**SQL Data Analysis Report**

**Internship Task 2 – Advanced Data Analysis Using SQL**

**Prepared by:** Mote Nayan Gangadhar

**Company:** CODTECH

**1. Objective**

The goal of this task is to analyze **customer and sales data** using SQL. We will use:  
✅**Window Functions** (for tracking sales trends)  
✅**Subqueries** (to find frequent customers)  
✅**Common Table Expressions (CTEs)** (to identify high-spending customers)

This analysis will help in **understanding customer behavior and improving business strategies**.

## ****2. Data Overview****

The data consists of two tables:

1. **Sales Data** – Contains customer purchases with order dates and amounts.
2. **Orders Data** – Contains details of customer orders.

## ****3. SQL Queries & Analysis****

### ****A. Running Total of Sales Per Customer****

A **window function** is used to calculate the cumulative total of sales for each customer over time.

**Key Finding:** One customer has spent the highest total amount across multiple purchases.

### ****B. Finding Frequent Customers****

A **subquery** is used to count the number of orders per customer and filter those who have placed more than five orders.

**Key Finding:** One customer has placed more than six orders, making them the most frequent buyer.

### ****C. Identifying High-Spending Customers****

A **Common Table Expression (CTE)** is used to find customers whose total spending exceeds $5000.

**Key Finding:** One customer has spent more than $6700, making them a high-value customer.

## ****4. Conclusion & Recommendations****

📌**Key Insights:**

* One customer has the highest total spending.
* Another customer is the most frequent buyer.
* Recent purchases show an increase in sales from specific customers.

📌**Business Recommendations:**

* Offer **discounts** and **exclusive deals** to high-spending customers.
* Create a **loyalty program** to reward frequent buyers.
* Run **promotions** for customers who have fewer orders to increase engagement.