Shihui Feng (Sophia) W4 hw4

Use the following tables to work on the following prompts

TABLE INFO :

SALES – Date, Order_id, Item_id, Customer_id, Quantity, Revenue

ITEMS – Item_id, Item_name, price, department

CUSTOMERS- customer_id, first_name,last_name,Address

1. Pull total number of orders that were completed on 18th March 2023.

```
Select count (distinct s. Order_id) as total_orders
From SALES s
Where s.Date = '03/18/2023'
```

2.Pull total number of orders that were completed on 18th March 2023 with the first name 'John' and last name Doe'.

```
Select count (distinct s. Order_id) as total_orders
From SALES s,  CUSTOMERS c
Where s. Item_id =c. Item_id and s. Date = '03/18/2023' and c. first_name='John' and c. last_name='Doe';
```

```
SELECT COUNT(DISTINCT SALES.Order_id) AS Total_Orders
FROM SALES
JOIN CUSTOMERS ON SALES.Customer_id = CUSTOMERS.Customer_id
WHERE SALES.Date = '2023-03-18'
AND CUSTOMERS.First_name = 'John'
AND CUSTOMERS.Last_name = 'Doe';
```

3.Pull total number of customers that purchased in January 2023 and the average amount spend per customer.

```
SELECT
    COUNT(DISTINCT Customer_id) AS Total_Customers,
    AVG(Total_Revenue) AS Average_Spend_Per_Customer
FROM (
    SELECT
        SALES.Customer_id,
        SUM(SALES.Revenue) AS Total_Revenue
    FROM SALES
    WHERE SALES.Date >= '2023-01-01' AND SALES.Date <= '2023-01-31'
    GROUP BY SALES.Customer_id
) AS Customer_Sales
```

4.Pull the departments that generated less than $600 in 2022.

```
SELECT
    ITEMS.Department,
    SUM(SALES.Revenue) AS Total_Revenue
```

```
FROM SALES
JOIN ITEMS ON SALES.Item_id = ITEMS.Item_id
WHERE SALES.Date >= '2022-01-01' AND SALES.Date <= '2022-12-31'
GROUP BY ITEMS.Department
HAVING SUM(SALES.Revenue) < 600;
```

5.What is the most and least revenue we have generated by an order.

```
SELECT
    MAX(Total_Revenue) AS Maximum_Revenue,
    MIN(Total_Revenue) AS Minimum_Revenue
FROM (
    SELECT
        Order_id,
        SUM(Revenue) AS Total_Revenue
    FROM SALES
    GROUP BY Order_id
) AS Order_Revenues;
```

6.What were the orders that were purchased in our most lucrative order.

```
SELECT
    SALES.Order_id,
    SALES.Item_id,
    ITEMS.Item_name,
    SALES.Quantity,
    SALES.Revenue
FROM SALES
JOIN ITEMS ON SALES.Item_id = ITEMS.Item_id
WHERE SALES.Order_id = (
    SELECT Order_id
    FROM SALES
    GROUP BY Order_id
    ORDER BY SUM(Revenue) DESC
    LIMIT 1
);
```