Stock Market Data Analysis in Excel

Project Overview:

This document provides detailed information about the stock market dataset. The dataset consists of multiple sheets, each containing relevant stock market data, such as price trends, trading volumes, and percentage changes over time.

Problem Statement:

Stock market movements are challenging to analyze if not visualized. Investors and analysts need graphical representations of stock price movements, trading volumes, and correlations in order to make sound decisions. This project will produce useful charts in Excel from historical stock data to examine Apple Inc.'s stock performance.

Objectives:

- Plot stock price movements over time.
- Examine trading volume fluctuations.
- Analyze the connection between closing prices and trading volume.
- Recognize patterns in price distribution.
- Analyze stock price movement with a bar chart.

Tools Used:

1. **Excel** – For data visualization and dashboard creation.
2. **CSV Files** – For storing and importing sales data.

Data Source:

Ticker: Stock symbol (AAPL for Apple Inc.)

Date: Trading day

Open: Stock price at the beginning of the trading session

High: Peak stock price during the day

Low: Lowest stock price of the day

Close: Stock price at the end of the trading session

Adj Close: Adjusted closing price (adjusted for dividends/splits)

Volume: Number of shares traded on that day

Step 1: Data Preparation & Cleaning

- Import Data into Excel
  - Connect to the dataset (CSV/Excel file) in Tableau.
  - Check data types for each field.

- Create Additional Columns.
  Create column percentage change by using open and close price.

Step 2: Exploratory Data Analysis (EDA) in Excel

- **Line Chart - Stock Price Trends**

  Insert a line chart using the "Date" column (X-axis) and "Close" price (Y-axis).

  Insert the slicer to adjust the months.

- **Bar Chart – Top 10 Trading Volume Over Time**

  Use "Date" as the X-axis and "Volume" as the Y-axis.

  Useful for identifying periods of high trading activity.

- **Column Chart – High low range**

  Represents the daily price range (high vs. low).

  Indicates stock volatility on a given day.

- **Pie Chart – Stock Volume Contribution**

  Visualizing the proportion of different stock tickers contributing to the total trading volume.

  This helps in understanding which stock dominates in terms of trading activity.

- **Percentage Change Line Chart**

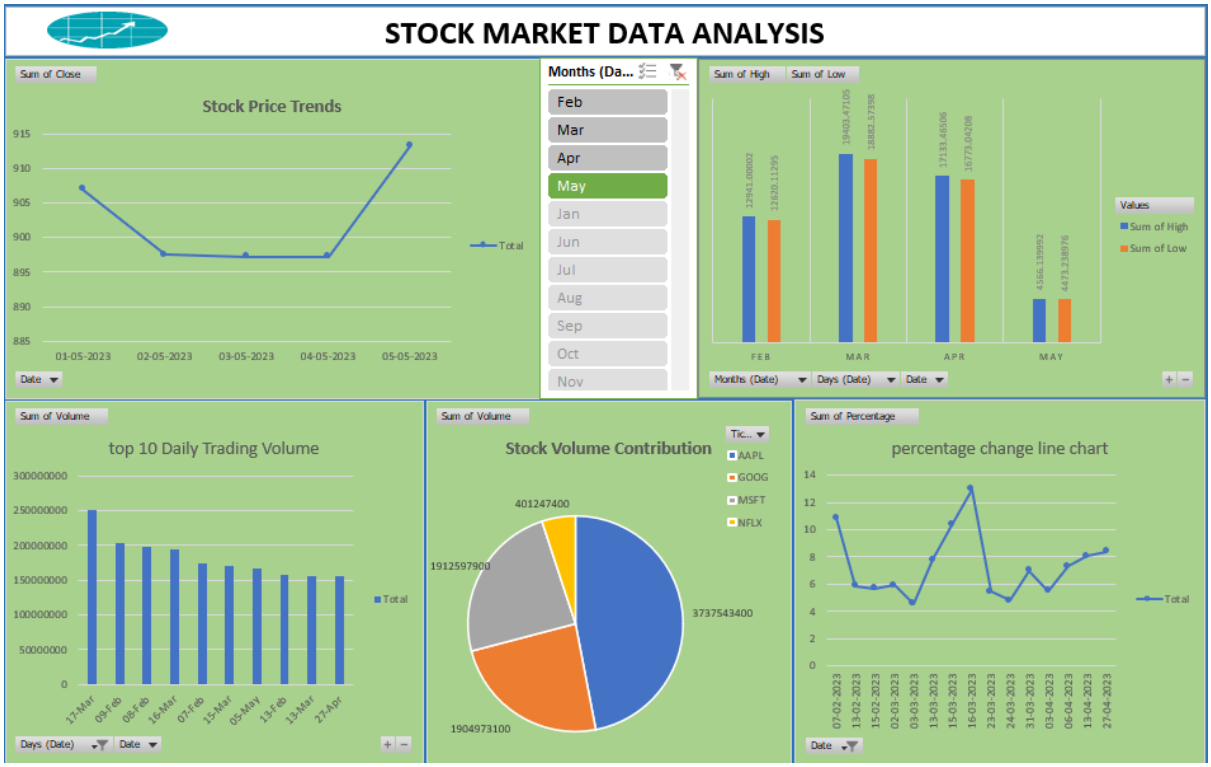
  Add a new column for a daily percentage change: ((Close - Open) / Open) * 100.

Graph a line chart with Date (X-axis) and percentage change (Y-axis) to view daily gains/losses.

Step 3 : Creating a Dashboard in Excel

- Design an Interactive Dashboard
- Integrate several visualizations into one dashboard.

Result:



Conclusion:

This project provides improved visualization of stock market trends, facilitating better data-driven investment and analysis decisions. The produced graphs will provide insights into movement of stock prices, fluctuations in trading volume, and general performance of stocks.