**CSE3207 Project #1**

**Implementation of a simple database application**

* Assignment Date: March 19th, 2019
* Due Date: April 27, 2019
* TA: 진영화, Yeong-Hwa Jin ([jyh2378@naver.com](mailto:jyh2378@naver.com))
* Weight: 15% of the course grade.
* Please read this description carefully.

**I. Relational tables**

The following relational tables show information about a movie, an actor, a director, an award, and a customer. The underlined attributes are the primary key of a table. In the movie table, a value of ‘avgRate’ column should be automatically calculated when a customer gives a rate.

director(directorID, directorName, dateOfBirth, dateOfDeath)

actor(actorID, actorName, dateOfBirth, dateOfDeath, gender)

movie(movieID, movieName, releaseYear, releaseMonth, releaseDate, publisherName, avgRate)

award(awardID, awardName)

genre(genreName)

movieGenre(movieID, genreName)

movieObtain(movieID, awardID, year)

actorObtain(actorID, awardID, year)

directorObtain(directorID, awardID, year)

cast(movieID, actorID, role)

make(movieID, directorID)

customerRate(customerID, movieID, rate)

customer(customerID, customerName, dateOfBirth, gender)

**II. Queries**

Translate the following statements into SQL and process the query using an application.

After processing the each statement, you should show the results for inserts/deletes/updates queries and the updated tables.

1. Create the tables and insert the proper data based on the provided data. You should make the movie, actor, director, and customer tables first and insert data into other related tables.

2. Insert the proper data from the following statements.

2.1. Winona Ryder won the “Best supporting actor” award in 1994

2.2. Andrew Garfield won the “Best supporting actor” award in 2011

2.3. Jesse Eisenberg won the “Best main actor” award in 2011

2.4. Johnny Depp won the “Best villain actor” award in 2011

2.5. Edward Scissorhands won the “Best fantasy movie” award in 1991

2.6. Alice In Wonderland won the “Best fantasy movie” award in 2011

3. Insert data to the proper tables based on the following statements and update avgRate if necessary.

3.1 Bob rates 5 to “The Dark Knight”.

3.2 Bell rates 5 to the movies whose director is “Tim Burton”.

3.3 Jill rates 4 to the movies whose main actor is female.

3.4 Jack rates 4 to the fantasy movies.

4. Select the names of the movies whose actor are dead.

5. Select the names of the directors who cast the same actor more than once.

6. Select the names of the movies and the genres, where movies have the common genre.

7. Delete the movies whose director or actor did not get any award and delete data from related tables.

8. Delete all customers and delete data from related tables.

**III. Implementation environment**

Programming Languages: C/C++/Java

DBMS: MySQL (mandatory)

JDBC download links: https://dev.mysql.com/downloads/connector/j/

ODBC download links: https://dev.mysql.com/downloads/connector/odbc/

**IV. Submission**

1. Files to submit:

A. Program source files

B. README.doc

- What you have implemented and what you have not

- Brief explanation of your implementation (less than 1 page)

- How to compile and run

- Display result for all queries

- Talk about your experience of doing this project

- Write your available contact information such as phone number (just in case)

2. Due date: April 27, 2019 Midnight

3. Penalty: 20% per day

4. Score

A. Create table processing (20%)

B. Insert processing (20%)

C. Update processing (15%)

D. Query processing (15%)

E. Delete processing (15%)

F. README and comment (15%)

**V. Initial data**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Movie** | | | | | | |
| **Name** | **Director** | **Actor** | **Role** | **Genre** | **Publisher** | **Release date** |
| Edward Scissorhands | Tim Burton | Johnny Depp | Main actor | Fantasy, Romance | 20th Century Fox Presents | 1991.06.29 |
| Winona Ryder | Main actor |
| Alice In Wonderland | Tim Burton | Johnny Depp | Main actor | Fantasy, Adventure, Family | Korea Sony Pictures | 2010.03.04 |
|
| Anne Hathaway | Main actor |
| The Social Network | David Fincher | Jesse Eisenberg | Main actor | Drama | Korea Sony Pictures | 2010.11.18 |
| Andrew Garfield | Supporting Actor |
| The Dark Knight | Christopher Nolan | Christian Bale | Main actor | Action, Drama, Mystery, Thriller | Warner Brothers Korea | 2008.08.06 |
|
| Heath Ledger | Main actor |
|

|  |  |  |
| --- | --- | --- |
| **Director** | | |
| **Name** | **Date of birth** | **Date of death** |
| Tim Burton | 1958.8.25 |  |
| David Fincher | 1962.8.28 |  |
| Christopher Nolan | 1970.7.30 |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Actor** | | | |
| **Name** | **Date of birth** | **Date of death** | **Gender** |
| Johnny Depp | 1963.6.9 |  | Male |
| Winona Ryder | 1971.10.29 |  | Female |
| Anne Hathaway | 1982.11.12 |  | Female |
| Christian Bale | 1974.1.30 |  | Male |
| Heath Ledger | 1979.4.4 | 2008.1.22 | Male |
| Jesse Eisenberg | 1983.10.5 |  | Male |
| Andrew Garfield | 1983.8.20 |  | Male |

|  |  |  |
| --- | --- | --- |
| **Customer** | | |
| **Name** | **Date of birth** | **Gender** |
| Bob | 1997.11.14 | Male |
| John | 1978.01.23 | Male |
| Jack | 1980.05.04 | Male |
| Jill | 1981.04.17 | Female |
| Bell | 1990.05.14 | Female |