Database project

Deliverables:

Week of 2/9

1. Project description
2. List of business requirements
3. List of technical requirements
4. Enterprise level diagram of database solution

Week of 3/16 (Finals week)

1. Gather and capture requirements (all of previous assignment)
2. Model using ER and conceptual/enterprise model
3. Normalize your sql schema/ER diagram to 3NF
4. Create sql schema based on ER diagram
5. Create key constraints in sql
6. Create stored procedures/views to organize your data into meaningful information
7. Populate tables with sample data, provide sample outputs from your sprocs/views
8. Class presentation

Assignment:

Propose a business scenario that would require the use of a database. Describe the business scenario and ensure to list all relevant business rules and requirements that will inform your database design.

Create a concept/enterprise level diagram for you solution. Give all the entities and their base realtionships with each other, including cardinality. This will serve as a high level overview to orient new developers, business people, etc.

Construct ER/EER diagrams for your proposed solution. Diagrams should include all entities, attributes, relations, cardinality, sub/super types, etc. Entities/Relations should be in 3NF. Be sure to mark primary and foreign keys, as well as noting whether they are natural/surrogate, simple/composite. Ensure your diagram has all relations correctly show using relational tables, if necessary (no composite/multi-value relations). The diagrams should look exactly like your end result tables.

Create these entities and relationships in SQL. Write the SQL statements to generate them, including all relationship constraints and appropriate data types.

Write stored procedures and view to make your data into usable information by the user of your system. Stored procedure and views should be part of you requirements. What information does the user need, what are the best ways of getting data into/out of your database design. Be sure to document/support what requirements your views are satisfying.

Provide sample data as insert statements or store procedure calls. Give enough data for each table so that sample information can be shown. Enough information should be available to demonstrate your design fulfills your requirements.

Prepare a short (5-10 minute) presentation for class. Give a description of your problem and requirements, show your high level design, show your ER diagram, present some final informational snapshots of your output.

Project size requirements:

Project should consists of

6 (minimum) Tables

Stored procedures – enough for input for tables, and for appropriate output/display

3 (minimum) Relational only tables

Views – enough to display all relevant information for a user of the system

Core tables should have several attributes (3 or more), while relational tables can have as many as necessary to accurately describe the relation. Store procedures should be used for all input and output of the system. Views should be used any time an output requires the use of more than one table (ie joining on relations).