**EX:No.1 221501047**

**25/01/25**

**PROGRAM TO IMPLEMENT TIME SERIES DATA FOR IMPORT LIBRARY, LOAD DATA, PREPROCESSING AND VISUALISING**

**PROGRAM AND OUTPUT:**

import pandas as pd

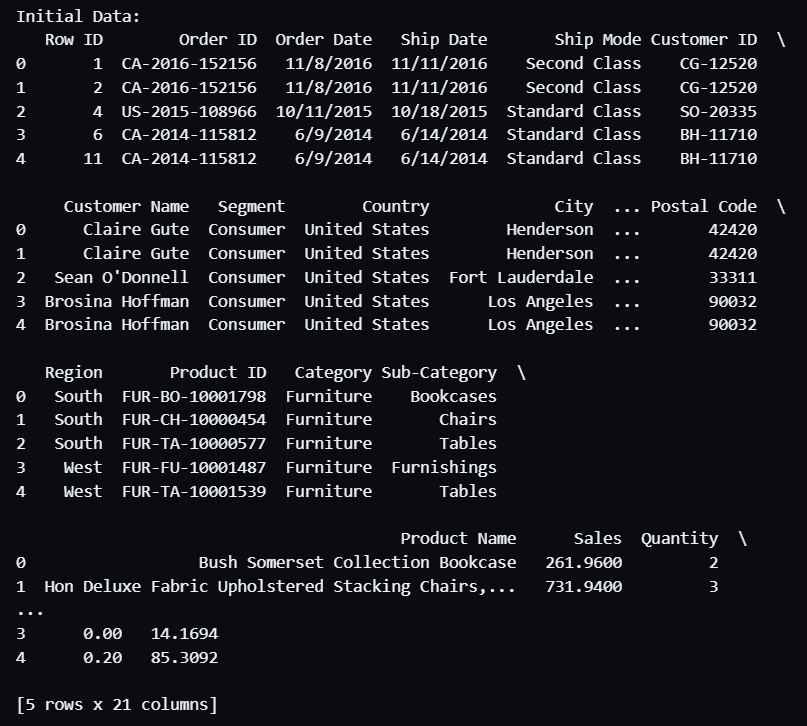
import matplotlib.pyplot as plt

file\_path = 'Super\_Store\_data.csv'

data = pd.read\_csv(file\_path, encoding='latin1')

print("Initial Data:")

print(data.head())



print(data.isnull().sum())



data.fillna(method='ffill', inplace=True)

data.fillna(method='bfill', inplace=True)

date\_column = 'Order Date'

data[date\_column] = pd.to\_datetime(data[date\_column], errors='coerce')

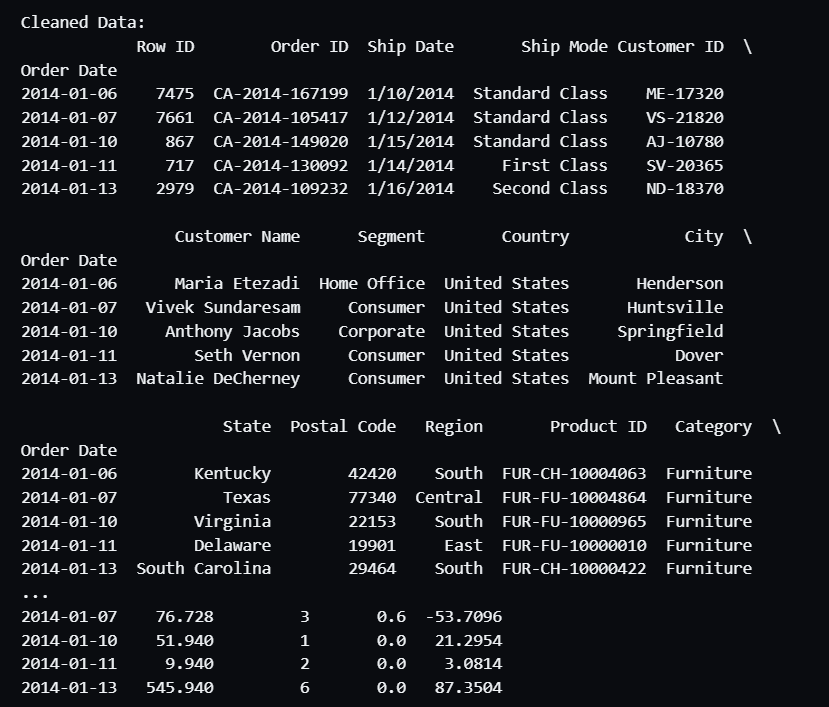
data = data.dropna(subset=[date\_column])

data.set\_index(date\_column, inplace=True)

data.sort\_index(inplace=True)

print("\nCleaned Data:")

print(data.head())



numerical\_column = 'Sales'

if numerical\_column in data.columns:

    plt.figure(figsize=(10, 6))

    data[numerical\_column].plot()

    plt.title(f'Time Series of {numerical\_column}')

    plt.xlabel('Date')

    plt.ylabel(numerical\_column)

    plt.grid()

    plt.show()

