

CS 1083

Assignment #5

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1. Source Code

a. MovieReporter.java

```
import java.util.Scanner;
import java.util.InputMismatchException;
import java.io.PrintWriter;
import java.io.FileNotFoundException;
import java.io.File;

/**
 * Creates a report on movies.
 *
 * @author Yulong Wang
 * @date 2021/10/20
 */
public class MovieReporter {
    /**
     * @param args Terminal parameters
     */
    public static void main(String[] args) {
        //create a set to organize Genres
        GenreSet genres = new GenreSet();
        File reader = new File("genrerating.txt");
        File writer = new File("errorLog.txt");
        try{
            Scanner sc = new Scanner(reader).useDelimiter("[~|\\n]");
            sc.nextLine();
            PrintWriter pw = new PrintWriter(writer);
            // skip the first line
            int lineNumber = 1;
            // read the file
            while(sc.hasNext()){
                lineNumber++;
                try{
                    String genreName = sc.next(".+");
                    double totalPoints = sc.nextDouble();
                    int ratings = sc.nextInt();
                    String movieName = sc.next(".+");
                    Movie movie = new Movie(movieName,totalPoints,ratings);
                    Genre g = new Genre(genreName);
                    try{
                        genres.addGenre(g);
                    }catch (DuplicateGenreException e){
                        g = genres.get(genres.genreIndex(g));
                    }
                    try{
                        g.addMovie(movie);
                    }catch (DuplicateMovieException e){
                        pw.println(e.getMessage());
                    }
                }
            }
        }
    }
}
```

```

        }catch(InputMismatchException e){
            pw.println("problem reading line: "+lineNumber);
//            skip this line
            sc.nextLine();
        }
    }
    pw.close();
    sc.close();
}catch (FileNotFoundException e){
    System.out.println("Not able to write or read to/from the file.");
}
genres.sort();
System.out.println("TOP MOVIE GENRES");
System.out.println("=====");
for(int i=genres.length()-1;i>-1;i--){
    Genre foo = genres.get(i);
    System.out.printf("%d. %s, contains: %d movies, avg. rating: %.2f \n
%s%s; average rating: %.2f \n",
        -(i+10),foo.getName(),foo.length(),foo.calcAvgRating(),"",
        foo.getHighestRated().getName(),foo.getHighestRated().getAvgRating()
    );
}
}
}

```

b. DuplicateGenreException.java

```

/**
 * @author Yulong Wang
 * @date 2021/10/20
 */
public class DuplicateGenreException extends Exception{
    /**
     * @param message the error message
     */
    public DuplicateGenreException(String message) {
        super(message);
    }
}

```

c. DuplicateMovieException.java

```

/**
 * @author Yulong Wang
 * @date 2021/10/20
 */
public class DuplicateMovieException extends Exception{
    /**
     * @param message The error message
     */
    public DuplicateMovieException(String message) {

```

```
        super(message);
    }
}
```

2. Output & Error Log

a. Output

```
(base) yulongwang@mackenzies-air src % java MovieReporter
TOP MOVIE GENRES
=====
1. Mystery, contains: 40 movies, avg. rating: 3.34
    Rear Window (1954); average rating: 4.39
2. Animation, contains: 29 movies, avg. rating: 3.32
    Close Shave, A (1995); average rating: 4.49
3. Romance, contains: 170 movies, avg. rating: 3.30
    Casablanca (1942); average rating: 4.46
4. Drama, contains: 471 movies, avg. rating: 3.27
    Entertaining Angels: The Dorothy Day Story (1996); average rating: 5.00
5. Sci-Fi, contains: 76 movies, avg. rating: 3.24
    Star Kid (1997); average rating: 5.00
6. Thriller, contains: 176 movies, avg. rating: 3.14
    Close Shave, A (1995); average rating: 4.49
7. Comedy, contains: 355 movies, avg. rating: 3.09
    Close Shave, A (1995); average rating: 4.49
8. Action, contains: 188 movies, avg. rating: 3.01
    Star Wars (1977); average rating: 4.36
9. Fantasy, contains: 16 movies, avg. rating: 2.98
    Star Kid (1997); average rating: 5.00
10. Horror, contains: 63 movies, avg. rating: 2.65
    Psycho (1960); average rating: 4.10
```

b. Error Log

```
Face/Off (1997) is already in the genre Action
Hugo Pool (1997) is already in the genre Romance
Hurricane Streets (1998) is already in the genre Drama
problem reading line: 855
problem reading line: 862
Nightwatch (1997) is already in the genre Horror
Nightwatch (1997) is already in the genre Thriller
That Darn Cat! (1997) is already in the genre Comedy
That Darn Cat! (1997) is already in the genre Mystery
Money Talks (1997) is already in the genre Action
Money Talks (1997) is already in the genre Comedy
```