

JAVA PROGRAMMING LAB

Exercises on 'Interface' – 03.10.2024

1. Define a class called Movie with attributes:

- The movie name
- The number of people who have rated this movie as a 1 (Terrible)
- The number of people who have rated this movie as a 2 (Good)
- The number of people who have rated this movie as a 3 (Great)
- A method addRating that takes an integer as an input parameter. The method should verify that the parameter is a number between 1 and 3, and if so, increment by one the number of people rating the movie that matches the input parameter.

```
Public interface RatingScore {  
    maximum possible rating = 3;  
    double getAverageRating();  
  
};
```

Implement interface RatingScore in Movie

Implement interface comparable and find the movie title that has highest average rating

Create a collection of Movie and sort the Album such that it orders Movie objects based on the lexicographic ordering of the name variable.

Define Test class to create objects of Movie and invoke the methods.

2. Define abstract class called DepartmentFaculty whose data members are: departmentName(String), facultyName(String) and years_exp(double) and member functions are: constructor with two arguments, toString() that prints the Department information.

Inherit the following classes:

TeachingFaculty with members: designation (String), salary(double) and constructor with two arguments, toString() that prints the TeachingFaculty information

NonTeachingFaculty with members: designation (String), wagesperday(double), no_days(integer) and constructor with two arguments, calculatSalary() that finds the total salary based on number of days worked, toString() that prints the NonTeachingFaculty information

Both the classes implement interface Bonus defined as follows:

```
public interface Bonus{  
  
    public double calculateBouns();  
  
}
```

The bonus is given as 10% of salary for the TeachingFaculty and 25 % of salary for NonTeachingFaculty. Write a main method to test the class instances.