Date 5/3/25
Page 1

Lab-0

→ Write a python prog to import & export data using Pandas library functions.

To do:

Method 1: Initializing values directly into dataframe. Insert your known values, five rows of data with column headings as 'USN, Name, Marks'

→
```
import pandas as pd
data = {'USN': ['1BM22CS266', '1B--267', '1B--268'],
        'Name': ['Shreya', 'Shr', 'Shree', 'Shri'],
        'Marks': [99, 98, 97, 96]}
df = pd.DataFrame(data)
print(df)
```

Method 2: Importing datasets from sklearn.datasets
Loading diabetes datasets sklearn.datasets.load_diabetes

→
```
from sklearn.datasets import load_diabetes
diabetes = load_diabetes()
df = pd.DataFrame(diabetes, columns = diabetes.feature_names)
df['target'] = diabetes.target
print(df)
```

Method 3: Importing datasets from specific .csv file
sample_sales_data.csv

→
```
path = r"/content/sample_sales_data.csv"
df = pd.read_csv(path)
print(df)
```

Method 4: Downloading datasets from existing dataset repositories like kaggle, UCI, Mendeley, kaggle, etc

→
```
path = r"/content/dataset of diabetes.csv"
df = pd.read_csv(path)
print(df)
```

TODO:

1. HDFC Bank Ltd, ICICI Bank Ltd, Kotak Mahindra Bank Ltd
tickers = ["HDFCBANK.NS", "ICICIBANK.NS", "KOTAKBANK.NS"]

→ import yfinance as yf
import matplotlib.pyplot as plt
tickers = ["HDFCBANK.NS", "ICICIBANK.NS", "KOTBANK.NS"]

2. start date: 2024-01-01, End Date: 2024-12-30

→ data = yf.download(tickers, start='2024-01-01', end='2024-12-30', group_by=tickers)
print(data)

3. Plot the closing price & daily returns for all the three banks mentioned

→ #HDFC BANK
HDFC = data['HDFCBANK.NS']
HDFC['Daily Return'] = HDFC['Close'].pct_change()
plt.figure(figsize=(12,6))
plt.subplot(2,1,1)
HDFC['Close'].plot(title='HDFCBANK - closing Price')
plt.subplot(2,1,2)
HDFC['Daily_Return'].plot(title='HDFCBANK - Daily Return', color='orange')
plt.tight_layout()
plt.show()

→ #KOTAK BANK
KOTAK = data['KOTAKBANK.NS']
KOTAK['DailyReturn'] = KOTAK['Close'].pct_change()
plt.figure(figsize=(12,6))
plt.subplot(2,1,1)
KOTAK['Close'].plot(title='KOTAKBANK - closePrice')
plt.subplot(2,1,2)
KOTAK['DailyReturn'].plot(title='KOTAKBANK - DailyReturn', color='orange')
plt.tight_layout()
plt.show()