**TAIWO’S CAPSTONE**

**Query for creating Table**

create table customers(

id int(11) PRIMARY KEY AUTO\_INCREMENT,

Customer\_ID varchar(50),

Customer\_Name varchar(50),

Gender VARCHAR(50),

Age int,

Location varchar(50),

Date\_Joined date

);

**Query for question 1: list the top 5 products by total sales amount**

SELECT p.Product\_Name, SUM(s.Total\_Amount) AS TotalSales

FROM sales s

JOIN products p ON s.Product\_ID = p.Product\_ID

GROUP BY Product\_Name

ORDER BY totalsales DESC

LIMIT 5

;

|  |  |
| --- | --- |
| Product\_Name | TotalSales |
| LED TV 42 inch | 1200 |
| Bluetooth Speaker | 750 |
| Blender Pro Max | 450 |
| T-Shirt(Unisex) | 400 |

**Query for question 2: find the average purchase per customer by region**

SELECT Region,

AVG(Total\_Amount) AS AveragePurchasePerCustomer

FROM (

SELECT Region, Customer\_ID, SUM(Total\_Amount)

AS Total\_Amount

FROM sales

GROUP BY Region, Customer\_ID

) s

GROUP BY Region

;

|  |  |  |  |
| --- | --- | --- | --- |
| Region | AveragePurchasePerCustomer | | |
| East | 1200 |  |  |
| North | 375 |  |  |
| South | 450 |  |  |
| West | 400 |  |  |

**Query for question 3: show customers who have never made a purchase**

SELECT c.Customer\_ID,

c.Customer\_Name

FROM customers c

WHERE c.Customer\_ID NOT IN (SELECT Customer\_ID FROM sales)

;

|  |  |  |
| --- | --- | --- |
| Customer\_ID | Customer\_Name | |
| C005 | Grace Obi | |
|  |  |  |

**Query for question 4: calculate monthly revenue from January 2023 to December 2023**

SELECT

date(s.Order\_Date) AS month,

sum(s. Total\_Amount) AS MonthlyRevenue

FROM sales s

WHERE s. Order\_Date BETWEEN '2023-01-01' AND '2023-12-31'

GROUP BY

date(s.Order\_Date)

ORDER BY

month;

|  |  |  |
| --- | --- | --- |
| month | MonthlyRevenue | |
| 1/12/2023 | 300 |  |
| 1/15/2023 | 450 |  |
| 2/1/2023 | 450 |  |
| 2/20/2023 | 1200 |  |
| 3/11/2023 | 400 |  |

**Query for question 5: identify the 3 most profitable category**

SELECT p.Category,

SUM(s. Total\_Amount) AS TotalRevenue

FROM sales s

JOIN products p ON s.Product\_ID = p.Product\_ID

GROUP BY p.Category

ORDER BY TotalRevenue DESC

LIMIT 3

;

|  |  |  |
| --- | --- | --- |
| Category | TotalRevenue | |
| Electronics | 1950 |  |
| Appliances | 450 |  |
| Clothing | 400 |  |

**DESCRIPTION OF THE DATA SET**

1. **Sales Data;** this contains information about sales transactions which includes the order details, customer details, product details, regional sales data
2. **Customer Data;** this contains customer information including the age, gender and date
3. **Product Data;** this contains product information including the product details(product name, product ID, category and inventory data(stock level)

This would be used to gain insights which will help analyze sales trend (when sales is at its highest or lowest, change of sales over time and comparison between products and regions), customer behavior(to know the purchase history, customer attributes like age, income and location),to reward loyal customers and discover their unmet needs and product performance(tracking sales volume, revenue and profit to identify top selling products and areas for improvement, manage stock levels and reduce waste).

It helps to make data driven decisions to drive sales, revenue and customer satisfaction.