

AP Computer Science Homework 3

Due date: Monday, October 26, 2015

Instructor: Mr. Alwin Tareen

Part A: Calculating the Area of a Rectangle

- The following is the equation for calculating the area of a rectangle.

$$\text{area} = \text{length} \times \text{width}$$

- Write a Java program in the file `Rectangle.java` that calculates the area of a rectangle with `length = 5` and `width = 6`.
- This program is a little different than usual. You will write your solution in a method called `calculateArea()`, right below the place where it says: `YOUR CODE HERE`. Make sure that the product of the `length` and the `width` is placed in the variable `area`.
- Compile and run the `Rectangle.java` file, and make sure that you get a correct value of 30 on the terminal output. If you have made an error, correct the mistake, and then compile and run the `Rectangle.java` file again, until you get the right answer.
- Now, we are going to verify that we have a correct answer by using the `JUnit` testing feature of BlueJ.
- First, we must enable the `JUnit` testing feature. From your BlueJ project window, click on the `Tools` menu, then select `Preferences...`
- You should see the `BlueJ: Preferences` window pop up. Click on the `Interface` tab, and make sure that the checkbox corresponding to `Show unit testing tools` is checked. Then, click on the `OK` button at the bottom right-hand corner.
- On your BlueJ project window, you should see a new button labelled `Run Tests`. Go ahead and press this button.
- 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 by uploading it to the Web-CAT automated grading platform.