

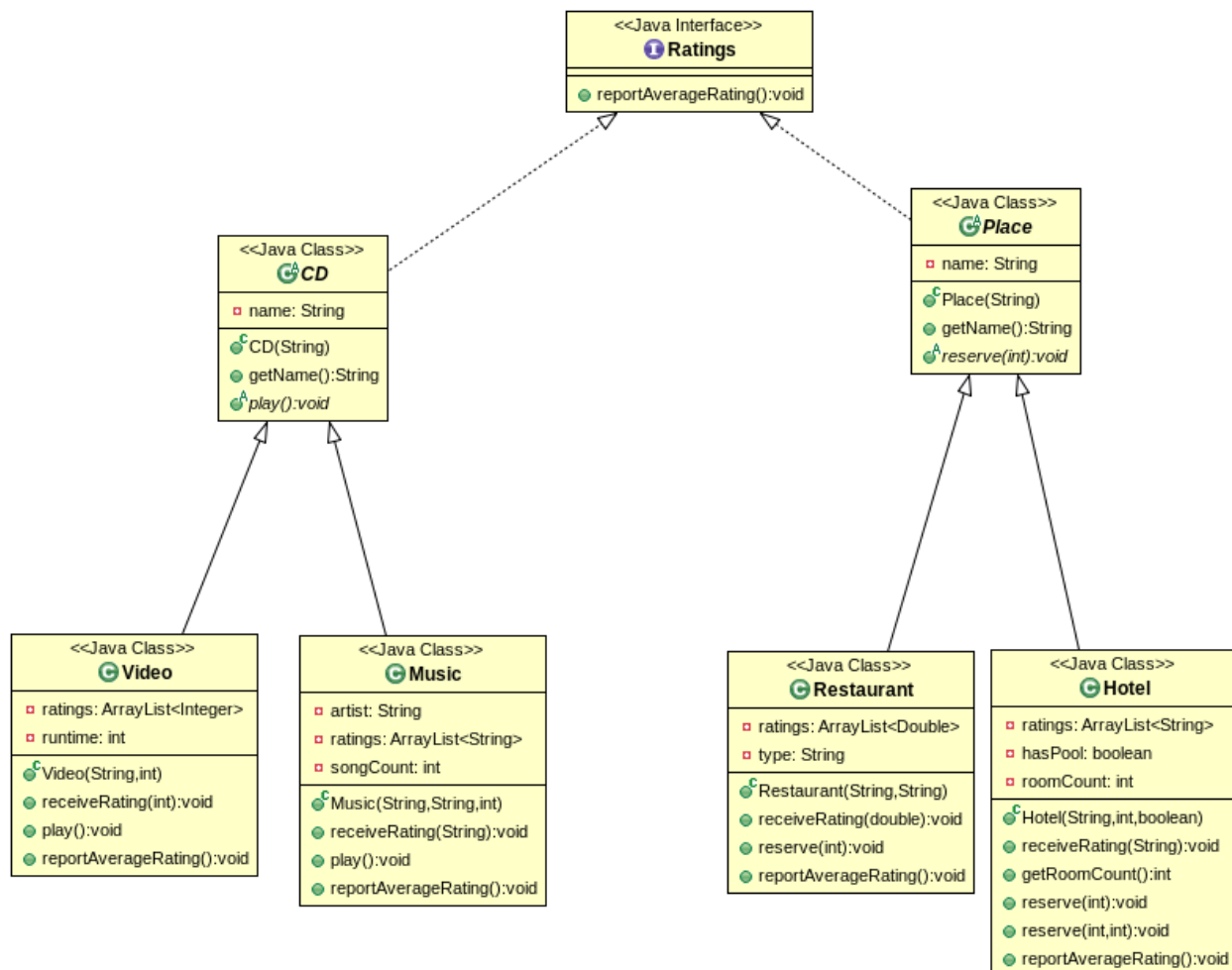
CS 102 – Homework 03



Due Date: November 28, 23:55

In this assignment you are going to implement the classes shown in the UML diagram given below. This UML diagram gives most of the details necessary to implement these classes. Even though UML diagrams are very descriptive, they still do not give implementation details about the member functions. For specific implementation details, use the given main class and its output.

UML Diagram:



This UML diagram is a little bit different than what we have learned at the class. In this UML diagram green color indicates *public* and red color indicates *private*. Ratings is an *interface*. CD and Place are *abstract classes*.

Test Class:

```
public class Test {
    public static void main(String[] args){

        Video LOR = new Video("Lord of the Rings", 180);
        System.out.println("-----");
        LOR.play();
        System.out.println("-----");
        LOR.receiveRating(5);
        LOR.receiveRating(3);
        LOR.receiveRating(4);
        System.out.println("-----");
        LOR.reportAverageRating();
        System.out.println("-----");

        System.out.println("");

        Music AV = new Music("Ahde Vefa", "Tarkan", 13);
        System.out.println("-----");
        AV.play();
        System.out.println("-----");
        AV.receiveRating("three star");
        AV.receiveRating("one star");
        AV.receiveRating("two star");
        AV.receiveRating("two star");
        System.out.println("-----");
        AV.reportAverageRating();
        System.out.println("-----");

        System.out.println("");

        Restaurant Bogaz = new Restaurant("Bogazici", "Turkish
Cuisine");
        System.out.println("-----");
        Bogaz.reserve(10);
        System.out.println("-----");
        Bogaz.receiveRating(10.0);
        Bogaz.receiveRating(7.0);
        System.out.println("-----");
        Bogaz.reportAverageRating();
        System.out.println("-----");

        System.out.println("");

        Hotel Ist = new Hotel("Istanbul", 50, true);
        System.out.println("-----");
        Ist.reserve(2);
        System.out.println("-----");
        Ist.reserve(4, 3);
        Ist.receiveRating("two star");
        Ist.receiveRating("two star");
        Ist.receiveRating("one star");
        Ist.receiveRating("three star");
        Ist.receiveRating("three star");
        System.out.println("-----");
        Ist.reportAverageRating();
        System.out.println("-----");

    }
}
```

Output:

```
-----
Playing the Video: Lord of the Rings
The running time is 180 minutes.
-----
Rating received!
Rating received!
Rating received!
-----
Average rating of the movie is 4.0
-----

-----
Playing Tarkan's album Ahde Vefa
The are 13 number of songs.
-----
Rating received: three star
Rating received: one star
Rating received: two star
Rating received: two star
-----
Ratings of the music CD:
three star: 1
two star: 2
one star: 1
-----

-----
Your reservation at Bogazici restaurant.
A table is reserved for a party of 10.
-----
Rating 10.0 received!
Rating 7.0 received!
-----
Average rating of the restaurant is 8.5
-----

-----
Your reservation at Istanbul hotel for one night.
A room is reserved for 2 people.
-----
Your reservation at Istanbul hotel for 3 nights.
A room is reserved for 4 people.
Rating received!
Rating received!
Rating received!
Rating received!
Rating received!
-----
Average rating of the hotel is 2.2
-----
```

Additional Details:

- A music CD and a hotel can only receive one of the following ratings: “one star”, “two star” and “three star”. How they display the average rating is different.

Submission Instructions:

- Please **DO NOT** include a main method in your homework. If you have a main method in one of the class please remove it before you submit your homework. You are allowed to test your classes by writing a main for your homework, but make sure to remove them before submission. We have our own Test class to test and grade your homework.
- You will submit this homework via the LMS system. You should follow the file-naming conventions and guidelines below. In case you don't your assignment can fail the automatic grading tools and so you may lose significant points in your grade.
- You should submit your source files as a **ZIP** archive file (**NOT** RAR or other formats). The name of the file should be in format “<USER-ID>_hw<HOMEWORK-NR>.zip”. For example, if your username is un1234, then the name of the submitted file should be “un1234_hw02.zip”. Pay attention that all the letters are in lower-case. ZIP archive is supposed to contain **just the java files**, no folders are allowed by any means.
- Late submissions, missing submissions and source files that do not compile are **not** accepted and will receive 0 as the grade. After submission, download your assignment file to a location different than where your original assignment codes are. Make sure that the downloaded files contain everything to compile/build your assignment.
- You can resubmit your homework (until the deadline) if you need to.

Final Controls Before Submission:

- Do not upload *.class files. These files can't be graded and you will get 0.
- Only use zip format. (rar, 7z, tar, vs. not allowed)
- Do not zip the whole Eclipse project.
- Do not zip src folder. Select the java files and zip them directly.
- Name your classes "exactly" the same as stated above. Capitalization of letters are important, too. (Do the same for the methods if stated in the pdf)
- Do not upload a main class.