LAB-0

To-Do

Method 1 → Initializing values directly into dataframe

```
import pandas as pd
data = { "USN": ["1BM22CS231", "1BM22CS328", "1BM22CS259",
                 "1BM22CS259", "1BM22CS241"],
         "Name": ["Sagar", "Vinayaka", "Shashidhar", "Varun",
                  "Sanket"],
         "Marks": [90, 90, 90, 90, 90]
}
df = pd.DataFrame(data)
df
```

Method 2 → Importing datasets from sklearn.datasets

```
from sklearn.datasets import load_diabetes
diabetes = load_diabetes()
df = pd.DataFrame( diabetes.data, columns = diabetes.feature_names)
df["target"] = diabetes.target
print("sample data :");
print (df.head())
```

Method 3 → Importing datasets from specific csv files

```
file_path = "sample_sales_data.csv"
df = pd.read_csv(file_path)
print("sample-data :")
print ( df.head())
```

Method -4 → Downloading datasets from existing dataset repositories like kaggle, UCI, KEEL etc

```
file_path = "Diabetes.csv"
df = pd.read_csv(file_path)
print("Sample data")
print(df.head())
```

Stock Market Data Analysis of following
1) HDFC Bank Ltd, ICICI Bank Ltd, Kotak mahindra Bank Ltd
2) Start date : 2024-01-01, End date: 2024-12-30
3) Plot the closing price and daily returns for all the three banks mentioned

```
import yfinance as yf
import pandas as pd
import matplotlib.pyplot as plt
tickers = ["HDFCBANK.NS", "ICICIBANK.NS", "KOTAKBANK.NS"]
data = yf.download(tickers, start="2024-01-01",
                   end="2024-12-30", group_by="ticker")

hdfc_data = data['HDFCBANK.NS']
print("\n Summary statistics for HDFC Bank:")
print(hdfc_data.describe())
.
hdfc_data['Daily return'] = hdfc_data['Close'].pct_change
plt.figure(figsize=(12,6))
plt.subplot(2,1,1)
hdfc_data['Close'].plot(title="HDFC Bank - Closing price")
plt.subplot(2,1,2)
hdfc_data['Daily Return'].plot(title="KOTAK Bank -
                Daily returns", color="orange")
plt.tight_layout()
plt.show()
```