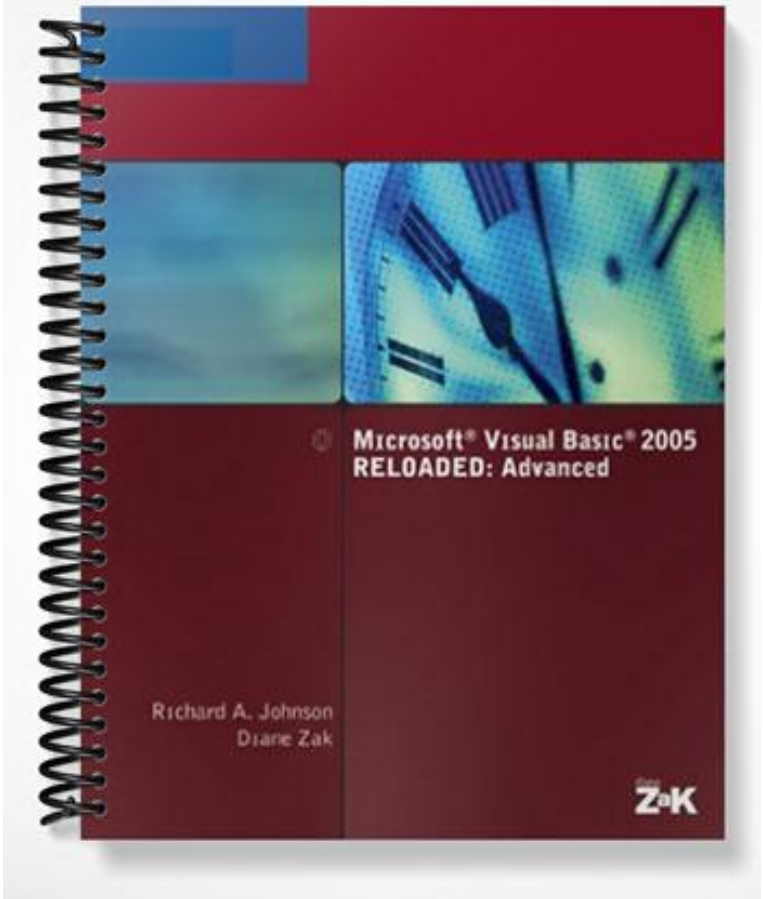
TEST BANK


Microsoft® Visual Basic® 2005
RELOADED: Advanced
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Chapter 2: Reviewing Microsoft Visual Basic 2005 Reloaded: Part II

TRUE/FALSE

1. The EndsWith method determines whether a specific substring occurs at the end of a string.

   ANS: T PTS: 1 REF: 93

2. A Sub procedure is a block of program code that performs a specific task and returns a value after performing its assigned task.

   ANS: F PTS: 1 REF: 105

3. To pass a variable by value in Visual Basic, you include the keyword ByVal before the variable's corresponding parameter in the procedure's parameter list.

   ANS: T PTS: 1 REF: 109

4. A Handles clause in a procedure can include several objects and events.

   ANS: T PTS: 1 REF: 113

5. Structure members can be variables, constants, or procedures.

   ANS: T PTS: 1 REF: 129

MULTIPLE CHOICE

1. You can use the ____ method to replace a sequence of characters in a string with another sequence of characters.
   a. Replace
   b. Trim
   c. Remove
   d. Change

   ANS: A PTS: 1 REF: 87

2. Visual Basic provides the ____ method for inserting characters anywhere within a string.
   a. Mid
   b. Replace
   c. Copy
   d. Insert

   ANS: D PTS: 1 REF: 91

3. You can use the ____ method to determine whether a specific substring occurs at the beginning of a string.
   a. AtTheBeginning
   b. EndsWith
   c. StartsWith
   d. BeginsWith

   ANS: C PTS: 1 REF: 93

4. The ____ method returns the index of the first occurrence of a substring within a string.
   a. Count
   b. IndexOf
   c. At
   d. CharAt

   ANS: B PTS: 1 REF: 96

5. The ____ operator allows you to use pattern-matching characters to determine whether a string matches a specified pattern.
   a. Pattern
   b. Compare
   c. Contains
   d. Like

   ANS: D PTS: 1 REF: 101

6. The ____ tool is used to add a radio button to an interface.
   a. CheckBox
   b. RadioButton
   c. GroupBox
   d. GroupButton

   ANS: B PTS: 1 REF: 103

7. The ____ tool in the toolbox adds a check box to an interface.
   a. GroupButton
   b. RadioBox
   c. CheckBox
   d. GroupBox

   ANS: C PTS: 1 REF: 105

8. A(n) ____ returns a value after performing its assigned task.
   a. Function procedure
   b. Sub Procedure
   c. Object procedure
   d. Structure procedure

   ANS: A PTS: 1 REF: 105

9. The combination of data type and variable name in a parameter list is called a(n) ____.
   a. event
   b. parameter
   c. argument
   d. variable

   ANS: B PTS: 1 REF: 106

10. Passing a variable's value is referred to as passing ____.
    a. by value
    b. by address
    c. by memory location
    d. by reference

    ANS: A PTS: 1 REF: 109

11. Passing a variable's memory address is referred to as passing ____.
    a. by content
    b. by value
    c. by memory
    d. by reference

    ANS: D PTS: 1 REF: 109

12. A Function procedure is typically referred to simply as a(n) ____.
    a. Sub procedure
    b. procedure
    c. function
    d. event procedure

    ANS: C PTS: 1 REF: 114

13. A(n) ____ is one that is unrelated to any other variable.
    a. scalar variable
    b. array variable
    c. matrix variable
    d. parallel variable

    ANS: A PTS: 1 REF: 116

14. You can think of a(n) ____ array as a column (or row) of variables.

a. table
b. parallel
c. one-dimensional
d. two-dimensional

ANS: C PTS: 1 REF: 117

15. You can use the ____ statement to access each element in a group (such as an array) without explicitly using the subscripts of the group elements
a. For...Next
b. Do loop
c. Case
d. For Each...Next

ANS: D PTS: 1 REF: 120

16. The syntax *arrayName*.____ returns the number of elements in *arrayName*.
a. Size
b. Length
c. Count
d. Elements

ANS: B PTS: 1 REF: 121

17. You use the Array.____ method to sort the elements in a one-dimensional array in ascending order.
a. Reverse
b. Order
c. Sort
d. Fix

ANS: C PTS: 1 REF: 123

18. A(n) ____ array can be viewed as a table of values with a fixed number of rows and columns.
a. one-dimensional
b. two-dimensional
c. single
d. parallel

ANS: B PTS: 1 REF: 126

19. A(n) ____ is a data type consisting of a group of different members.
a. two-dimensional array
b. parallel array
c. matrix
d. structure

ANS: D PTS: 1 REF: 129

20. Variables declared using a structure are often referred to as ____ variables.
a. structure
b. scalar
c. single
d. parallel

ANS: A PTS: 1 REF: 130

21. A sequential access file is also referred to as a(n) ____ file, because it is composed of lines of human-readable characters.
a. binary
b. text
c. human
d. coded

ANS: B PTS: 1 REF: 134

COMPLETION

1. The number of characters contained in a string is stored in the string's _____ property.

ANS: Length

PTS: 1 REF: 82

2. A(n) _____ is a contiguous (adjacent) sequence of characters taken from a string.

   ANS: substring

   PTS: 1 REF: 93

3. The String.Compare method uses rules called _____ when comparing the strings.

   ANS: word sort rules

   PTS: 1 REF: 100

4. A(n) _____ is a section of code that can be invoked (called) from one or more places in an application and is independent of any object and event—it is processed only when invoked from code.

   ANS: independent Sub procedure

   PTS: 1 REF: 105

5. To pass a variable by reference in Visual Basic, you include the keyword _____ before the variable's corresponding parameter in the receiving procedure's header.

   ANS: ByRef

   PTS: 1 REF: 111

MATCHING

Match each term with the correct statement below:

a. Remove method
b. Mid statement
c. Contains method
d. Substring method
e. Procedure
f. Event procedure
g. Array
h. Subscript
i. Parallel arrays

1. removes one or more characters located anywhere in a string, not just the beginning or end
2. group of variables that is given a name, and all variables in the group have the same data type
3. block of program code that performs a specific task
4. determines whether a string contains a specific sequence of characters
5. replaces a specified number of characters in an existing string with characters from another string
6. Sub procedure that is associated with a specific object and event
7. two or more arrays whose elements are related by their positions in the arrays
8. unique number that identifies each variable in a one-dimensional array
9. returns any part of a string

1. ANS: A PTS: 1 REF: 85
2. ANS: G PTS: 1 REF: 116
3. ANS: E PTS: 1 REF: 105
4. ANS: C PTS: 1 REF: 95

5. ANS: B PTS: 1 REF: 87
6. ANS: F PTS: 1 REF: 105
7. ANS: I PTS: 1 REF: 124
8. ANS: H PTS: 1 REF: 117
9. ANS: D PTS: 1 REF: 98

SHORT ANSWER

1. How can you remove characters from a string?

   ANS:
   At times, a user may inadvertently enter unwanted characters (such as spaces) at the beginning or end of a string within a text box. Such characters may be removed within an application using the TrimStart method, the TrimEnd method, or the Trim method.

   TrimStart removes certain kinds of characters from the beginning of a string, TrimEnd from the end of a string, and Trim from both the beginning and end of a string.

   PTS: 1 REF: 84

2. Briefly describe and provide examples of the PadLeft and PadRight methods.

   ANS:
   If you want to insert characters at either the beginning or end of the string, you can use the PadLeft and PadRight methods, respectively. Both methods pad the string with a character until the entire string is a specified length, then they return the new padded string. The syntax for the PadLeft and PadRight methods is as follows:

   Syntax
   string.**PadLeft(***length*[**,** *character*]**)**
   string.**PadRight(***length*[**,** *character*]**)**

   Example 1
   Dim netPay As Decimal = 667.50D
   Dim formattedNetPay As String
   ' assigns "********$667.50" to the formattedNetPay variable
   formattedNetPay = netPay.ToString("C2").PadLeft(15, "*"c)

   Example 2
   Dim firstName As String = "Nicole"
   ' assigns "Nicole " to the firstName variable
   firstName = firstName.PadRight(10)

   PTS: 1 REF: 89

3. Briefly explain how to use the String.Compare method.

   ANS:
   To compare strings you can use the String.Compare method. The syntax is as follows

   Syntax
   String.Compare(*string1***,** *string2*[**,** *ignoreCase*]**)**

Examples

```
Dim result1 As Integer
result1 = String.Compare(“Dallas”, “DALLAS”) ' returns -1

Dim result2 As Integer
result2 = String.Compare(“Dallas”, “DALLAS”, True) ' returns 0

Dim result3 As Integer
result3 = String.Compare(“Dallas”, “Boston”) ' returns 1
```

PTS: 1 REF: 99

4. Briefly explain how to use the Like operator.

ANS:
The Like operator allows you to use pattern-matching characters to determine whether a string matches a specified pattern. The syntax is as follows:

Syntax
Like *patternString*

Example 1

```
' condition is True if state begins with K (* is a wildcard)
If state Like “K*” Then
```

Example 2

```
' condition is True if idNum begins with 3 numbers
Do While idNum Like “###*”
```

Example 3

```
' condition is True if firstName is Tom or Tim, ignoring case
If firstName.ToUpper() Like “T[OI]M” Then
```

Example 4

```
' isLowercase is True if letter contains just one lowercase letter
isLowercase = letter Like “[a-z]”
```

Example 5

```
' the loop counts the number of nonletters in name
Dim nonLetter As Integer = 0
For indexNum As Integer = 0 to name.Length - 1
        If name.Substring(indexNum, 1) Like “[!a-zA-Z]” Then
                nonLetter = nonLetter + 1
        End If
Next indexNum
```

PTS: 1 REF: 101-102

5. Briefly describe the use of radio buttons on Visual Basic application.

ANS:
The RadioButton tool is used to add a radio button to an interface. A RadioButton control allows you to limit the user to only one choice in a group of two or more choices. GroupBox controls are used so that only one radio button can be selected in each group.

Important properties of a radio button are Checked (indicating whether the radio button is selected or not), Name (a meaningful name given to the radio button), and Text (the text that appears with the radio button).

PTS: 1 REF: 103

6. How do you include parameters in an independent Sub Procedure?

ANS:
Many Call statements have an argument list. A Call statement uses the argument list to pass information to a procedure when necessary. Recall that the number of arguments listed in the argument list must agree with the number of parameters listed in the parameter list in the procedure header. In addition, the data type and position of each parameter in the parameter list must agree with the data type and position of its corresponding argument in the parameter list. You can pass a literal constant, named constant, keyword, or variable to an independent Sub procedure; in most cases, you will pass a variable. You will see an example of Sub procedure parameters shortly.

PTS: 1 REF: 109

7. How do you declare a one-dimensional array?

ANS:
Before you can use an array, you first must declare (create) it. The syntax for declaring an array is shown below:

Syntax – Version 1
{**Dim** | **Private**} *arrayName***(***highestSubscript***) As** *datatype*

Example 1
' four String elements that contain Nothing
Dim cities(3) As String

Syntax – Version 2
{**Dim** | **Private**} *arrayName***() As** *datatype* **= {***initialValues***}**

Example 2
' four Decimal elements that contain the values in the braces
Dim sales() As Decimal = {75.33D, 9.65D, 23.55D, 6.89D}

PTS: 1 REF: 117

8. How do you declare a two-dimensional array?

ANS:
The syntax for declaring two-dimensional arrays is shown below:

Syntax - Version 1
{**Dim** | **Private**} *arrayName***(***highestRowSubscript, highestColumnSubscript***) As** *datatype*

Example 1
Dim clothing(2, 2) As String

Syntax - Version 2

{**Dim** | **Private**} *arrayName***(,) As** *datatype* **= {{***initialValues***},**...**{***initialValues***}}**

Example 2
Dim clothing (,) As String = {{“AC34”, “Shirt”, “Red”}, _
{“BD12”, “Coat”, “Blue”}, _
{“CP14”, “Blouse”, “White”}}

PTS: 1 REF: 127

9. Explain how to create a structure.

ANS:
You create a structure in Visual Basic with the Structure statement. The syntax for the Structure statement is provided below:

Syntax
Structure *structureName*
    Public *memberVariable1* **As** *datatype*
    [**Public** *memberVariableN* **As** *datatype*]
End Structure

Example
Structure Employee
    Public number As String
    Public firstName As String
    Public lastName As String
    Public salary As Decimal
End Structure

PTS: 1 REF: 129

10. Explain the differences between sequential access, random access, and binary access files.

ANS:
Visual Basic can perform input and output with three kinds of files: sequential, random, and binary. Data in a sequential access file are always accessed in sequence from the beginning of the file through the end of the file. The data stored in a random access file (also called direct access) can be accessed directly without going from beginning to end. Information about where data are located is stored with the file. The data in a binary access file can be accessed by byte location in the file.

PTS: 1 REF: 134