Databases

CAL 2 2019-20

Based on the previous assignment, this assignment must be uploaded to BlackBoard in a compressed file with the following:

- Report of the solution
- Relational Model design using TOAD Modeler / Pgmodeler
- SQL scripts to BOTH load the database and SQL queries.

This assignment will be demonstrated to the lecturer during a lab class.

Assigment

This CAL2 continues the work of CAL1 modifying (and perhaps updating) the E/R model created to turn such model into a relational model and the physical database in PostgreSQL.

- The transformation will be carried out using TOAD Data Modeler or Pgmodeler.
- We need to create all the necessary scripts and data in PostgreSQL.
- We will also need to load the database with information that let us create the following SQL queries (one query per sentence):

  1. Obtain the items in the database, showing the barcode and the price without VAT.
  2. Obtain the name of every worker indicating if they are cashiers or repleteners.
  3. Obtain the name of the repleteners who work more than 20 hours per week.
  4. Obtain the total money billed by the supermarket since the implementation of the database.
  5. Show customer coupons, along with the products they affect and the discount made.
  6. Show 5 products on which members have discount coupons
  7. Determine the average degree of satisfaction of the opinions that customers have made online, showing the average score.
  8. Determine the number of tickets that each supermarket has issued, showing the number of tickets, the name of the cashier and the city of the supermarket where the cashier works. Sort the output from highest to lowest.
  9. Determine the number of workers each supermarket has, ordering the exit from lowest to highest.
  10. Show the name and telephone number of the employee with the best score
  11. Show the barcode and the discount of the products that were on sale the first week of May 2019.
  12. Show the name of the members who have benefited from discounts applied to a product the last week of May 2019
  13. Show the name of the workers in alphabetical order of the supermarkets located in cities that begin with "M".
  14. Show the email of the member whose total amount accumulated is the highest.
  15. Show the product that has been returned the most times.
  16. Show the name of the cashier that has issued the most tickets.
  17. Show the name of the member that has issued the best opinion (the highest score)
  18. Show the tickets issued by cashiers whose name begins with "A" and works in cities that begin with "M"
  19. Show the id of the tickets issued in the supermarkets of Alcalá de Henares along with the name of the cashier
  20. Perform the same query as the previous point but for those tickets in which no discount coupons have been used

Every query must have an output. You will need to insert data in order to obtain non empty outputs.

You may have to modify your 1st assignment if you cannot answer the previous questions. If that is the case, include your new E/R diagram model describing changes and improvements.