Lab 4: Use Case Formalization

Due date: Thursday, May 2.

This is a **team lab**. Each team submits one set of deliverables. Note: **Lab 5** assignment will be distributed on, or before the due date. It is expected that you will spend the *May 2* lab period working on **Lab 5** tasks.

Lab Overview

During this lab each team will do the following:

- Finalize the database design started in Labs 2 and 3.
- Formalize the use cases that each team needs to implement.

WSDL

The WSDL specification of the API your project needs to provide to the customer has been made available to you earlier in the quarter. If you have not studied it in detail, please examine it now. The WSDL specification contains information that not only will allow you to determine correctly the formats of the API calls and the input/output specs for them, but also, can serve to verify the correctness of your database design.

Database Design

Each team will receive an evaluation of **Lab 3** submission on Tuesday, April 30. Based on the comments received, as well as based on other information availble to you (e.g., WSDL), update and finalize your relational database model.

Formalization of Use Cases

One of the aspects of this quarter's project is the integrated nature of the customer documentation. The documentation identifies a number of core use cases for the project. Each use case is embodied as an API call described in the WSDL specification. Additional simple API calls are available in the WSDL specification.

For this lab, your key assignment is to formalize the core use cases you are asked to implement. The use case formalization includes the following steps:

- Identification of the use case in the project documentation.
- Identification of the WSDL for the API call or calls for the use case.
- Determination of the input data provided.
- Determination of the output data expected.
- Construction of SQL statement(s) that retrieve the required data from the database (or put/update the data in(to) the database).

You will prepare a document that lists the use cases and specifies the information from the list above for each use case[1].

Deliverables

There are four deliverables for this lab.

1. Lab 3 evaluated hardcopy with instructor's comments. Return it back on Thursday, May 2 during the lab.
2. Revised DB design. Based on instructor's comments, revise your **Lab 3** submission. The revised design shall contain the relational model (list of tables/SQL CREATE TABLE statements) and the revised list of constraints. You also need to have the new `DB-setup.sql` and `DB-drop.sql` files.
3. Changelog. To simplify grading, create a changelog, specifying the revisions made to the DB model.
4. Formalized use cases. The document identifying the core use cases, tying them to the WSDL spec, and providing the SQL templates to be used to retrieve the data.

[1] Feel free to copy and paste the appropriate WSDL fragments directly into your spec.

Submission Instructions

On your team's github wiki page create a page for **Lab 4** deliverables. Link to all **Lab 4** deliverables from that page. As usual, your documents can either be uploaded to your team's branch in PDF format, or can be created as github wiki pages. Each document shall have names of all team members. Every document you upload/create shall be printable (the grading/evaluation of your materials involves printing your complete submission and providing comments in the printed hardcopy).

All electronic documents shall be submitted by **11:59pm** on **May 2, 2013**.