

# Assignment 04

CS 364 | Fall 2017

For this assignment, you will be developing the SQL statements to set up and populate a database, followed by developing a Java program to access and modify the database. You will be submitting a single `.sql` file and an Eclipse project archive (i.e., `.zip` file). Below is the information for part 2; part 1 has already been released on D2L. This assignment uses MySQL and Java. Your assignment (the combination of parts 1 and 2) is due **November 17** at 11 PM.

## Part 2: Building the Application

Next, open Eclipse. Create a new project called `cs364-assign04-<lastname>`. Create a Java class called `MovieReview`; this is where your `main` method should be located. The implementation of the remainder of this assignment is at your discretion, provided you use JDBC to connect to a local MySQL instance with the credentials outlined in the previous section<sup>1</sup>.

For this part of the assignment, you will be writing a console-based application to add, remove, and modify data in the database. Particular functionality is outlined below:

- The console should provide a menu of options for the user and respond appropriately.
- Option 1 should allow the user to add a movie.
- Option 2 should allow the user to add actors and what movies they starred in.
- Option 3 should list the top N grossing movies, where N is provided by the user, ordered from most to least grossing.
- Option 4 should get information for a movie (including who starred in it and reviews).
- Option 5 should allow the user to add a review (timestamped for today).
- Option 6 should allow the user to terminate the program.

Additional notes and assumptions for this program:

- You can assume all input will be “good” input, i.e., you do not need to worry about error checking for “bad” input.
- Dates will always be entered in the format YYYY-MM-DD. Example: 2017-01-01.
- Dates should be handled in Java using the `LocalDate` class. Potentially useful code snippets below:

```
// returns a date object holding today's date
Date.valueOf(LocalDate.now())

// parses a date value read in from the user (not shown here)
// into a LocalDate object
DateTimeFormatter dtf = DateTimeFormatter.ofPattern("yyyy-MM-dd");
dtf = dtf.withLocale(Locale.US);
LocalDate releaseDate = LocalDate.parse(date, dtf);
```

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<sup>1</sup>If you will be using SQLite for this assignment, please leave me a note in the D2L dropbox when submitting indicating as much!

- Dates should be handled with JDBC by calling the `setDate` method for the `PreparedStatement`.
- You can assume any monetary values will never exceed the billions.
- Monetary values should be entered without dollar signs or commas.
- You can assume actors have single word first and last names. So, examples of names you do not need to handle are “Mary Jo Smith” or “James Van Patten”.
- You can assume there is only a single blank line between parts of the output where there is obviously blank lines.
- You will not be generating full functionality for everything you could imagine doing with this program/database. Please only implement the parts outlined above.
- You can assume that each prompt spans a single line; line breaks in the examples below are due to space constraints.
- **You can assume that each example run of the program below starts with the tables/data outlined in part 1.**

Below are example runs of the program, one for handling each possible option from above (all runs show the functionality of option 6). Note that, although these are each shown separately, your program should be capable of handling multiple choices for options over a single execution of the program (e.g., you can add an actor, then use that actor when adding a movie); the last example shows this behavior.

**Option 1**

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 1

Enter the name of the movie: Star Trek XIII

Enter its gross earnings: 3289743.82

Enter the date released: 2017-01-01

Enter the first and last name of an actor in the movie (enter "done" if finished): Emily Jenson

Enter the first and last name of an actor in the movie (enter "done" if finished): John Smith

Enter the first and last name of an actor in the movie (enter "done" if finished): done

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 6

Thank you for using the movie review system!

**Option 2**

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 2

Enter the first and last name of the actor: Ruby Picardo

Did this actor have another name they were credited under? If so, enter it.  
Otherwise, enter "no": no

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 6

Thank you for using the movie review system!

**Option 3** (note that there are four tabs between each movie and its gross)

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 3

How many of the top earning movies would you like to display? 5  
The Wild West                      \$6,502,831.03

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 6

Thank you for using the movie review system!

**Option 4** (note the formatting here; actors have one tab before they are displayed)

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 4

Which movie would you like information on? The Wild West

The Wild West (released: 2004-10-05; grossed: \$6,502,831.03)

Starring:

John Smith  
Emily Jenson

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 6

Thank you for using the movie review system!

**Option 5**

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 5

Which movie would you like to write a review for? The Wild West

Please provide your review here: It was OK.

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 6

Thank you for using the movie review system!

## Longer Run

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 2

Enter the first and last name of the actor: Remus Reynolds

Did this actor have another name they were credited under? If so, enter it.

Otherwise, enter "no": Remy

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 1

Enter the name of the movie: Star Trek XIII

Enter its gross earnings: 3297321.99

Enter the date released: 2017-01-01

Enter the first and last name of an actor in the movie (enter "done" if finished): Remus Reynolds

Enter the first and last name of an actor in the movie (enter "done" if finished): John Smith

Enter the first and last name of an actor in the movie (enter "done" if finished): Emily Jenson

Enter the first and last name of an actor in the movie (enter "done" if finished): done

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 5

Which movie would you like to write a review for? Star Trek XIII

Please provide your review here: Halfway decent. Good score.

Would you like to...

1. Add a movie?
2. Add an actor?

3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 4

Which movie would you like information on? Star Trek XIII

Star Trek XIII (released: 2017-01-01; grossed: \$3,297,321.99)

Starring:

John Smith  
Emily Jenson  
Remus Reynolds

Review by movieJunkie (2017-11-10)  
Halfway decent. Good score.

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 1

Enter the name of the movie: Sail Away

Enter its gross earnings: 374683.28

Enter the date released: 2015-06-23

Enter the first and last name of an actor in the movie (enter "done" if finished): Emily Jenson

Enter the first and last name of an actor in the movie (enter "done" if finished): done

Would you like to...

1. Add a movie?
2. Add an actor?
3. List the top earning movies?
4. Get information and reviews for a movie?
5. Write a new review? (currently logged in as movieJunkie)
6. Logout of this session?

Enter your option here: 1

Enter the name of the movie: Robots

Enter its gross earnings: 2753894.10

Enter the date released: 2001-09-19

Enter the first and last name of an actor in the movie (enter "done" if finished): Remus Reynolds

Enter the first and last name of an actor in the movie (enter "done" if finished): done



```
Would you like to...
  1. Add a movie?
  2. Add an actor?
  3. List the top earning movies?
  4. Get information and reviews for a movie?
  5. Write a new review? (currently logged in as movieJunkie)
  6. Logout of this session?

Enter your option here: 3

How many of the top earning movies would you like to display? 10
The Wild West          $6,502,831.03
Star Trek XIII         $3,297,321.99
Robots                  $2,753,894.10
Sail Away               $374,683.28

Would you like to...
  1. Add a movie?
  2. Add an actor?
  3. List the top earning movies?
  4. Get information and reviews for a movie?
  5. Write a new review? (currently logged in as movieJunkie)
  6. Logout of this session?

Enter your option here: 3

How many of the top earning movies would you like to display? 2
The Wild West          $6,502,831.03
Star Trek XIII         $3,297,321.99

Would you like to...
  1. Add a movie?
  2. Add an actor?
  3. List the top earning movies?
  4. Get information and reviews for a movie?
  5. Write a new review? (currently logged in as movieJunkie)
  6. Logout of this session?

Enter your option here: 6

Thank you for using the movie review system!
```

### Part 3: Submission

Once you have finished with your program, copy and paste your `.sql` file from Part 1 into the folder where your Eclipse project is. In Eclipse, export this entire project as `cs364-assign04-<lastname>`, where `<lastname>` should be replaced with your last name in camelcase. For example, if your last name is "Von Neumann," your submission will be named `cs364-assign04-vonNeumann`. Be sure that the `.sql` file is also exported. Were you to then unzip your Eclipse archive, you should procure a single folder whose directory structure looks as follows:

`cs364-assign04-<lastname>` (folder)

```
db.sql
/bin
    MovieReview.class
/src
    MovieReview.java
```

**You should only be uploading a single .zip file to D2L.**

**Grading:**

Your assignment will be graded on correctness of queries, correct submission format, readability of queries (e.g., are keywords capitalized? is the query not indented in an unusual way?), and correct Java code/functionality as outlined above.