Software Development 1, Coursework 3

This is individual assessed coursework. You are allowed to discuss this assessment with other students, but you should not copy their code, and you should not share your own code with other students. Note that we will carry out plagiarism checks on all submissions.

This coursework contributes 12.5% of your overall mark for the course.

The **deadline for completing this work is** by Tuesday 3.30pm, week 10, November, 16th. You should submit your work for marking (whether you have completed everything or not) during your timetabled lab session. To do this, check your final solution into GitLab (as instructed in the familiarisation lab in Week 1) and use the lab form (via the link provided by your lecturer) to ask for marking. You will need to specify the URL of your GitLab project, which you can copy from the address field of your browser when viewing your project in a web browser.

Instructions

Go to https://gitlab-student.macs.hw.ac.uk/F27SA_2021-22/f27sa-coursework-3 in GitLab, fork the project, and import the forked project into Eclipse. Don't forget to fork the project; if you don't do this, you won't be able to save your changes back to Gitlab.
Save your changes to GitLab every time you get something working. If you later break something, this will make it easy for you to restore the earlier working version. Once you've finished, **make sure you save your code to GitLab**, and then show it to a lab helper or your lecturer during a timetabled lab session. If you have not been able to finish everything, please show us what you have been able to do, and save what you have completed to GitLab.

The src directory contains two java classes Circle.java and CircleTest.java which you can use as examples when working on your submission.

Your task is to design a class named **Rectangle** to represent a rectangle.

The class needs to contain:

Two double data fields named width and height that specify the width and height of the rectangle. The default values are 1 for both width and height.
A no-arg constructor that creates a default rectangle.
A constructor that creates a rectangle with the specified width and height.
A method named getArea() that returns the area of this rectangle.
A method named getPerimeter() that returns the perimeter.

Write a test program **RectangleTest** that creates two Rectangle objects—one with width 4 and height 40 and the other with width 3.5 and height 35.9.

Display the width, height, area,
and perimeter of each rectangle in this order.

You will get a mark out of 10 for your work, according to this marking scheme:

- 5 marks for correctly implementing **Rectangle**.
- 3 marks for correctly implementing **RectangleTest.**
- 1 mark if your code is well-formatted (including correct indentation)
- 1 mark if your code is appropriately commented