DeVry University

Student Lab Activity

A. Lab # CIS CIS170C-A3

B. Lab 3 of 7: Arrays

C. Lab Overview – Scenario/Summary

You will code, build, and execute a program that will use looping and arrays to store sales for seven different types of salsa.

Learning outcomes:

1. Become familiar with the using an array.
2. Populate an array with data.
3. Be able to debug a program of syntax and logic errors.
4. Be able to use the debug step-into feature to step through the logic of the program and to see how the variables change values.

D. Deliverables

Section	Deliverable	Points
Lab 3	Step 6: Program Listing and Output	**45**

E. Lab Steps

Preparation:
If you are using the Citrix remote lab, follow the login instructions located on the iLab tab in Course Home.

Locate the Visual Studio 2015 icon and launch the application.

Lab:

Step 1: Requirements – parallel arrays
You need to store sales for seven different types of salsa: **mild, medium, hot, sweet, fruit, verde,** and **zesty**. You will need two parallel 7 element arrays. An array of strings to hold the salsa names and an array of integers holding the number of jars sold during the past month for each type of salsa. Create a string array and initialize it with the salsa types. The program should prompt the user to enter the number of jars sold for each type. Use input validation with a loop to ensure that negative values

are not input.

Once the data is input, the program should display a report that shows sales for each salsa type, total sales (total number of jars sold) and the names of the highest and lowest selling products.

Lab hints: When writing this lab, you will need a for loop to enter in the sales numbers and a nested while loop within it to ensure the number entered is greater than 0. After reading in all the sales, you will need another loop that will calculate the total number of jars sold. It will also evaluate the low and high sales. You will need code something like this to keep track of which index contains the high sales product:

```
if (sales[i] > sales[hiSalesProduct])
        {

            hiSalesProduct = i;

           }
```

Sample output from program

```
Jars sold last month of mild  : 11
Jars sold last month of medium: 22
Jars sold last month of hot   : 33
Jars sold last month of sweet : 44
Jars sold last month of fruit : 55
Jars sold last month of verde : 66
Jars sold last month of zesty : 77


     Salsa Sales Report

Name     Jars Sold
_____________________
mild  :   11
medium:   22
hot   :   33
sweet :   44
fruit :   55
verde :   66
zesty :   77

Total Sales:            308
High Seller: zesty
Low Seller : mild
Press any key to continue . . .
```

Step 2: Processing Logic

Using the pseudocode below, write the code that will meet the requirements.

Write report heading

Initialize string array, highest seller index and lowest seller index
Loop
    Input sales for salsa
    Validate to be sure sales are above 0
End-Loop

Loop
    Calculate total jars sold
    Test for low and high sales products
End-Loop

Display the sales for each type of salsa
Display the total sales, salsa with the highest sales, and the salsa with the lowest sales

Step 3: Create a New Project

Create a new project and name it LAB3.

Write your code using the Processing Logic in Step 2. Make sure to save your program.

Step 4: Build Solution

To compile the program, click **Debug** then **Build solution (F7).** You should receive no error messages. If you see some error messages, check the code above to make sure you didn't key in something wrong. Once you make your corrections to the code, go ahead and click Build >> Build Solution again.

Step 5: Execute the Program

Once you have no syntax errors, to execute or run your program, click **Debug** on the menu bar and then click **Start Debugging.**

Step 6: Capture the Output

1. Capture a screen print of your output. (Do a PRINT SCREEN and paste into an MS Word document.)
2. Copy your code and paste it into the same MS Word document that contains the screen print of your output.
3. Save the Word document as Lab03_LastName_FirstInitial.

END OF LAB