

Course 1-02-322: Database Systems

Semester Project

Views

Michael J. May

Due December 30, 2009; Extended to January 6, 2010

In the previous phase you designed the relations which will be used to store the data for your application. In this phase you will design reports and summaries based on your relations. The reports will be stored in the database as a collection of *views*, dynamic tables which are defined as queries over static relations (or other views).

1 Views

Views are SQL queries which are stored in the database and may be accessed similarly to relations. We have learned in class how to define views and also have studied the fundamentals of SQL queries, including some more advanced features which are useful for writing complex queries.

Your job is to prepare at least 10 reports as appropriate to your database topic. Be ambitious and think of realistic reports and standing queries which would likely be executed.

For each report, write down its name, its logic in natural language, a justification for the report, and its SQL code as a view.

1.1 Minimum Requirements

While each topic will have different requirements for views, there is a minimum standard for the views and reports that you must prepared. You must write at least 10 views, at least a few of which should be ambitious. At a minimum they must contain the following features:

1. 7 views which connect at least 2 tables
 - Of which, 3 must connect at least 3 tables
2. 5 views which use nesting and/or correlation
3. 2 views which use MAX, COUNT, MIN, and/or AVG
4. 3 views with a GROUP BY operator
5. Canceled ORDER BY is not supported in MS SQL Server views (was: 2 views with ORDER BY)
6. 2 views which use one of the following features: {Outer join, Like, Views based on another view}. For instance, you may have the following
 - 1 view with Like, 1 view with an outer join
 - 2 views with an outer join
 - 2 views which are based on other views

2 What you must turn in by December 30; Extended to January 6, 2010

As mentioned above, you must turn in the following:

1. A list of the views which you will use for reports. Each view should have the following information:
 - Report Name
 - Logic (in natural or structured language) for the report
 - What the report's purpose is
 - The SQL code for the view