Logic Chapter 8

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**Short Answer**

3. **Look at the following pseudocode:**

Constant Integer SIZE = 3

Declare Integer numbers [SIZE] = 1, 2, 3

1. What value is stored in numbers[2]?

3

1. What value is stored in numbers[0]?

1

**4. A program uses two parallel arrays named customerNumbers and balances. The customerNumbers array holds customer numbers and the balances array holds customer account balances. If a particular customer’s customer number is stored in customerNumbers[187], where would that customer’s account balance be stored?**

*Balances[187]*

5. **Look at the following pseudocode array declaration:**

Declare Real sales[8][10]

1. How many rows does the array have?

*8*

1. How many columns does the array have?

*10*

1. How many elements does the array have?

*80*

1. Write a pseudocode statement that stores a number in the last column of the last row in the array.

*Sales[7][9] = 10*

**Algorithm Workbench**

3. Assume the arrays numberArray1 and numberArray2 each have 100 elements. Design an algorithm that copies the values in numberArray1 to numberArray2.

*FOR i FROM 0 TO 99*

*numberArray2[i] = numberArray1[i]*

*ENDFOR*

6. Draw a flowchart showing the general logic for finding the lowest value in an array.

**Debugging**

3. What is the error in the following pseudocode?

// The searchName function accepts a string containing the name

// to search for, an array of strings containing the names, and

// an integer specifying the size of the array. The function

// searches for the name in the array. If the name is found, the

// string containing the name is returned; otherwise a message

// indicating that the name was not found in the array is

// returned.

Function String searchName (String name, String names [], Integer size)

Declare Boolean found

Declare Integer index

Declare String result

// Step through the array searching for the

// specified name.

While found == False AND index <= size - 1

If contains(names[index], name) Then

Set found = True

Else

Set index = index + 1

End If

End While

// Determine the result.

If found == True then

Set result = names[index]

Else

Set result = “That name was not found in the array.”

End If

Return result

End function

One error I found was that ‘’found’ and “index” are not initialized.

Found should be initialized to False and index should be initialized to 0 for its starting point.