CMPE 351 - Database Systems

Homework 01
Deadline: 06.11.2020 23.59

This homework is for students
who is registered **CMPE351.01/0101**.

RULES

Submission

- Submit your solution as [name_surname_homework01].sql.

- Solution without comments will **not** be evaluated.

- Late submissions will **not** be accepted. Submission system will be closed after deadline.

- Submissions via e-mail will **not** be accepted.

- Plagiarism is strictly prohibited. Submitted codes will be assessed via a plagiarism tool. Involved students will get zero.

QUESTIONS

1. Create MALL database.

2. *(10 points)* Create two table which attributes are given as below:

    (a) CUSTOMER: `customer_id` *integer*, `name` *varchar*, `lastname` *varchar*, `registration_date` *date*

    (b) INVENTORY: `item_id` *integer*, `item_name` *varchar*, `cost` *integer*

3. *(20 points)* Create PURCHASE table that stores items purchased by the customers. Determine the attributes of the table. Justify your answer with comments.

4. *(15 points)* Choose primary and foreign keys depending on the relations in MALL database design. If there is no need for foreign key explain why. Justify your answer with comments.

5. *(5 points)* Populate each table with at least 5 different record.

6. *(10 points)* Show IDs of all customers who purchased the second item in `Inventory`.

7. *(10 points)* Add score attribute to CUSTOMER table.

8. *(20 points)* Write a SQL command that automatically assigns all customers' score depends on their `registration_date`. Each year passed from the registration date, the customer gains 10 point. For example, the customer who is registered at '`2010-09-19`' owns 100 points.

    $$((2020 - 2010) * 10 = 100)$$

9. *(10 points)* Show average number of days passed up to now for the customers who registered in 2020. You can fix the number of days for each month as 30. For example, the customer who registered at '`2020-05-19`' registered 161 days ago.

    (for 30th October $\rightarrow 30 - 19 + 30 * (10 - 5) = 161$)

Note: Ensure that your programs are fully documented, using comments.