AP Computer Science Homework 10

Due date: Thursday, December 10, 2015
Instructor: Mr. Alwin Tareen

Part A: Determining the Minimum Value from an Array of Integers

- A group of friends decide to run the Beijing Marathon. Their names and finishing times(in minutes) are listed below:

Name	Finishing time
Elaine	341
Thomas	273
Hamilton	278
Suzie	329
Chad	445
Matt	402
Albert	388
Ezra	275
Jerry	243
James	334
Jane	412
Emily	393
Daniel	299
Neda	343
Aaron	317
Kate	265

- Your task is to create a program that determines the minimum finishing time from an array of integers.
- You will have to loop through the entire array of finishing times, and keep track of both the minimum value and the array index as you process each element. Once you have reached the end of the array, you will know what the minimum element is, as well as its corresponding array index.
- You must write a `calculateMin` method for the `Marathon` class. This method accepts an array parameter of type `int`, and it returns a single number of type `int`. This number is the array index that corresponds to the minimum finishing time.
- Two arrays have been provided for you: One containing the runners' names, and another containing the runners' finishing times.
- Once you have calculated the array index of the fastest runner, print the name and the finishing time. The output should look like the following:

```
Jerry 243
```

- You are provided with the files `Marathon.java` and `MarathonJUnitTest.java` to develop this program.
- Write your code in the area indicated by `//YOUR CODE HERE`.
- On your `BlueJ` project window, you should see a button labelled `Run Tests`. Press this button to run the `JUnit` tests.

- You should see a `BlueJ: Test Results` window pop up. If everything is correct, you should see a green bar that indicates that your code has passed the `JUnit` tests. If your program is incorrect, you will see a red bar. You can click on the method name to get more information about the problem. Otherwise, just click on the `Close` button, and you can go ahead and upload this program to `Web-CAT`.

Part B: Submission

- Submit your Java program `Marathon.java` by uploading it to the Web-CAT automated grading platform.