CSC 134 Fall 2013

Homework 3

Total: 100 points

This homework allows students to practice the development of a database using MySQL.

Section 1

Using SQL, create tables according to the given schema shown in Figure 1. The ER diagram is shown in Figure 3. You must create your database using exactly the same names for tables and attributes, using the given type. The type of each attribute is defined in Figure 2. Note that it is case-sensitive.

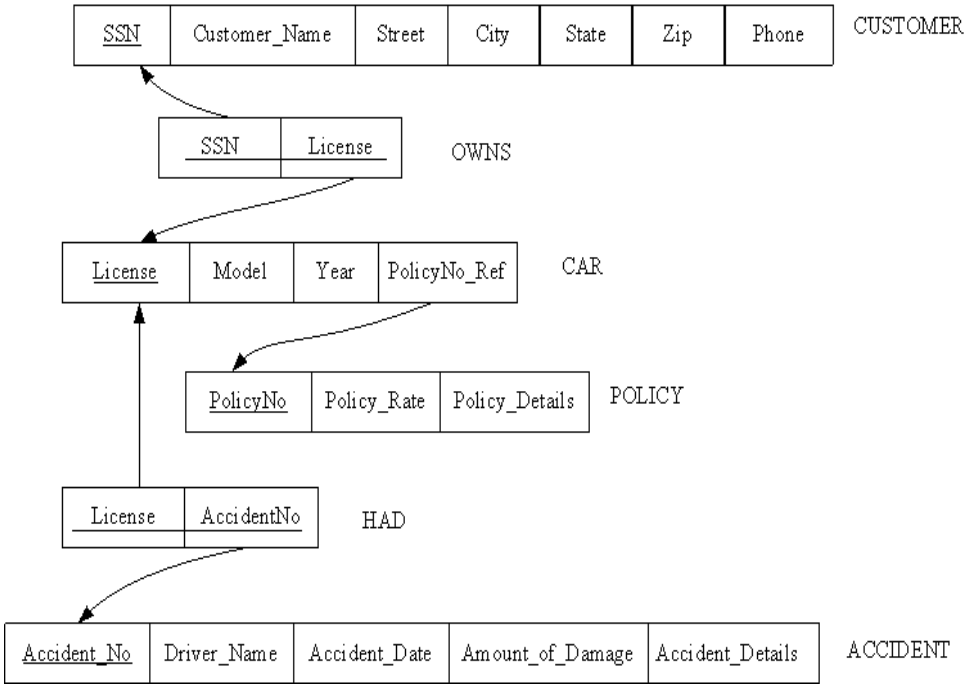

Figure 1 Schema

CUSTOMER table:

SSN: CHAR(9), Customer_Name: VARCHAR(30), Street: VARCHAR(20), City: VARCHAR(10), State: VARCHAR(10), Zip: CHAR(5), Phone: CHAR(10)

OWNS table:

SSN: CHAR(9) , License: VARCHAR(15)

CAR table:

License: VARCHAR(15), Model VARCHAR(15), Year int, PolicyNo_Ref: int

POLICY table:

PolicyNo:int, Policy_Rate: DECIMAL (15,2), Policy_Details: VARCHAR(100)

HAD table:

License: VARCHAR(15), AccidentNo: int

ACCIDENT table:

Accident_no: int, Driver_name: VARCHAR(30), Accident_Date: DATE,

Amount_of_Damage: DECIMAL (15,2), Accident_Details: VARCHAR(100)

Note: DATE is in the format of 'yyyy-mm-dd'.

Figure 2: Type Definition

Section 2

Populate the database. Please check sections 3 for details.

Section 3

Use SQL to specify the following queries. When you populate the database, insert data such that at least one row will be display as the result of running each query.

1. List the cars (license, model and year, Amount_of_Damage) that have been involved in any accidents. Order the result by license in descending order.
2. List the cars that have more than two accidents. List license and number of accidents.
3. List information (driver name, amount of damage, license, model and SSN) about the accidents in which the owner of the car are involved i.e., the Driver_Name and Customer_Name are the same.
4. Obtain the information of any policy (policy number, policy rate and policy details) whose policy rate is higher than the rate of policy number 12.
5. Consider all policies, list the lowest rate, highest rate, and average rate.
6. Get information (accident number, driver name, accident date and amount of damage) of the accident which has the highest amount of damage among all the accidents.

7. Get the information (customer name, city and state) about the customers who own cars with the model of ‘Honda Accord’. Also get those cars’ license, and year made.
8. Retrieve the customers’ information (SSN, customer name, street, city, state and zip) who live either in ‘Roseville’ or ‘Sunrise’. (‘Roseville’ and ‘Sunrise’ are city names)
9. Retrieve policies that cover more than 2 cars. List policy number and number of cars covered.

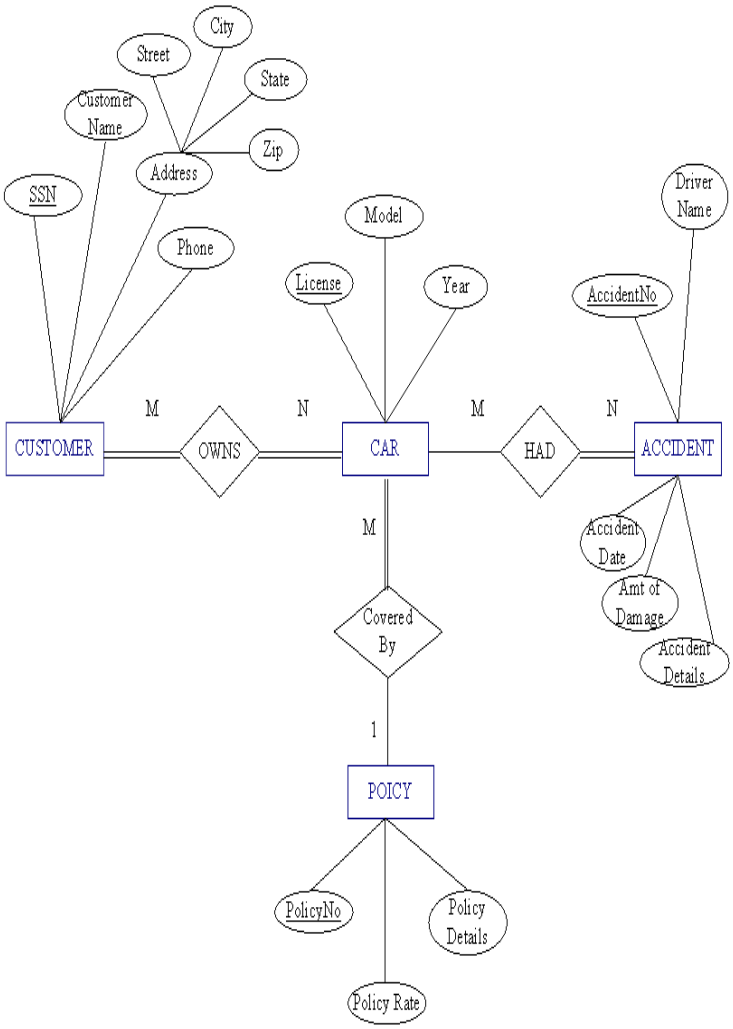

Figure 3 ER Diagram

Section 4

Specify the statements to drop all the tables. Pay attention to the order of the drop statements in order to drop everything successfully.

Submission

Submit the following files to SacCT. Note: Submit through any other ways, such as email attachment, will not be graded.

1. Create table statements (file name must be: 1_create_table.sql)
2. Insert statements to populate database (file name must be : 2_populate_db.sql)
3. Queries (file name must be: 3_query.sql)
4. Statements to drop all tables (file name must be: 4_drop_all.sql)
5. An output file showing query results (file name must be: 5_output.pdf, or 5_output.doc, or 5_output.txt). In this file, for each query, you must:
    1) Include the number and query description (e.g Query 1: List the cars ….)
    2) Your SQL query (e.g. select… from…)
    3) The result of running this query.