CIS611 – Spring 2017
Individual Practice Programming Assignment: PA03

Due: Friday Feb 17, 2017 11:59pm

Total Points: 20

Iterations and Single Dimensional Arrays (*Try Catch for Input Validations*)

Q1 (10 points)**:**

Write a Java program that prompts the user to enter an order ID, then it prompts the user to input the prices for four items of the order. The program continues to accept user inputs as long as the user responds with **Yes** to the JOPtionPane Confirm Dialog message. For each item's prices (4 prices should be kept in an array of double, *double[ ] prices*); the program should calculate the current order average price (*avg*). After calculating each order average price (you may store each order's average in another array of double, e.g. *double [ ] avg*), the program should display the minimum (*min*) and the maximum (*max*) average prices. Note that, no need to check for duplicated orders IDs. The input prices should be separated by a single comma. The user inputs should be validated so that the program should NOT crash on an invalid input. The program should handle the **Cancel** button click in the JOPtionPane Confirm Dialog message.

Here are sample runs:

```
Enter Order ID -> 2020 click OK button, and then the program should output:
Enter Order 2020 4 Items' Prices-> 56.8, 88.6, 92.5, 72.6, click OK button,
and then the program should output a JOPtionPain Confirm Dialog message
asking would you like to continue (Yes/No/Cancel):Yes
Enter Order ID -> 2031 click OK button, and then the program should output:
Enter Order 2031 Items' Prices -> 96.4, 76.9, 64.8, 81.6 click OK button, and
then the program should output a JOPtionPain Confirm Dialog message asking
would you like to continue (Yes/No/Cancel):Yes
Enter Order ID -> 2015 click OK button, and then the program should output
Enter Order 2015 Items' Prices -> 65.6, 97.6, 87.9, 78.4, click OK button,
and then the program should output output a JOPtionPain Confirm Dialog
message asking would you like to continue (Yes/No/Cancel):No

The min_average = 77.625 and the max_average = 82.375 (these values might not
be accurate)
```

Hint: *recommended to use the while loop since the iterations is not known (is not fixed), other loop statements can work too. You may use the split() string method to extract the 4 prices input for each item and keep the prices in a double array*

```java
String input = JOptionPane.showInputDialog("Enter Order  " + id + "
Items' Prices");
String[] splitStr = input.split(",");
double[] prices = new double[splitStr.length];
// after that convert each element in splitStr String[] array to the
prices double[] array , size of the arrays is 4
```

Q2 (10 points)**:**
        Write a java program that prompt the user to enter character alphabetic letters (mix of uppercase and lowercase) array elements (with any number of elements), then the program generates and displays a new character alphabetic letters array eliminating the duplicated letters in the entered array. The input character letter array elements should be separated by a single space. You should take into account a case sensitive letters (Uppercase and lowercase letters are different.) The program should validate the user input.

Here are sample runs:
```
Enter the integer array elements: C F C D c r E D D C f l r-> click OK
button, then the program should output:
The distinct integer array elements: C F D c r E l
```

Hint: *follow the same concept in **Q1** hint to accept user input from showInputDialog() method and convert the input to a char array*

Evaluation Criteria:
  - The programs must compile cleanly (no compile errors, but compile warnings are sometimes accepted)
  - The program should handles invalid data inputs by users and terminates gracefully
  - The programs should not crash while running and it should terminate
  - All tasks (requirements) in this assignment must be completed in order to receive credit
  - The correct understanding and implementation (coding) of the requirements (programs should behave as anticipated):
      o The programs must terminate with proper/correct outputs
      o All the logical computations should be performed correctly

Submission: (This is an individual Assignment!)
        Copy the .java source files from the *src* folder in your *work space* to another folder that should be named following the provided naming format in this course, then zip and upload the file under this assignment answer in Canvas.
        File Name: FLLLLPA03.zip (F = first letter in your first name and LLLL = your last name)

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PA03

Name: _____

Question 1

Requirements	Any comment provided by grader	Max Points Allowed	Points Earned

Requirements		Max Points Allowed	Points Earned
General Code Structure: Proper naming convention used for file, Comments used in the code to explain the purpose of the code, Indentation of the code for better readability, Good choice of variable names		3	
Input, Output, User Interface: Proper coding implementation of the logic to read the data and display the expected value, proper coding implementation of dialog box/boxes, general aesthetics of user interface. Exception handling of the invalid input values (for example if no value is entered, or empty space is entered, or character value is entered where numeric is expected, the program should not crash), proper display of the user interface of the input values and the output values (min average, max average), should allow 2 places after the decimal, if appropriate, use of Yes, No, Cancel button.		3	
General Algorithm and Logic: Proper calculation of the min average and the max average, use of array (string, double), split function.		4	
		10	

Question 2

Requirements	Any comment provided by grader	Max Points Allowed	Points Earned
General Code Structure: Proper naming convention used for file, Comments used in the code to explain the purpose of the code, Indentation of the code for better readability, Good choice of variable names		3	
Input, Output, User Interface: Proper coding implementation of the logic to read the data and display the expected value, proper coding		3	

implementation of dialog box/boxes, general aesthetics of user interface. Exception handling of the invalid input data (program should not crash is empty space is entered, or no value is entered, or numeric value is entered with or without decimal when character is expected), proper display of the expected result, use of OK button, handle both upper case and lower case letters.			
General Algorithm and Logic: Proper elimination of the duplicate alphabets, concerting input to char array.		4	
		10	

Total _____/20