Programming I
Assignment 3

Question 1:

1. Write an application that uses an array data structure to store 12 numerical values entered by the uses. Each of these values represents the amount of rainfall for a particular month of the year. The application should calculate and output the average rainfall for the 12 month period. The output should resemble the following:

```
<terminated> Rainfall [Java Application] /System/Library/J
Enter rainfall in cm for month 1 116.7
Enter rainfall in cm for month 2 87.8
Enter rainfall in cm for month 3 94.7
Enter rainfall in cm for month 4 72.0
Enter rainfall in cm for month 5 75.3
Enter rainfall in cm for month 6 79.6
Enter rainfall in cm for month 7 86.5
Enter rainfall in cm for month 8 107.8
Enter rainfall in cm for month 9 100.3
Enter rainfall in cm for month 10 128.9
Enter rainfall in cm for month 11 120.3
Enter rainfall in cm for month 12 123.2
Annual Average Rainfall:99.43
```

Question 2

```java
public class Movie {

    String title;
    String genre;
    int rating;

    public void playIt(){
        System.out.println("Playing the Movie");
    }
}
```

a. Rewrite the Movie class shown above and make the instance variables *private*. Write I appropriate overloaded constructors; getter and setter methods for each of the private data members and an overridden toString() method.

b. You application should include a tester/driver class, which creates three instances of the Movie class and stores them in an array. Your tester class should use a *for* loop to set the title, genre and rating of the Movie objects. You should also use a *for* loop to traverse the array and display the title, genre and rating for each element of the array and call the *playIt()* method for each object. Your output should look something like the screenshot below but use different names etc.

```
Please enter the title of movie 1: Step Brothers
Please enter the genre of movie 1: Comedy
Please enter the rating (1-5) for movie 1: 4
Please enter the title of movie 2: The Big Lebowski
Please enter the genre of movie 2: Crime Comedy
Please enter the rating (1-5) for movie 2: 5
Please enter the title of movie 3: O Brother, Where Art THou?
Please enter the genre of movie 3: Adventure Comedy
Please enter the rating (1-5) for movie 3: 4
Movie 1  Title: Step Brothers
Movie 1  Genre: Comedy
Movie 1 Rating: 4
Step Brothers - Now playing
Movie 2  Title: The Big Lebowski
Movie 2  Genre: Crime Comedy
Movie 2 Rating: 5
The Big Lebowski - Now playing
Movie 3  Title: O Brother, Where Art THou?
Movie 3  Genre: Adventure Comedy
Movie 3 Rating: 4
O Brother, Where Art THou? - Now playing
```