COP-2210 – Lab 10

Objective

Students will be able to develop Java programs that require the definition and use of class methods, by implementing exercises that involve method definition, method calls, parameters definition, and appropriate class definition.

Guidelines

- The assignment is to be completed in pairs.
- Questions are based on content discussed in the Lecture and book readings.
- NetBeans is the IDE of choice.
- Students are expected to attend each lab session and actively participate in the lab activities.
- Lab should be completed and submitted by the end of the lab time. Extra time would be considered on a case by case analysis and last day to submit would be Friday.
- To submit, upload your lab solutions to the dropbox in Canvas.
- Make sure you include the information of the developers as a comment in the first lines of each program of the lab:

Student Name: _____ Student Name: _____
Panther ID: _____ Panther ID: _____
Week: _____
Section: _____

Lab Questions

1) Write a **`printDate`** method that displays the current date. No value to be passed or returned. Test the method by invoking it from the class constructor.

Note: To obtain the current date, instantiate an object variable of type java.util.Date and print it.

2) Write a **`getChar`** method that asks the user to enter a character and then returns it. Test your method.

3) Write a **`rectangleArea`**, **`squareArea`**, and **`circleArea`** methods that calculate and print the area of a rectangle, a square, and a circle, respectively. These methods will have the following signature:

```
public void rectangleArea(double h, double w)
```
(**`h`** and **`w`** are the height and width of the rectangle, respectively)

```
public void squareArea(double s)
```
(**`s`** is the length of the side of the square)

```
public void circleArea(double r)
```
(**`r`** is the radius of the circle)

Test your methods. *Do not create three different projects; just add the three methods to the same class.*

4) (This exercise is a variation of the previous one) Write a **`rectangleArea`**, **`squareArea`**, and **`circleArea`** methods that calculate and *return* the area of a rectangle, a square, and a circle, respectively. These methods will have the following signature:

```
public double rectangleArea(double h, double w)

public double squareArea(double s)

public double circleArea(double r)
```

Test your methods by invoking them from the class constructor and printing in the constructor the values returned.

Grading Rubric

Lab grade is 16 points (out of 1000 total course points). Question weights are as follows:

Question	Points
1	3 pts
2	3 pts
3	5 pts
4	5 pts

Answers will be graded based on correctness, completion, and organization.