

SQL Lab: Assignment 5

(due to 08./09.02.2010)

General Information

This week, we will do some Java programming. For that task, we again recommend that you use a Java IDE (e.g. [Netbeans](#) or [Eclipse](#)). However, you are free to use any tools for programming you prefer. Besides an IDE, you obviously will need a [Java SE JDK](#) (use version 6 or newer). After you got your IDE up and running, you should get the DB2 JDBC driver.

During the course of the exercise, you are to write a little Java program. Please send the .java files of your program via **e-mail** to your tutor. Please note that your tutor must be able to inspect your program easily – so take care that you package everything needed to **compile** and **run** it. If something special has to be done to compile or run your code, please **document** this. Also, you are required to **comment** sections of your program code (using Java comments) so that it is easy to understand by others (in particular by your tutor). If your code cannot be compiled or run easily or is not well documented/commented, you will receive the grade –1.

It is part of this exercise to look up all necessary commands and methods the lecture did not cover in depth. The easiest way for this probably is referring to [the Java API documentation](#) which can be found online. Moreover, many Java and JDBC tutorials can be found on the Web.

Tasks

- a) Write a Java method establishing a connection to our DB2 database. The Connection object is to be returned by the method.

Signature should look like this:

***public** Connection getDBLABConnection() **throws** SQLException*

Hint: Set the retrieveMessagesFromServerOnGetMessage property to true during connection initialization in order to obtain verbose exceptions from the JDBC driver.

- b) Create a new program (which, of course, may use the connect method of part a) doing the following: After being started the user is asked to enter an actor/actress name. Then, all movies and the corresponding years of this actor/actress are returned showing the newest movies first. Plain console input/output is enough.
- c) Create a program showing your favorite movies. The program has to provide the following features:
 - Search for movies in the IMDb database by entering a movie title.
 - Declare movies in the result set as favorite movies.



- If the movie type is TV episode, also the related series has to be added.
- Show favorite movies including all attributes from the IMDb movies table and the corresponding rating (Ratings.rating). Print it nicely so that one can get a quick overview of all movies.
- Delete movies from the favorites list.
 - If the movie type is TV episode, also the related series has to be deleted.
 - If the movie type is series, also all episodes have to be removed.

To achieve these task do the following steps:

- Use prepared statements wherever possible!
- Create a table *favorite_movies* in your database schema including only the IDs of your favorite movies. When inserting a movie that is a TV episode, also the related series has to be added! You have to avoid that it is possible that a TV episode entry is stored in the table without the related series entry (use transactions!). *Hint: Remember what we have learned about auto-commit in lecture 11.*
- Create a view including all IDs of your favorite movies and at least all attributes from the IMDb title table. Use this view for the “show all favorite movies” feature.

Do the following task to test your program:

- Search for all movies containing the String “Star Wars” in their title.
- Add the movie “Star Wars: The Empire Strikes Back” to your favorite list.
- Search for the TV series “The King of Queens”, episode “Depo Man”.
- Add it to your favorite list.
- Show your favorite list (3 entries should be included)
- Delete the **series** “The King of Queens” from your favorite list.
- Show your favorite movie list (only “Star Wars” should be left)

Important note: It is not necessary to build a GUI for your program. A text interface is also fine. You can use the Scanner class to read keyboard input.