

CS 410/510 Data Management in the Cloud

Spring 2018 Quarter

Project Task 3: Application Design

Due: In-class presentations on Thursday, 24 May 2018

Slides must be submitted by 10p Wednesday, 23 May.

You should do this assignment in project groups. You should only talk to your group, the TA and the instructor about this assignment. You may also post questions and comments to the course discussion list on Piazza.

Task 3: Application Design

In the third part of the project, teams design the implementation of the data and queries given in Task 1 for the system they profiled in Task 2. Task 3 is similar to Task 1, except it is more technical as you work with a concrete system that you are familiar with (based on the previous part of the project).

The deliverable for this part of the project is a ten-minute presentation in class that discusses the final design and motivates the design choices made with respect to the requirements of the application and the capabilities of the system.

The presentation in class should address the following points.

- Using the provided example data, explain how you store the data structures in your data store.
 - Show how the example data can be represented in the data model of your data store. Mention any indexes you will create.
 - Present at least one variant you considered during the design phase.
 - Explain why you believe your final design is the preferred one
- Describe the process you will use to restructure the data to fit your model. You can assume that the data starts either in the original XML form, or in three tables as posted in SQLShare.
- Outline query implementation strategies in pseudo-code based on the capabilities of your data store and the indexes you plan to define. Your slides should cover all 6 queries, though you might have time to present only 2 or 3.
- Include one slide that shows you have loaded at least a few data items into your system. You might, for example, give a screen shot of accessing that data. You won't present this slide.

Submit your slides either as PDF or Powerpoint on Piazza by 10p Wednesday, 23 May. Also, please bring a hard copy of your slides to class.

Note: For Task 3, you will design for all 6 queries. For Task 4, you will select 4 of the 6 queries to implement.