Lab 2

CSCI 132 Summer 2022

This lab has three parts. Upload your code to the Gradescope Lab2

1. Create the Lab 1 using maven quickstart archtype. You can either use command line to create the program or use Intellij Idea to do this. (2 points) Please include the pom file when you upload the lab
2. Create a **Calculator** **class** that can do the following. Note: Since the calculator class does not need to keep track of anything you can make a class which only has static methods. Therefore, create static method that can do the following tasks. Input values should be double values. Also create a Unit test for the Calculator class and create a test for feature (e) (Power of two numbers). The test should test whether static method that you use to calculate the power of two numbers work correctly.
   1. Add two numbers
   2. Subtract two numbers
   3. Multiply two numbers
   4. Take the modulo of two numbers
   5. Calculate the power of two numbers Ex: ab
   6. Calculate the square root of a given number
3. Create a class called Rectangle that does the following.
   1. Rectangle class should contain the width and height of a rectangle (create variables to keep these values in the class. Height and width should be double values)
   2. Rectangle class should have two constructors. First constructor needs to take height and width as parameters. Second constructor should only take one parameter, in which the object would be a square. Therefore, height and width would be equal.
   3. You should add a method to calculate the perimeter
   4. You should add a method to calculate the Area of the rectangle.
   5. Demonstrate above functionalities in a class called RectangleDemo. You can create different rectangle objects and call above methods. Make sure you try both the constructors.

Upload everything to Gradescope Lab2. If you have any questions, please let me know.