

CSE 2102: Introduction to Software Engineering

Objects & Classes

Assigned: February 23, 2023, Due: March 2, 2023

Consider a class `Movie` that contains information about a movie. The class has the following attributes:

- The movie name
- The MIPAA rating
- The number of people that have rated this movie as a 1 (Terrible)
- The number of people that have rated this movie as a 2 (Bad)
- The number of people that have rated this movie as a 3 (OK)
- The number of people that have rated this movie as a 4 (Good)
- The number of people that have rated this movie as a 5 (Great)

Implement the class according to the following specifications:

- Write a constructor that creates the class with movie name, and MIPAA rating. All the ratings should be set to their default values of 0.
- Write a method `addRating(int)` that takes an integer as an input parameter. The method should verify that the parameter is a rating between 1 and 5, and if so, increment by 1 the number of people rating the movie that match the input parameter. For example, if 3 is the input parameter, then the number of people that rated the movie 3 should be incremented by 1. If the rating is not between 1 and 5 (inclusive) it must be ignored.
- Write another method `getAverage()` that returns the average value for all the ratings.

Write a test client `TestMovieRating.java` to test the class. The test client should prompt the user to:

- Input the name of the movie.
- Input the MIPAA rating of the movie.
- Keep prompting the user to enter the rating for the movie, until the user enters -1.

Once the user enters -1, the client prints the name of the movie, the MIPAA rating, and the average rating.

Input cmd:

```
java MovieTestRating
```

Output

```
Enter the name of the movie: The Hunger Games
Enter the MIPAA rating of the move: PG-13
Enter the rating of the movie (1 to 5, -1 to exit): 10
Incorrect rating

Enter the rating of the movie (1 to 5, -1 to exit): 1
Enter the rating of the movie (1 to 5, -1 to exit): 2
Enter the rating of the movie (1 to 5, -1 to exit): 3
Enter the rating of the movie (1 to 5, -1 to exit): 4
Enter the rating of the movie (1 to 5, -1 to exit): 5
Enter the rating of the movie (1 to 5, -1 to exit): -1

Name of the movie: The Hunger Games
MIPAA Rating: PG-13
Average Rating 3.00
```

Submission

The following deliverables must be submitted on HuskyCT by midnight on March 2, 2023.

- a) Java and class files, Java files should be well-documented.
- b) At least 2 test cases that you used to test the code. These should be submitted as screenshots.
- c) Please make sure that your code compiles, we will test your code offline with specific test cases (common to all).
- d) Late submissions (without any legitimate excuse) will incur a penalty of 10% per day.