

## Workshop 7

### Description:

This assignment lets you practice basic Functional Programming and Lambda Expressions in Java.

In this assignment, you will be adding some code to the workshop 2 (shapes) as follows:

Task 4: Define a functional interface to calculate the area of a shape. Create an object of that interface in each of the **Circle**, **Square**, **Rectangle** classes, *using lambda expressions*.

Print all the shapes and their perimeters polymorphically, as you did in task 1 (don't forget that you are using *just one Shape* array) but in cases that the shape being printed is an object of these classes (i.e. **Circle**, **Square**, **Rectangle**), print their areas (*using the above mentioned objects you created*) as well.

### Marking Criteria and Tasks:

Please note that you should:

- a- have appropriate indentation.
- b- have proper file structures and modularization.
- c- follow Java naming conventions.
- d- document all the classes properly.
- e- not have debug/useless code and/or file(s) left in assignment.
- f- have good intra and/or inter class designs.

in your code!

- Task 4: **5 marks**.

### Deliverables and Important Notes:

You are supposed to show up AND hand in your solution in person (run the solution and/or answer related Qs) in lab 9.

In case you don't show up OR hand in/run the required task in the lab, you could submit your final solution (described below) on the same due date but note that there would be a 50% penalty! Late submissions would result in additional 10% penalties for each day or part of it.

In this case, you should zip *only the Java files* to a file named after your Last Name followed by the first 3 digits of your student ID. For example, if your last name is **Savage** and your ID is **354874345** then the file should be named **Savage354.zip**. Finally email your zip file to me at [reza.khojasteh@senecacollege.ca](mailto:reza.khojasteh@senecacollege.ca)

Remember that you are encouraged to talk to each other, to the instructor, or to anyone else about any of the assignments, but the final solution may not be copied from any source.