

## 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 workshop 3 (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 an 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: Developing and running the desired solution: (you should submit your source code - **just individual .java files, and screenshots** that demonstrate the way your code runs): 5 marks.

### Deliverables and Important Notes:

- You are supposed to **submit your solution online on Bb by the end of the day on Tuesday, 19<sup>th</sup> of July 2022.**)
- Please note that you would be allowed to **submit just once**, so please **be super careful and double-check before you hit submit.**
- There would be a **20% penalty** for each day (or part of it,) in case you submit late!
- 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 sources.**