ECE 356 Project

Suggested Project Timeline

This document defines a suggested timeline for the successful completion of the database course project. You are not required to follow this timeline, nor are there any intermediate deliverables for the project. However, it is strongly recommended that if you do not wish to follow this timeline you develop a timeline that you will follow as the project is worth over 50% of your final grade in the course.

The timeline is divided into eight weeks rather than specific calendar dates, and is described in terms of what needs to be completed by the end of the given week.

Overview

The project is divided, losely, into three main areas: server-side, client-side, and data-mining, with one team member responsible for each main area. The timeline is therefore divided into collective timeline for the initial and final aspects, and then separately for the three areas. Although it is divided this way, it is expected that you will need to communicate as you work in the separate areas, if for no other reason than the fact that there are dependencies between the areas.

Collective Issues

The the start of project there are four main requirements that the team need to agree upon

1. Understand the dataset and domain area: week 1
2. ER Design and relational model: weeks 1 and 2
3. Client requirements: weeks 1 and 2
4. Data-mining question: weeks 3 and 4

At the end of project there are three main requirements that need to be done:

1. Integration: throughout; mostly weeks 7 and 8
2. System Testing: throughout the project; mostly weeks 7 and 8
3. Documentation: thoughout the project; mostly weeks 7 and 8

Server-Side Issues

The server requires the following items:

1. SQL code for the relational schema: weeks 2 to 5
   (a) Code necessary for creating tables: weeks 2 and 3
   (b) PKs, FKs, constraints: weeks 3 and 4

(c) Load data into the database: weeks 3 and 4
(d) Deal with any errors and inconsistencies: weeks 4 and 5
(e) Testing code for this schema: weeks 2 to 5

Client-Side Issues

The client requires the following items:

1. Client code: weeks 1-6
   (a) Ability to connect to database, issue SQL queries, update database, retrive results: weeks 1 and 2
   (b) Ability to parse user commands: weeks 2 and 3
   (c) Ability to query database and present results to user: weeks 4 and 5 (dependency on data being in the database)
   (d) Ability to add data to database: weeks 5 and 6
   (e) Testing code the client application: weeks 1 to 6

This is not about sending queries relevant to the project to the database engine: it is about setting up your client-side development environment such that you can write code in whatever client-side applciation language you choose (Python, Perl, Java, *etc.*) and have that connect to the database engine and correctly execute queries and get results.

Data-Mining Issues

The data-mining component of the project is necessarily going to occur later than the other components. To facilitate it not being excessively delayed, some course materials related to data-mining will be released earlier than is necessary so that the person responsible for this area can get a head-start on understanding that material and thinking about how best to implement the data-mining aspect.

The data-mining portion requires the following items:

1. Data-mining code: weeks 3 to 7
   (a) Deciding on the algorithm to use (in conjuction with the team deciding on the question to address): weeks 3 and 4
   (b) understanding the algorithm: weeks 3 and 4
   (c) implementing a prototype of the algorithm with a simple database and a few simple attributes: weeks: 4 and 5
   (d) implementing the algorithm over the dataset on the server: weeks 5 and 6
   (e) running the algorithm to gather results: week 6
   (f) model validation: week 7
   (g) testing: weeks 3 to 7