

Lab 2: Database requirements analysis

Due date: Wednesday, January 13, beginning of class.

This is a **team lab**. Each team submits one set of deliverables. Each team member receives the same grade for the assignment.

Course Project Information

This quarter, CPE 366 comes with a group course project. General information about the project is provided below.

Customer. Our customer for this quarter is Anthony Casparro, a software engineer from *shopatron.com*, an e-commerce company based in San Luis Obispo, and a Cal Poly CPE program graduate.

Project. The customer asks us to design a multi-tenant database for maintenance of products sold by on-line stores and for storage and management of on-line customer orders. Products come in a variety of flavors (options) and different tenants (companies serviced by the database) have somewhat different approaches to their flavors. The customer also asks us to design and implement a simple, proof-of-concept standalone browser program for the designed database. The program would need to incorporate use cases both for on-line customers and for tenants of the database.

Lab Overview

In the course of this lab, you will

- receive an overview of the customer requirements via direct communication with the customer (January 6);

- elicit additional requirements for the database via direct communication with the customer (January 11);
- Document the elicited requirements and create a project knowledge base hosted on the course wiki (by January 13).

The lab assignment spans three lab periods, and has two distinct steps. The overview of the lab structure is below.

January 6, 2009 Groups are announced. Tony Casparro joins us for the project presentation. He will discuss his company, its business model and will give a brief and broad overview of the desired database and software application. Project documentation is released.

There will be two meetings with the customer on January 6: one for the morning section and one for the evening section.

January 7 – January 11, 2010: Teams meet and analyze the project documentation and prepare questions for the customer. The morning section will have the Friday, January 8, lab period to work on this. The evening section teams will have to find some meeting time outside of the class.

January 11, 2009: 8:00 - 10:00am: Q&A session with the customer. Each team will have an allocated portion of time for questions. Questions/answers must be recorded and posted later.

Note, that there is only one meeting with the customer on this day! Team representatives from the evening section will join the morning section at 8am **at 20 - 128** (Engineering East building).

January 11 - January 13, 2010: teams work on creating the knowledge base.

Assignment

January 6: Group Creation and Initial Presentation

Group lineup will be announced by the instructor at the end of the lecture in each section. We will ensure that the group lineups are feasible (e.g., that we are not missing three people on a single 4-person team). The teams will have four or five people each.

Following team formation, our customer, Tony Casparro, will present an overview of your project, followed by a short, informal Q&A session. The main purpose of the presentation is to give you a good understanding of what the project entails. After the presentation, we will release customer-supplied documentation:

- Database description/requirements.
- Case studies.
- Software use cases.

These three documents, combined with the data, which will be released upon your completion of Lab 4 will serve as the basis for your project.

Assignment. Lab attendance is required for everyone We will distribute nametags – please keep them and wear them for all meetings with the customer as a courtesy. During the presentation, you are welcome to take notes - those will come in handy later. Upon receiving customer documentation, study it in preparation for the January 11 meeting.

Deliverables. Each team shall come up with a name. Further, you shall create a team wiki page on the `csc366` wiki. The page, at the very least shall contain team name and names and emails (Cal Poly userIDs are fine) for all team members.

January 7 - 11: Documentation reading/analysis

During the January 7-11 period, each team will read the documentation and determine what questions it wants to ask the customer during the Q&A session on January 11. The goal of each team is to identify any aspects of the application domain, information about objects to be stored in the database, customer needs (w.r.t. the database), *that require clarification*. Each team shall prepare a list of question that the team wants to ask the customer during the Q&A session. Note, that in addition to the customer, you may direct your questions at the instructor.

Please note: initial list of questions **must be prepared** by each team independently of other teams. However, once lists are prepared, I allow for teams to compare them. I expect that many questions will coincide or be

similar (it is ok if multiple groups have similar/same questions). It is also ok for one group to come up with a question, no other group has asked — there is no need for other groups to add it to their lists, since each question only needs to be asked once, and all teams benefit from the answer.

The teams in the morning section will be able to use the Friday, January 8 lab period as group meeting time. The evening section teams will have to meet outside of the class time.

Deliverables. By 8:00am on Monday, January 11, each team should have a list of questions it plans to ask the customer posted up on its wiki page.

January 11: Question and Answer Session

The first step towards building the database model for your project is the Q&A session with the customer, during which each team gets a chance to ask questions about the project. Other steps will take place after the Q&A session and will form the content of Lab 3.

In order to make sure that every team has heard exactly the same story, there is only one Q&A session to be conducted for both sections. The Q&A session will take place during the entire class period (both the lecture and the lab) of the morning section: 8:10 – 10:00am (with a 10min break in the middle to change rooms). The Q&A session will start in 20-128 (Engineering East building, room 128), and will continue at 9:10 in 14-302.

All morning section students are expected to be at the Q&A session. Evening section teams should delegate team representatives who can come to the 8:10am session. The teams in the evening section are formed to have at least two people on each team who can come to the Q&A session.

Each team will be given about 10 minutes of time to ask their questions and receive answers from the customer and the instructor. We will set the order of questioning by a simple lottery at the beginning of the lab. I strongly suggest that each team (or team representatives) sits and works together during the Q&A. Please note the following:

- Listen carefully to the questions other groups are asking. It is very likely, that some of your team's questions will be posed by teams who get to ask questions earlier.
- If your group runs out of questions yield your time to the next group.
- If your group has unanswered questions left after its Q&A period, wait until all groups ask their questions. If the question has still not been asked, you will have a chance to ask it at the end of the session.
- You are certainly allowed to ask questions that are not on your list - some questions might occur to you as a result of things said during the Q&A session. But please, make sure you document the extra questions you asked and the answers you received.

Each team is responsible for recording the answers to all questions its members have asked (whether those questions were prepared or were asked on the spot).

After each team had a chance to ask questions, if any additional questions remain, a free-form Q&A period will begin and will last until the end of the lab period. Any questions that went unasked, or unanswered during the Q&A session should be submitted in writing (via email) to the instructor. The questions will be forwarded to the customer, who, in turn, will provide answers.

Deliverables. After the Q&A session, all teams, in collaboration shall create the project knowledge base as part of the csc366 wiki. The structure of the knowledge base is left up to the teams (generally speaking, you want to break the entire knowledge base by topic: e.g., group information about one type of data in one place, and information about another type of data — in another). At the "bottom" of the knowledge base hierarchy shall lie wiki pages that contain questions that the teams asked and answers received from the customer (plus any additional information that teams think may be useful). A single question can appear in multiple places in the knowledge base (as it may be applicable to more than one "leaf" topic).

Note: You can view the knoweldge base created by students from the Winter 2008 CSC 366 here:

http://wiki.csc.calpoly.edu/cs366-2008/wiki/Q&A_Information

Deliverables Overview and Submission Instructions

Overall, the lab has the following formal deliverables:

No.	Deliverable	Due:	Softcopy	Hardcopy
1.	Team wiki pages	January 11	Yes	No
2	List of questions for Q&A session	January 11	Yes	No
3	Project knowledge base	January 13, early morning	Yes	No

Submission. Softcopy submissions must appear on your team's wiki page by the due date/time. Your team's contribution to the project knowledge base shall be up on the wiki by the due date/time.

This lab has no hard copy submissions.