

24-10-2024

# Training Day – 26

## \*Topic:\* Introduction to Pandas

- Learned about Pandas DataFrame and Series.
- Example: Created a DataFrame from a dictionary and accessed its rows and columns.

Pandas provides Series and DataFrame structures for efficient data manipulation and analysis.

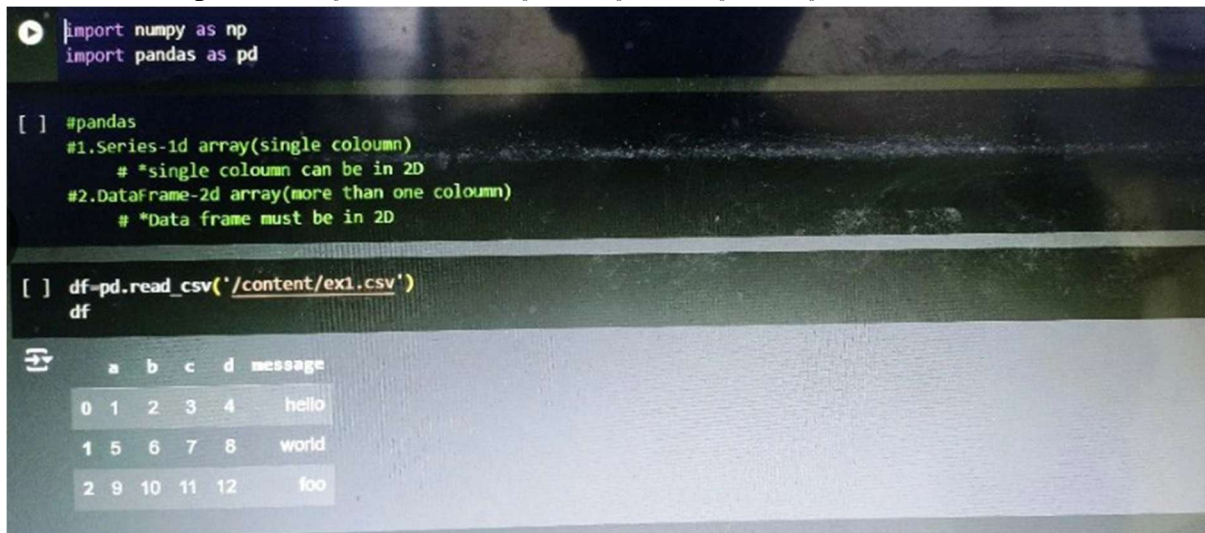
In today's session we worked little bit more on Broadcasting on numpy library, by solving a mathematical operation on matrices.

- Also learn about "fromfunction" through the help of numpy.
- Topic Array creation also covered in today's session, and completed with solving one example of 'Array Creation' using static method.

### EXAMPLE

```
import pandas as pd
data = {"Name": ["Alice", "Bob"], "Age": [25, 30]}
df = pd.DataFrame(data)
print(df)
```

- After importing I used some functions of pandas to read and analyse the data set, like - . shape, . isnull(), info(), . sum(), . head(), . tail()



```
import numpy as np
import pandas as pd

[ ] #pandas
#1.Series-1d array(single column)
# *single column can be in 2D
#2.DataFrame-2d array(more than one column)
# *Data frame must be in 2D

[ ] df=pd.read_csv('/content/ex1.csv')
df
```

	a	b	c	d	message
0	1	2	3	4	hello
1	5	6	7	8	world
2	9	10	11	12	foo

```
[ ] df5.info()
```

```
<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 3 entries, 0 to 2  
Data columns (total 6 columns):  
#   Column      Non-Null Count  Dtype  
---  ---  
0   something    3 non-null      object  
1   a            3 non-null      int64  
2   b            3 non-null      int64  
3   c            2 non-null      float64  
4   d            3 non-null      int64  
5   message      2 non-null      object  
dtypes: float64(1), int64(3), object(2)  
memory usage: 272.0+ bytes
```

```
[ ] df5.isnull().sum()
```

```
0  
something 0  
a         0  
b         0  
c         1  
d         0  
message   1
```