# **CSCI X370: Database Management**

## **Small Project: SQL Programming in Java (JDBC) and MySQL**

The Employees sample database was developed by Patrick Crews and Giuseppe Maxia and provides a combination of a large base of data (approximately 160MB) spread over six separate tables and consisting of 4 million records in total. The database schema is as follows:



You should follow instructions here to download and populate your MySQL database:

https://dev.mysql.com/doc/employee/en/

Secondly, you will need to implement a simple front-end (don’t use a **web** front-end; regular text-based or graphical interface is ok) to get user input for queries when necessary and display output data.

The SQL queries to be implemented in the application are as follows:

* Find 1 degree of separation between 2 given employees E1 and E2:
  + 1 degree: E1 --> D1 <-- E2 (E1 and E2 work at department D1 at the same time)
* Find 2 degrees of separation between 2 given employees E1 and E2:
  + 2 degrees: E1 --> D1 <-- E3 --> D2 <-- E2 (E1 and E3 work at D1 at the same time; E3 and E2 work at D2 at the same time)

Your front-end need to capture E1 and E2 from a user for testing these queries and display query results. Note that a query may not return any tuples in the database. Print a simple message indicating this result.

**Programming language:** MySQL is required for database storage. Java (JDBC) is required for client-side programming.

**What to submit:** Please submit

* all source code
* all the javadoc files
* a readme file

The readme file should contain: your names, how to compile and run your code and other specifications you want to make (including your database access information for testing purposes). Please pack all your files in a zip package with the file name: project2\_ your group name. For example: project2\_Team101.zip

**How to Submit:**

Submit your ".zip" file using ELC. Only team leaders need to make a submission. **Every student needs to submit a peer-evaluation form within 24 hours of the project submission deadline**.

Do not place your solution on a public web site. Submit your own work and follow the course misconduct policy.