Stock Market Analysis Report

1. Objective

The purpose of this analysis is to study the stock performance of six major companies — **Bajaj Auto**, **Eicher Motors**, **Hero Motocorp**, **Infosys**, **TCS**, and **TVS Motors** — using SQL-based analytical queries. The goal is to identify:

- Maximum and minimum stock prices

- Buy/Sell opportunities

- Percentage change in price over time

- Buy/Sell recommendations based on trends

This analysis helps investors make data-driven decisions by understanding long-term performance and profit opportunities.

2. Dataset Description

Each company's data table contains the following columns:

Column	Description
Date	Trading date
Open_Price	Opening price of the stock on the given day
High_Price	Highest price reached during the day
Low_Price	Lowest price reached during the day
Close_Price	Closing price of the stock on the given day
WAP	Weighted Average Price
No_of_Shares	Total number of shares traded
No_of_Trades	Total number of trade transactions
Total_Turnover_Rs	Total turnover in rupees
Deliverable_Quantity	Quantity of stocks actually delivered
Percent_Deli_Qty_to_Traded_Qty	Delivery percentage
Spread_High_Low	Difference between high and low price
Spread_Close_Open	Difference between close and open price

3. Maximum and Minimum Stock Prices

SQL Query Used:

```sql
SELECT

   'Bajaj Auto' AS Stock_Name,

   MAX(Close_Price) AS Max_Price,

   MIN(Close_Price) AS Min_Price

FROM bajaj_auto

UNION ALL

SELECT 'Eicher Motors', MAX(Close_Price), MIN(Close_Price) FROM eicher_motors

UNION ALL

SELECT 'Hero Motocorp', MAX(Close_Price), MIN(Close_Price) FROM hero_motocorp

UNION ALL

SELECT 'Infosys', MAX(Close_Price), MIN(Close_Price) FROM infosys

UNION ALL

SELECT 'TCS', MAX(Close_Price), MIN(Close_Price) FROM tcs

UNION ALL

SELECT 'TVS Motors', MAX(Close_Price), MIN(Close_Price) FROM tvs_motors;
```

Explanation:

- This query extracts the **highest and lowest closing prices** for each stock.

- It helps identify the **price range** and **volatility** for each company.

Insight:

- Stocks with large differences between max and min prices (high volatility) are riskier but offer greater short-term profit opportunities.

- Stable stocks with smaller ranges (e.g., Infosys, TCS) are better for long-term investment.

4. Number of Buy/Sell Opportunities

```sql
SELECT 'Bajaj Auto' AS Stock_Name,

COUNT(*) AS Buy_Opportunities

FROM bajaj_auto

WHERE Close_Price = (SELECT MIN(Close_Price) FROM bajaj_auto)

UNION ALL

SELECT 'Eicher Motors', COUNT(*) FROM eicher_motors

WHERE Close_Price = (SELECT MIN(Close_Price) FROM eicher_motors)

UNION ALL

SELECT 'Hero Motocorp', COUNT(*) FROM hero_motocorp

WHERE Close_Price = (SELECT MIN(Close_Price) FROM hero_motocorp)

UNION ALL

SELECT 'Infosys', COUNT(*) FROM infosys

WHERE Close_Price = (SELECT MIN(Close_Price) FROM infosys)

UNION ALL

SELECT 'TCS', COUNT(*) FROM tcs

WHERE Close_Price = (SELECT MIN(Close_Price) FROM tcs)

UNION ALL

SELECT 'TVS Motors', COUNT(*) FROM tvs_motors

WHERE Close_Price = (SELECT MIN(Close_Price) FROM tvs_motors);
```

SQL Query Used:

Explanation:

- The query identifies how many times a stock reached its lowest price — potential **buy opportunities**.

- This gives insight into **price dips** and how often the stock was undervalued.

Insight:

- Companies with frequent buy opportunities (many dips) indicate **market volatility** or **investor uncertainty**.

- Consistent high-performing stocks (few dips) show **investor confidence** and strong fundamentals.

5. Percentage Change Analysis

SQL Query Used:

```
SELECT

  'Bajaj Auto' AS Stock_Name,

  ((MAX(Close_Price) - MIN(Close_Price)) / MIN(Close_Price)) * 100 AS Percent_Change

FROM bajaj_auto

UNION ALL

SELECT 'Eicher Motors', ((MAX(Close_Price) - MIN(Close_Price)) / MIN(Close_Price)) * 100 FROM
eicher_motors

UNION ALL

SELECT 'Hero Motocorp', ((MAX(Close_Price) - MIN(Close_Price)) / MIN(Close_Price)) * 100 FROM
hero_motocorp

UNION ALL

SELECT 'Infosys', ((MAX(Close_Price) - MIN(Close_Price)) / MIN(Close_Price)) * 100 FROM infosys

UNION ALL

SELECT 'TCS', ((MAX(Close_Price) - MIN(Close_Price)) / MIN(Close_Price)) * 100 FROM tcs

UNION ALL

SELECT 'TVS Motors', ((MAX(Close_Price) - MIN(Close_Price)) / MIN(Close_Price)) * 100 FROM
tvs_motors;
```

Explanation:

- This query calculates the **percentage change** in closing price between the lowest and highest points.

- It measures the **growth potential** of each stock over the observed period.

Insight:

- A higher percentage change means the stock experienced significant appreciation.

- A low or negative change indicates limited or poor performance.

6. Buy/Sell Recommendations

Stock	Recommendation	Reason
Bajaj Auto	Buy	Positive growth trend, stable returns
Eicher Motors	Sell	Volatile with declining recent performance
Hero Motocorp	Sell	Weak demand and price stagnation
Infosys	Buy	Strong fundamentals and consistent uptrend
TCS	Sell	Slight negative momentum
TVS Motors	Sell	High volatility, weak closing performance

Summary of Findings:

- **Buy:** Bajaj Auto, Infosys → Good long-term investment.

- **Sell:** Eicher Motors, TCS, Hero Motocorp, TVS Motors → Underperforming or unstable.

7. Insights & Profit Opportunities

- **Infosys and Bajaj Auto** show consistent growth and stability, suggesting low risk and steady profit potential.

- **Eicher Motors and TVS Motors** display large fluctuations, which can be profitable for short-term traders but risky for long-term investors.

- **Hero Motocorp** has seen minimal recovery from price drops, signaling weak market interest.

- **TCS**, despite being a tech leader, shows marginally negative trends — investors should monitor before buying.

8. Business Recommendations

1. **Diversify Investments:** Combine stable IT stocks like Infosys with high-growth auto stocks like Bajaj Auto.

2. **Avoid Overexposure:** Limit holdings in volatile stocks such as TVS Motors or Eicher Motors.

3. **Monitor Trends Quarterly:** Evaluate percentage changes quarterly to spot reversal or breakout opportunities.

4. **Use Stop-Loss Strategies:** For riskier stocks, define exit points to minimize losses.