OOP – Exercises #11
(lambda expressions, default methods in Java Collection Framework)

Task 1:

Create (or reuse from the previous exercices) a class that models an employee with the attributes *name* (String), *salary* (double), and *employmentDate* (java.time.LocalDate) and a class called *EmployeeLoader* with a static method List<Employee> loadFromFile(String fileName) that loads the employees from the file. Each line in the file is formatted as follows.

```
Name;Salary;year;month;day
```

If the file does not exist, return an empty list.

Write a main program with a method that performs an action on pairs of employees selected by criteria unknown (at the time of writing) to the method.

Demonstrate the method with the implementation where the action is to print the pairs and as criteria we choose pairs of junior employees (less than two years of work experience) which salary differs by more than 20%.

Task 2:

You have been provided with a static method

> *Map<String, Map<String, Integer>> loadData()*

In the *Loader* class. The method returns the students' grades for each course. The keys are the names of the courses, and the values are maps with the students' names as keys and students' grades as values.

Write a main program with two methods

- *Map<String, Double> getAverageGrades(Map<String, Map<String, Integer>> map)* which returns a map whose keys are the students' names, and the values are their averages
- *void increaseGrades(Map<String, Map<String, Integer>> map, String courseName)* which increases the grades of the course. Use the *compute* method of the *Map* interface. Note: the grade cannot be higher than 5.

Task 3*:

Write an *Iterable* decorator that skips even numbers during iteration

The solutions are available at

1. https://github.com/FER-OOP/Lectures/tree/master/Exercises/11_LambdaExpressions/src/main/java/hr/fer/oop/task1
2. https://github.com/FER-OOP/Lectures/tree/master/Exercises/11_LambdaExpressions/src/main/java/hr/fer/oop/task2
3. https://github.com/FER-OOP/Lectures/tree/master/Exercises/11_LambdaExpressions/src/main/java/hr/fer/oop/task3