

Please answer all the following questions on this exam. Question point values are shown in parentheses.

1. (15) For each of the following statements, indicate if it is **True** or **False**.
 - a. A recordset is generated after you:
 - 1) Set the DatabaseName property of the data control to a valid database file.
 - 2) Set the RecordSource property of the data control to a valid SQL Select query.
 - 3) Execute the Refresh method of the data control.
 - b. A For/Next loop is more general than a Do-type loop, i.e., you can do things with For/Next loops that cannot be done with Do-type loops.
 - c. Dealing with an array requires more processing overhead than dealing with a simple variable.
 - d. The RecordCount property of a recordset is a reliable indication of the number of records in the recordset.
 - e. While an array can have one or more dimensions, it can only have one type.

2. (14) For each of the following loop structures, determine what is printed from the Form1.Print statement. Assume all variables have been declared as Integer type.

a. n = 0: c = 0
For i = 1 To 4
 n = n + 1
 For j = n To 10
 c = c + 1
 Next j
 n = n + 1
Next i
Form1.Print n, c

b. k = 0: j = 10: n = 0
Do While k < j
 k = k + n
 j = j - k
 n = n + 1
Loop
Form1.Print j, k, n

c. n = 4: c = 0
For i = 1 To 4
 Do Until n <= 0
 n = n - i
 c = c + 1
 Loop
 n = i * 2
Next i
Form1.Print n, c

3. (15) For each statement below, indicate if is best associated with the recordset “Find...” methods or the recordset “Move...” methods. Write either **Find** or **Move** in the left margin by each statement.
- a. The NoMatch property is used to determine that no more records exist.
 - b. The EOF and BOF properties are used to determine that no more records exist.
 - c. You want to access every product record in a database’s Product table.
 - d. You want to access every product record in a database’s Product table that has a Price over \$100 (assuming the Price field exists in the Product table).
 - e. You want to fill a FlexGrid with product information for all products that have been in inventory for more that 30 days and that have a 45-day inventory life (assuming the appropriate fields exist).
4. (14) Write the correct SQL Select statement that retrieves the ProdNo, ProdDesc, PartDesc and NumOfParts fields from the following tables:

Product
ProdNo - Text
ProdDesc - Text
Price - Currency

Assembly
ProdNo - Text
PartNo - Text
NumOfParts - Integer

Part
PartNo - Text
PartDesc - Text
QOH - Integer

Assume that the user has specified a ProdNo on a form in a TextBox named txtProdNo and the NumOfParts in a TextBox named txtNumOfParts. Your SQL Select should retrieve records where the ProdNo equals what the user entered into txtProdNo and where NumOfParts is greater than what the user entered into txtNumOfParts.

5. (16) You are given the following code segment:

```
Dim a(1 To 4, 1 To 2) As Integer  
Dim z(1 To 4) As Integer  
Dim i As Integer, j As Integer
```

```
For i = 1 To 4  
    z(i) = i  
    For j = 1 To 2  
        a(i, j) = i + j  
    Next j  
Next i
```

```
For i = 1 To 2  
    For j = 1 To 4  
        a(j, i) = a(j, i) * z(j)  
    Next j  
Next i
```

Determine the values in the array “a” when the code is finished executing. Write your answers in the grid below:

Your answer - array "a"

	1	2
1		
2		
3		
4		

6. (13) In class we looked at some code that summed exam scores for students. The code segment below performs this process for 6 students who took three exams:

```

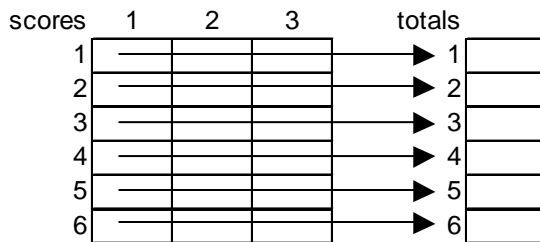
Dim scores(1 To 6, 1 To 3) As Currency
Dim totals(1 To 6) As Currency

Dim i As Integer, j As Integer
' code to populate the array

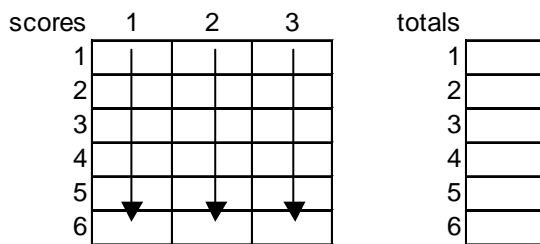
For i = 1 To 6
  For j = 1 To 3
    totals(i) = totals(i) + scores(i, j)
  Next j
Next i

```

This code goes across the three columns for each row and computes the totals as shown below:

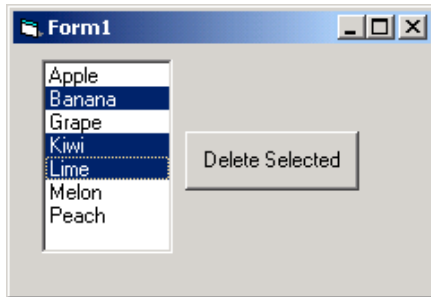


Rewrite this code so that the same totals are computed by going down the rows of each column instead of across the columns of each row:

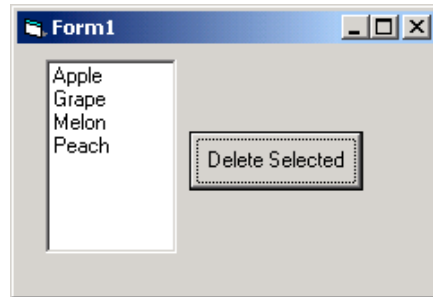


7. (13) Write the code for the click event associated with the button “Delete Selected” shown in the screen shots below (before and after the button was clicked)

Before:



After:



Your code should delete the selected items from the list box filled with the names of various fruits.

1.
 - a. True
 - b. False – For/Next limited to control by counting.
 - c. True
 - d. False – This property is not guaranteed to be correct until the last record is accessed.
 - e. True
2.
 - a. $n = 8, c = 28$
 - b. $j = 0, k = 6, n = 4$
 - c. $n = 8, c = 9$
3.
 - a. Find
 - b. Move
 - c. Move
 - d. Find
 - e. Find
4. “Select Product.ProdNo, ProdDesc, PartDesc, NumOfParts” & _
“ From Product, Assembly, Part” & _
“ Where (Product.ProdNo = Assembly.ProdNo And “ & _
“ Assembly.PartNo = Part.PartNo) And” & _
“ Product.ProdNo = ” & txtProdNo.Text & “ And” & _
“ NumOfParts = ” & txtNumOfParts.Text
- 5.

2	3
6	8
12	15
20	24

6. Sample solution:

```
For j = 1 To 3
  For i = 1 To 6
    totals(i) = totals(i) + scores(i, j)
  Next i
Next j
```

7. Sample solution:

```
Dim i As Integer
For i = lstQ7.ListCount - 1 To 0 Step -1
  If lstQ7.Selected(i) Then
    lstQ7.RemoveItem i
  End If
Next i
```