**EXPERIMENT – 1s**

**AIM:**

**Aim:**  
To develop a machine learning-based predictive model for stock market forecasting that analyzes historical stock data, market trends, and external factors to provide accurate predictions of stock price movements. The system will assist investors in making informed trading decisions by leveraging advanced data analytics and artificial intelligence techniques.

**Procedure:**

1. **Import Libraries:**
   * **pandas for data manipulation.**
   * **matplotlib.pyplot and seaborn for data visualization.**
2. **Load Data:**
   * **pd.read\_csv() loads the dataset into a DataFrame.**
3. **Check for Missing Values:**
   * **isnull().sum() calculates the number of missing values in each column.**
4. **Clean Column Names:**
   * **str.strip() removes any extra spaces in column names.**
5. **Handle Duplicates:**
   * **duplicated().sum() counts duplicate rows.**
   * **drop\_duplicates() removes duplicate rows.**
6. **Explore Data:**
   * **head() and tail() display the first and last rows of the dataset.**
   * **describe() provides summary statistics for numerical columns.**
7. **Visualize Data:**
   * **hist() creates histograms for all numerical columns to visualize their distributions.**

**OUTPUT :**

