LAB-1

21/2/25

* Different ways of importing datasets

Method-1 :- Initialize values directly into dataframe

```
import pandas as pd
data = {
    "USN": ["1bm23cs417", "1bm22cs112", "1bm22cs225", "1BM22CS441", "1bm22cs512"],
    "Name": ["Rohit", "Rahul", "Raj", "Revanth", "Pranitha"],
    "Marks": [85, 90, 78, 88, 92]
}
df = pd.DataFrame(data)
print(df)
```

Output:-

	USN	Name	Marks
0	1bm23cs417	Rohit	85
1	1bm22cs112	Rahul	90
2	1bm22cs225	Raj	78
3	1bm22cs441	Revanth	88
4	1bm22cs512	Pranitha	92

Method 2:- Importing datasets from sklearn.datasets

```
from sklearn.datasets import load_diabetes
import pandas as pd
diabetes = load_diabetes()
df = pd.DataFrame(diabetes.data, columns = diabetes.feature_names)
df['target'] = diabetes.target
df.head()
```

Output:-

	age	sex	bmi	bp	s1	s2	s3	s4	s5	s6	target
0	0.03	0.05	0.06	0.02	-0.04	-0.03	-0.04	-0.002	0.019	-0.017	151.0
1											
2											
3											
4											

Method-3 :- Importing datasets from a specific .csv file

```
df2 = pd.read_csv('/content/Dataset of Diabetes.csv', encoding='latin-1')
print("Sample data:")
print(df2.head())
```

Output -

Sample data :

	ID	No. Patients	Gender	Age	Urea	Cr	Hb	Chol	TG	HDL	LDL	VLDL	BR
0	502	17975	F	50	4.7	46	4.9	4.2	0.9	2.4	1.4	0.5	24.
1													
2													
3													
4													

* Analysing the dataset :

```
import yfinance as yf
import pandas as pd
import matplotlib.pyplot as plt

tickers = ["HDFC.NS", "ICICIBANK.NS", "KOTAKBANK.NS"]
data = yf.download(tickers, start = "2024-01-01", end = "2024-12-30",
group_by = 'ticker')
print ("First 5 rows of the dataset :")
print (data.head())

print ("\n Shape of the dataset:")
print (data.shape)
print ("\n Column names:")
print (data.columns)
hdfc_data = data['HDFCBANK.NS']
print("\n Summary statics for HDFC industries:")
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 - Closing Price")
plt.subplot (2,1,2)
hdfc_data['Daily Return'].plot (title = "hdfc - Daily Returns', color = 'orange
plt.tight_layout ()
plt.show ()

hdfc_data.to_csv ('hdfc-data.csv')
```

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