MEMO

DATE: November 6, 2020
TO: SLO Vintage Auto Development Teams
FROM: Larry Margaria

SUBJECT: Development Guidelines

Professor Floyd has shared with me some of the ERDs that have been created regarding the data used in the operations of my auto business. I have a number of different teams developing this system for my business and to help me compare the systems developed and to assure quality, I am asking that you and your team do the following tasks.

TASK 1: Customer and Preferences Tables

1. Creating Tables:
    a. The attributes of a Customer can be seen on my Sales Invoice. All of these attributes should be required. Phone and email should be unique. Be sure to store first and last names separately; make the State attribute have a DEFAULT value of 'CA'.
    b. For the Preferences table, include make, model, year, description, start_date and end_date. Assure end_date is after start_date. The make, model, and start date attributes are required. Make the start date have a default of the date the preference is entered into the table.
2. Data:
    a. Enter 10 customer records into the Customer table.
        i. 5 customer INSERTs must illustrate use of the DEFAULT clause and the rest must not make use of the DEFAULT clause
    b. Enter 7 preference records in the Preference table as follows
        i. 1 customer should have 3 preferences
        ii. 1 customer should have 2 preferences
        iii. 3 customers should have 1 preference
        iv. 5 customers should not have a preference.
        v. 3 preference INSERTs must illustrate of the DEFAULT clause and the rest must not make use of the DEFAULT clause

3. Quality Control Check List … assure that the following are functional. In some cases, this can be demonstrated by the data that is entered. In other cases, you can test them by entering data that tried to violate the constraint. You do not need to submit anything to show that you have performed these activities but if your system should work correctly.
    a. CHECK: End Date is after Start Date
    b. UNIQUE: constraints work (phone, email)
    c. NOT NULL:
    d. Reference integrity: These are tasks you can do to explore the issue of referential integrity.
        i. Changing the value of a customer's PK when that customer has a preference record.

ii. Deleting a customer when a customer has a preference.
iii. Deleting a preference.
iv. Changing a preference from one customer to another customer (e.g., say that a preference has been associated with customer 1000, and you want to change the FK to a different customer (e.g., customer 2000) where customer 2000 exists.
v. Changing a preference from one customer to another customer (e.g., say that a preference has been associated with customer 1000, and you want to change the FK to a different customer (e.g., customer 2000) where customer 2000 does not exist.
vi. Adding a preference to a customer who does not exist.

4. Queries: Write the following SELECT statements that returns the following to test your work. Write these as CREATE VIEW statements.
    a. List of customers including the following attributes: first name, last name, street, city, state, zip, phone, email ordered by last name.
    b. List of customers and their preferences. Only include customers who have preferences. Include the following attributes: first name, last name, phone, make, model, start date, end date.
    c. List of customers and their preferences including customers who do not have preferences. Include the following attributes: first name, last name, phone, make, model, start date, end date. For those customer who do not have preferences change the value of Make to “No Preference”.

Submission:

SCRIPT consisting of the following:

Comment statements with the names of your team members.
DROP TABLE
CREATE TABLE
CREATE VIEW
INSERT