# **CSCI X370: Database Management**

## **Final Term Project: Database/Web Application**

**You are expected to finish a Term Project with the following requirements:**

* A Database/Web Application is required: a project needs to use [MySQL](https://www.mysql.com/products/community) or PostgreSQL (unless permission) as a database backend. A database should have five tables.
* Real-world data is required: either collect from web, including social media, other databases or generate through human-activity. No toy-data is allowed.
* Large data is required: a project needs to use a significant number of tuples. Minimum number of tuples must be 1000. In some situations, computer-generated data will be permissible (with permission).
* A project needs to use database design in EER, normalization process and indexing capabilities of the database backend.
  + Design 1: EER Diagram
  + Design 2: BCNF Decomposition
  + Design 3: 3NF Synthesis
* A Java/JVM based back-end for database access is required (e.g., [JDBC](https://docs.oracle.com/javase/tutorial/jdbc/index.html), [Ebeans](https://ebean.io/) or [Hibernate](https://hibernate.org/)).
* A JVM-based Web Framework (e.g., [Play 2](https://www.playframework.com/)) is required (unless permission).
* Application may be coded in Java (unless permission).

**What to submit initially:** A proposal – team leaders submit through ELC:

* Min 1, max 2 pages document.
* Pdf or MS Word.
* 11 pts font size.
* Single space.
* Expected sections: a title, original contributions (what is new?), brief description, Preliminary EER Diagram, Database Access (JDBC, Ebeans or Hibernate), Web Framework, conclusion (optional: references).
* If you plan to request a waiver for Java and/or MySQL/PostgreSQL requirements above please include an additional justification page (up to a single page).

**What to submit when the project is complete:** Please submit

* A Term Project report: Min 2, max 4 pages document; Pdf or MS Word; 11 pts font size; Single space; Expected sections: a title, original contributions (what is new?), broader impact (how is it useful to society?), system architecture, sample query screen-shots (2), team members and responsibilities, conclusion (optional: references).
* all the source code with javadocs and a readme file
* The readme file should contain: your names, how to compile and run your code and other specifications you want to make. Please pack all your files in a zip package with the file name: Term\_Project\_ your group name. For example: Term\_Project\_Team101.zip

**How to Submit:**

Submit your ".zip" file using ELC. Only team leaders need to make a submission.

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