are all the same
17. What loop can be used with an array where you do not have to manipulate the subscripts of the array? the For Each/Next loop
18. When you are working with an array, the easiest way to traverse the elements without using subscripts is using what structure? the For Each/Next loop
19. In the following statement, what refers to the array? For Each OneNameString In NameString - NameString
20. What can be used to find a specific value in an array? a table lookup
21. What can a VB programmer use to create user-defined data types? the Structure statement
22. What statements are used to establish a user-defined data type that may be used to represent a record of related fields of information? The Structure/ End Structure statements
23. Where should the code for a user-defined Structure should be placed? In the General Declaration section, NOT in the procedure where the structure will be used.
24. Can the For Each/Next loop be used to initialize all of the variables in an array? Yes
25. Will a For Each loop will execute even if the array contains no elements? No
26. How can programmers define their own data types? with the Structure / End Structure statements.
27. What is the easiest way to initialize the variables in an array assuming it has already been created and contains values? use a For Each loop and set the initial value of each element to 0 for arrays with numeric
values; use a For Each loop and set the initial value of each element to an empty string for arrays with strings

28. It is not necessary for a programmer to manipulate the subscripts of an array with what type of loop? For Each/Next

29. What statements may be used to represent a record of related fields of information? The Structure/End Structure

30. Given a structure declaration, write the statement to create a structure variable.
   ```
   Structure InventoryInfo
       Dim IdString As String
       Dim DescString As String
       Dim QuantityInteger As Integer
       Dim PriceDecimal As Decimal
   End Structure
   Dim PliersInventoryInfo As InventoryInfo
   ```

31. When the following lines of code have been executed, an array with how many elements will exist in memory?
   ```
   Private Structure EmployeeInfo
       Dim NumberString As String
       Dim NameString String As String
       Dim PhoneString String As String
   End Structure
   Dim VendorEmployeeInfo(6) As EmployeeInfo
   ```
   There will be 7 elements in the array

32. Given a structure declaration and an array declared from that structure, be able to determine which code would be used to access a specific element of a given element number of the array.
   Given the following:
   ```
   Private Structure EmployeeInfo
       Dim NumberString As String
       Dim NameString String As String
       Dim PhoneString String As String
   End Structure
   Dim EmployeeEmployeeInfo(9) As EmployeeInfo
   ```
   Determine the code that would access the phone number for the third Employee
   ```
   EmployeeEmployeeInfo(2).PhoneString
   ```

33. Where will the code to create a user-defined Structure be placed? At module level
    Can it be placed at procedure level? No

34. By default a Structure is private, Public, or Friend? Private
    What else can it be declared as? Friend or Private.

35. Given a structure declaration and a structure variable created from that structure, be able to determine the name of the array.
   ```
   Private Structure EmployeeInfo
       Dim NumberString As String
       Dim NameString String As String
       Dim PhoneString String As String
   End Structure
   Dim VendorEmployeeInfo(6) As EmployeeInfo
   ```
   The array name is VendorEmployeeInfo

36. Can subscripted variables be used for counters and accumulators? Yes

37. What is a table lookup is used for? To find a match for a specific value (or string) by comparing it to each element in an array. It can be used to look up array elements indirectly.

38. What will be used to find a specific value in an array? A table lookup
39. What are arrays sometimes referred to as? What are 2-dimensional arrays sometimes referred to as? lists, tables.

40. When using direct referencing, what property of a list box can be used as an array subscript to find an item in a list box? The SelectedIndex property.

41. When performing a table lookup, why is it a good idea to include validation? the user should be notified if there is no match found in the table.

42. What does the first subscript in a two-dimensional array specify? The second subscript? the 1st subscript specifies the row and the second specifies the column.

43. What can be used when two subscripts are needed to identify tabular data which is data arranged in rows and columns? Multidimensional arrays.

44. Be able to determine the value of a specific element of a 2 dimensional array, given an array declaration that initializes the array at the time of declaration. Given:

   Dim PartsString( , ) as String = {{"Pliers", "Wrench"} , {"Hammer", "Screwdriver"}}

   What is the value of PartsString(1, 1)?
   The value if PartsString(1, 1) is Screwdriver.

Know how to do the following for the written coding:

1. Write the statement to add an item to a list box or combo box.
   ObjectName.Items.Add("Item to be Added")
   CoffeeComboBox.Items.Add(“Mountain Blend”)

2. Write the statement to add the value stored in a text box to a list box or combo box at a specific Index value.
   ObjectName.Items.Insert(IndexValue, TextBoxName.Text)
   SyrupListBox.Items.Insert(3, SyrupTextBox.Text)

3. Write the statement to add the item that the user has just typed into the text box portion of a combo box to the same combo box.
   ObjectName.Items.Add(ObjectName.Text)
   CoffeeComboBox.Items.Add(CoffeeComboBox.Text)

4. Write the statement to place the number of items contained in a list box or combo box into an integer variable.
   CountInteger = ObjectName.Items.Count
   CountInteger = CoffeeComboBox.Items.Count

5. Write the statement to deselect all items for a list box or combo box so that none of the items in the list box or combo box are selected.
   ObjectName.SelectedIndex = -1

6. Write the statement to display a given message followed by the number of items in a list box or combo box in a message box.
   MessageBox.Show(“The number of items in the list is “ & SyrupListBox.Items.Count)

7. What is the SelectedIndex property used for? To select an item in the list or to determine which item is selected by the user.

8. Given the number of items in a list box or combo box, be able to determine the a) Items.Count property b) the highest SelectedIndex property c) the lowest SelectedIndex property. Given that there are 20 items in the list.
   The Items.Count property is 20, the highest SelectedIndex property is 19 and the lowest is 0.

9. How do you remove an individual item from a list box or combo box? You can use the RemoveAt method and specify the index of the item or use Remove and specify the text.

10. Write the code to display the selected item from the list box or combo box in a label.
    LabelNameLabel.Text = ObjectName.Text    or    LabelNameLabel.Text = ObjectName.Items(ObjectName.SelectedIndex)
    CoffeeLabel.Text = CoffeeComboBox.Text    OR    SyrupLabel.Text = SyrupListBox.Items(SyrupListBox.SelectedIndex)
11. Write the statement to remove the item at a specified index from a list box or combo box.
   
   ```csharp
   ObjectName.Items.RemoveAt(IndexInteger)
   CoffeeComboBox.Items.RemoveAt(0)
   ```

12. Write the statement to remove the currently selected item from a list box or combo box.
   
   ```csharp
   ObjectName.Items.RemoveAt(ObjectName.SelectedIndex)  OR
   ObjectName.Items.Remove(ObjectName.Text)
   CoffeeComboBox.Items.RemoveAt(CoffeeComboBox.SelectedIndex)    OR
   SyrupListBox.Items.Remove(SyrupListBox.Text)
   ```

13. Write the statement to clear all of the items from a list box or combo box.
   
   ```csharp
   ObjectName.Items.Clear()
   CoffeeComboBox.Items.Clear()
   SyrupListBox.Items.Clear()
   ```

14. Write the first and last lines of a Do Until loop and the statement inside the loop to increment a given counter by a given amount. Use a pretest loop and execute until the value in counter is equal to a specific value.
   
   Given  CountInteger = 0, increment by 1, repeat until CountInteger = 20
   
   ```csharp
   Do Until CountInteger = 20
   'statements in loop
   CountInteger += 1
   Loop
   ```

15. Write the first and last lines of a Do Until loop and the statement inside the loop to increment a given counter by a given amount. Use a posttest loop and execute until the value in counter is equal to a specific value.
   
   Given TotalInteger = 0, increment by 2, repeat until TotalInteger is greater than 10
   
   ```csharp
   Do
   'statements in loop
   TotalInteger += 2
   Loop Until TotalInteger > 10
   ```

16. Write the first and last lines of a For/Next that will start the value of the LoopIndex variable at a given value and will count down by a given value until the value in the LoopIndex reaches a given value.
   
   Given the LoopIndex is IndexInteger, start at 25 count down by 5’s until you reach 0
   
   ```csharp
   For IndexInteger = 25 to 0 Step -5
   'statements in loop
   Next IndexInteger
   ```

17. Write the first and last statements for a FOR NEXT loop that will execute as many times as there are items in a combo box or list box.  You will be given the name of the list/combo box and the name of the loop counter variable.
   
   ```csharp
   For IndexInteger = 0 to CoffeeComboBox.Items.Count – 1
   'Statements in loop
   Next IndexInteger
   ```

18. Write the statements to make the entry in the text box appear selected when the text box's Enter event procedure occurs.  The first and last lines of the procedure are given. You just need to write the single statement that will be placed inside the procedure to make the text appear selected.
   
   ```csharp
   Private Sub MessageTextBox_Enter(ByVal sender as Object, ByVal e As System.EventArgs) Handles MessageTextBox.Enter
   'Select any existing text
   MessageTextBox.SelectAll()
   ```
19. Write the statement to use the DrawString method to send a given line to the graphics page. The font, the Brush, the X coordinate and the Y coordinate will be given. 
Given “This is a test” as the line, PrintFont as the font, Brushes.Black as the Brush, 300.0 as the X coordinate, and 300.0 as the Y coordinate. Assume that e is declared as System.Drawing.Printing.PrintPageEventArgs.
e.Graphics.DrawString("This is a test", PrintFont, _ Brushes.Black, 300.0, 300.0)

20. Be able to write the statement to create a static variable given the name of the variable and the value to initialize it to. Static LineCountInteger As Integer = 1

21. Write a statement to create a one-dimensional decimal array given the data type, array name and number of elements.
Dim AmountDecimal(9) As Decimal
will create a decimal array called AmountDecimal with 10 elements

22. Write the For Each/Next loop to reinitialize a previously created string array to the null string (""") or a previously created numeric array to 0. Assume that the array has been loaded with values and your code is going to reinitialize it back to the null string or to 0. Include any Dim statements you may need with your loop.
Dim Parts String(10) As String  (given)
Dim OneElementString As String

For Each OneElementString in PartsString
   OneElementString = ""
Next OneElementString
OR Dim ValueInteger(10) As Integer (given)
Dim OneElementInteger As Integer

For Each OneElementInteger in ValueInteger
   OneElementInteger = 0
Next OneElementInteger

23. Given variable declarations, write a For/Next loop to add 3 to each element of the AmountInteger array. Assume that the array has already been loaded with integer values and your code will increment each array element by 3.
Given:
Dim AmountInteger(5) As Integer
Dim IndexInteger As Integer
Write:
For IndexInteger = 0 to 5
   AmountInteger(IndexInteger) += 3
Next IndexInteger

24. Be able to write a structure given a description of the structure. For Example:
Write a structure called Employee that contains the following items:
Last Name (string), First Name (string), Employee ID (string), Department Name (string), Pay Rate. (decimal), Hours Worked (decimal) and Total YTD Gross (decimal)
Structure Employee
    Dim LastNameString As String
    Dim FirstNameString As String
    Dim EmployeeIDString As String
    Dim DeptNameString As String
    Dim PayRateDecimal As Decimal
    Dim HoursDecimal As Decimal
    Dim TotalYTDGrossDecimal As Decimal
End Structure
25. Given a structure and a structure variable created from the structure, be able to assign a value to one of the elements of the structure. For Example:

Structure Inventory
    Dim DescString As String
    Dim ProdIDString As String
    Dim QuantityInteger As Integer
    Dim PriceDecimal As Decimal
End Structure
Dim PliersInventory As Inventory
PliersInventory.PriceDecimal = 24.99D

26. Given a structure declaration, write a statement to create an array of a given number of Item variables.

Create an array of 8 Inventory items given the following
Structure Inventory
    Dim DescString As String
    Dim ProdIDString As String
    Dim QuantityInteger As Integer
    Dim PriceDecimal As Decimal
End Structure
Dim Inventory(7) As Inventory
(Remember to subtract 1 because your subscripts start at 0)

27. Given the declaration for a 2 dimensional array, write the statements to initialize the elements of the array to 0.0. Assume that the array has already been loaded with decimal values and your code will be used to reinitialize the array back to 0. Include the Dim statements for any additional variables that you might need.

Given
Dim SalesDecimal(4, 4) As Decimal
Dim RowInteger As Integer
Dim ColInteger As Integer

For RowInteger = 0 to 4
    For ColInteger = 0 to 4
        SalesDecimal(RowInteger, ColInteger) = 0.0D
    Next ColInteger
Next RowInteger
OR
Dim OneElementDecimal As Decimal
For Each OneElementDecimal in SalesDecimal
    OneElementDecimal = 0.0D
Next OneElementDecimal

28. Given the following declarations, write the code to add each row of a 2 dimensional array
AmountDecimal and store the row totals in the one dimensional array TotalDecimal. Assume that the values have already been loaded into the AmountDecimal array. Include any Dim statements for any additional variables that you might need to create.

Given
Dim AmountDecimal(3, 5) As Decimal
Dim TotalDecimal(3) As Decimal
Dim RowInteger As Integer
Dim ColInteger As Integer

For RowInteger = 0 to 4
    For ColInteger = 0 to 4
        SalesDecimal(RowInteger, ColInteger) = 0.0D
    Next ColInteger
Next RowInteger
OR
Dim OneElementDecimal As Decimal
For Each OneElementDecimal in SalesDecimal
    OneElementDecimal = 0.0D
Next OneElementDecimal

28. Given the following declarations, write the code to add each row of a 2 dimensional array

Given
Dim AmountDecimal(3, 5) As Decimal
Dim TotalDecimal(3) As Decimal
Dim RowInteger As Integer
Dim ColInteger As Integer
Write:
For RowInteger = 0 to 3
    For ColInteger = 0 to 5
        TotalDecimal(RowInteger) += AmountDecimal(RowInteger, ColInteger)
    Next ColInteger
Next RowInteger

29. The 20 point coding part of the test will consist of a program using the direct reference method of table lookup for a 2 dimensional table. It will be similar to the Hands On at the end of Chapter 8. Also look at the program code on p. 342 for the example.