Georgia State University
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COLLEGE of BUSINESS

Database Management
Design and Implementation of a Relational Database

This assignment may be completed individually or in groups of up to 5 students. Notify the instructor at least one week before the assignment is due of the members in your group or whether you are doing the assignment by yourself. This will help to ensure that the dropboxes are set up before the submission is due.

The purpose of this assignment is to provide an opportunity to design, implement, and use a database management system. Oracle is provided as software by GSU.

1. [10 points]
   Select an application for which a database management system is needed. Describe the application and state why it is an important application from a management perspective.

2. [25 points]
   Create a conceptual model for this application. Be sure to include proper names for entities, attributes, and relationships. Identify min/max cardinalities. You may use either the Chen or Crow's Feet representation. Use a drawing tool to create the conceptual model. There should be 5-8 entities in the conceptual model.

3. [20 points]
   Transform the conceptual model into a relational model and show: 1) the transformation rules applied; and 2) the final relational model.

4. [10 points]
   Implement the database using your Oracle account provided for this course and populate it with data. Note that you will need to create the data for your relations. Show the populated relations. You can do this by using the "select * command.

There should be at least 5-10 entries for each relation. Make sure that the data in the relations are consistent with each other.

5. [35 points]
   Identify and run 7 representative, and non-trivial, queries. Show the results. Queries of the form "select *" are considered trivial queries and should not be included. Queries of the form "select name from customer;" are also considered to be trivial queries. At least 4 of the queries must involve two or more relations, so you will need to use join commands. Write the queries in English. Then, use screen shots to show the SQL form of the queries and the results obtained from running the queries on the data you created.