

CSCI 2141, Fall 2015  
**Term Project Guideline**

Proposal Due: Nov. 4, Project Due: Dec. 8

---

**1. Objectives:**

- 1) To gain an in-depth understanding of the Relational Database concepts, the DBMS methods and techniques via developing a DB solution for a selected application.
- 2) To learn how to work as a team in a collaborative and efficient way (you are encouraged to form a team up to 3 people). The focus in a work group is individual goals and accountabilities. A team's performance is measured primarily by the products produced collectively by the team. A short article for the tips how to make a team successful: <http://hrweb.mit.edu/learning-development/learning-topics/teams/articles/basics>.

**2. Requirements:**

- 1) Develop a web-based DB for a real application, such as for a small organization, or a project of your own interest (e.g., <http://infolab.stanford.edu/~ullman/fcdb/silverberg/home.html>). The list below includes the required basic components (a-f) and the optional: (g) with bonus marks.
  - a) Business requirement analysis/generalization.
  - b) Design an ER diagram based on 1).
  - c) Convert 2) into relations with normalization validation.
  - d) Use result 3 to create the DB schema (tables in DDL) and move your data into the DB.
  - e) Demonstrate the application usage with SQL programming, including information retrieval, and DB update.
  - f) User interface.
  - g) \*Additional features include views, transaction handling, triggers, and stored procedures, and security functions.\*Bonus marks: +20% (4% per feature).
- 2) Submit a single page project proposal by Nov. 4 by emailing it to [Parsa.Sarshar@Dal.Ca](mailto:Parsa.Sarshar@Dal.Ca). The proposal should include the following information.
  - a) The project team members (up to 3 persons).
  - b) The proposed project title and an abstraction of the application scenario.
  - c) The tentative system & tools.
- 3) Implement your database in MySQL using your account on the CS server, or via some popular software bundles, such as LAMP, or XAMPP. You are also allowed to use any other system tools you like to develop the project as long as they are available from a CS computer for final evaluation.
- 4) Each team is required to provide project a demo/presentation (10 minutes) on Dec. 9<sup>th</sup> or 10<sup>th</sup>, 1:00-5:00pm, in CS233 (\*Book a time if your team has a preference).

**3. Project Tutorials - Project guide & development tools:**

- 1) TA: *Parsa Sarshar* ([Parsa.Sarshar@Dal.Ca](mailto:Parsa.Sarshar@Dal.Ca)).
- 2) Tutorials: Nov. 6th, 20th.

#### 4. Project Report:

- 1) Report format: use a single column research report/paper format.
- 2) Cover page with the project title, team member names and IDs.
- 3) Sections:
  - a) **Introduction:** Describe the domain problem, the application scenario, the business model and constraints, and the objectives, etc.
  - b) **System Design and Development:**
    - i. Present the task subsections from 2.1) a) to 2.1 g).
    - ii. Provide examples data instances, queries and result relations, and other proper result demonstration for each task section.
  - c) **Conclusion:** The main contribution, possible future work, what you've gained from this project, and what lesson had been learned.
  - d) **References** (if any).

#### 5. Submission:

- 1) Project report due: Dec. 8, 11:59pm.
- 2) Submit your project report by the command line: submit proj (proj is the name of the folder containing your Report.pdf file).