Project 2 **Spring 2017**

RDB Design, Implementation, and Queries Due: Thursday 4/20/17 100 points

In this project, derive a relational schema from the given ER diagram, implement the schema, populate it, and query over it.

Work with your assigned partner unless you apply for permission to work solo. You should justify your request in writing (email) no later than Wednesday 4/5/17 5pm. If approved, you will be granted written permission (email).

Requirements:

1. Implement your relations using MySQL or Teradata.

2. Populate the relations used in the queries according to the following criteria:

    a. every relation should have at least 5 tuples (some of which do not contribute to the query answer).
    b. the queries should return answers containing at least 5 distinct tuples.
    c. the data should look realistic; do not use random keyboard text or obvious placeholder data.
    d. you may not have to populate all the relations, just the ones used in the queries.

3. Give the SQL queries and resulting answers for the following queries. Do not use null values or any values not explicitly given in the data request. If you use intermediate queries, show the intermediate queries and results as well as the final query and final result.

Queries:

1. List all sold products (product ID, product name, and standard price) where the standard price is at least $100.

2. List all products (product ID and name) for sold products that have never been purchased by any customer.

3. List name and ID for technicians in the Data Science unit who have SQL and R programming as skills.

4. List the technicians (identifier and name) who can repair a product that they have also sold for a cost greater than $1000.

5. Give the sum of repair costs by product category and name where the product category contains at least two products with a warranty length greater than 1.

Submit on Blackboard (one pdf document):

1. A list of all the relations obtained via our forward engineering algorithm with primary and foreign keys indicated (along with the relation to which they refer.)
2. Contents of all your populated relations.
3. SQL query text and the data answering the query.
4. Individual and team time spent on the project in the form of a log including names, time, location, duration, topics of discussion, activities, action items (who is assigned what tasks outside of team meetings, and what the tasks are), and total solo and team time on task.

Hardcopy: Submit a hardcopy in class or my office on Thursday 4/20/17 by 9:30am.

Notes:

1. Present your work neatly and professionally, but there is no need to use 14pt font or to have only a few lines of text on each page.
2. Please omit cover pages.
3. Pay attention to the information requested for your activity log.

This is the conceptual schema for the RDB implementation schema for Project 2.
This ERD is based on the requirements for your first project.