

MYSQL

Overview

Please understand the below mentioned task and try to solve the SQL challenges

Business Scenario

You are employed in a large multinational company that operates a chain of hypermarkets and retail companies. The manager/executives of the company would like to know how the company has performed in the past few months, so you are now responsible for generating those reports. Using the given dataset, try to answer the below questions using SQL queries.

Dataset: Dataset_supermarket_sales - v1.3

Attribute information:

Invoice id: Computer generated sales slip invoice identification number

Branch: Branch of supermarkets

City: Location of supermarkets

Customer type: Type of customers, recorded by Members for customers using member card and Normal for without member card.

Gender: Gender type of customer

Product line: General item categorization groups - Electronic accessories, Fashion accessories, Food and beverages, Health and beauty, Home and lifestyle, Sports and travel

Unit price: Price of each product in \$

Quantity: Number of products purchased by customer

Tax: 5% tax fee for customer buying

Total: Total price including tax

Date: Date of purchase (Record available from January 2019 to March 2019)

Time: Purchase time (10am to 9pm)

Payment: Payment used by customer for purchase (3 methods are available – Cash, Credit card and Ewallet)

COGS: Cost of goods sold

Gross margin percentage: Gross margin percentage

Gross income: Gross income

Rating: Customer stratification rating on their overall shopping experience (On a scale of 1 to 10)

Task 01: Prepare and provide the **SQL Queries** along with **screenshots** of the output to answer the below business problems

1. The marketing team is tasked with creating promotions and offers to improve the sales in the branches that have performed less. Your job is now to find those branches which have, the lowest gross income % increase for the month of March, compared to the average of previous 2 months for the product "Electronic accessories".
2. You have to generate an ad-hoc report for your manager to identify the most profitable product line for the first week of 2019. Display your output in the following format.
3. Identify the top 5 rush hours during weekends for the month of February to help the storekeepers to better equip themselves to handle the rush hour.
4. As a part of your weekly routine, you have to generate a report for your boss where for a particular date and product line, you have to compare and find out which city has generated the highest income and show the respective amount. In this scenario, compare the products 'Electronic accessories' and 'Food and beverages' for the first week of February. Display the output in the following format.
5. Write a SQL Query to find out the top 3 product lines purchased by every customer type along with how much gross income they generated (Exclude 'Unknown'). Display the output in the following format.
6. The district manager wants to know how much gross income has been generated by each type of customer ('Member' - 'Normal'. Exclude 'Unknown' customer type fields) in every branch. If income is greater than or equal to 500 display 'high income' else 'low income' Write a SQL Query to display the output in the following format.
7. Find out for each date and product line how much quantity was sold. Also, find how much quantity sold on the previous day, the next day and difference between them in the first week of March and for the products 'Health and beauty', 'Home and lifestyle', 'Food and beverages' and sort the data by date. Display the query in the following format

8. The company is currently conducting a survey to find which cities have high rating and the reason for this high rating. So, you are tasked with finding out which cities have a high average rating given by different customers in every city (excluding 'Unknown') and rank them from highest to lowest. Display the query in the following format

9. Find out which products sell the most during weekends and how much income they generated and in which city. Display the query in the following format.