- **TASK OF DAY- 3:-**

1. Create a NumPy array and perform at least 5 operations.

```
import numpy as np
a = np.array([9,10,4,22])
#First_Operation
b = np.ones((1,4))
print(b)
#Second_Operation
result = np.add(a , b)
print("Use of add operation : ",result)
#Third_Operation
Check = np.less(a , b)
print("Use of less operation : ",Check)
#Fourth_Operation
Reshaping = np.reshape(a , (2, 2))
print("Use of reshaping operation : ",Reshaping)
#Fifth_Operation
Transpose = np.transpose(Reshaping)
print("Use of Transpose operation : ",Transpose)
```

OUTPUT :-

```
PS C:\Users\Heet\Desktop\PROGRAMS> python -u "c:\Users\Heet\Desktop\PROGRAMS\NEW LEARNINGS\Python\day3_1.py"
[[1. 1. 1. 1.]]
Use of add operation :  [[10. 11.  5. 23.]]
Use of less operation :  [[False False False False]]
Use of reshaping operation :  [[ 9 10]
 [ 4 22]]
Use of Transpose operation :  [[ 9  4]
 [10 22]]
PS C:\Users\Heet\Desktop\PROGRAMS>
```

2. Create a DataFrame manually with at least 2 columns and 5 rows.

```
import pandas as pd
data = {'Trainee_Name': ['Aarav', 'Lila', 'Kai', 'Zara ', 'Rohan'],
        'Trainee_id': ['Aarav_AIIntern_001', 'Lila_AIIntern_002', 'Kai_AIIntern_003',
        'Zara_AIIntern_004', 'Rohan_AIIntern_005']}
df = pd.DataFrame(data)
print(df)
```

OUTPUT :-

```
PS C:\Users\Heet\Desktop\PROGRAMS> python -u "c:\Users\Heet\Desktop\PROGRAMS\NEW LEARNINGS\Python\day3_2.PY"
  Trainee_Name          Trainee_id
0        Aarav  Aarav_AIIntern_001
1         Lila   Lila_AIIntern_002
2          Kai    Kai_AIIntern_003
3        Zara    Zara_AIIntern_004
4        Rohan  Rohan_AIIntern_005
```

3. Read any public CSV (from Kaggle or local file) and print head and column names.

```
import pandas as pd
file_path = r'C:\Users\Heet\Desktop\PROGRAMS\NEW LEARNINGS\Python\circuits.csv'
data = pd.read_csv(file_path, encoding='ISO-8859-1')
print("First 5 Rows:\n", data.head())
print("\nColumns:\n", data.columns)
```

OUTPUT :-

```
PS C:\Users\Heet\Desktop\PROGRAMS> python -u "c:\Users\Heet\Desktop\PROGRAMS\NEW LEARNINGS\Python\day3_3.
py"
First 5 Rows:
    circuitId   circuitRef                          name      location  ...       lat        lng   alt
                                      url
0          1  albert_park  Albert Park Grand Prix Circuit     Melbourne  ... -37.84970  144.96800  10.0
http://en.wikipedia.org/wiki/Melbourne_Grand_P...
1          2       sepang    Sepang International Circuit  Kuala Lumpur  ...   2.76083  101.73800   NaN
http://en.wikipedia.org/wiki/Sepang_Internatio...
2          3      bahrain   Bahrain International Circuit        Sakhir  ...  26.03250   50.51060   NaN
http://en.wikipedia.org/wiki/Bahrain_Internati...
3          4    catalunya  Circuit de Barcelona-Catalunya     MontmelÌ_  ...  41.57000    2.26111   NaN
http://en.wikipedia.org/wiki/Circuit_de_Barcel...
4          5     istanbul                 Istanbul Park      Istanbul  ...  40.95170   29.40500   NaN
       http://en.wikipedia.org/wiki/Istanbul_Park

[5 rows x 9 columns]

Columns:
 Index(['circuitId', 'circuitRef', 'name', 'location', 'country', 'lat', 'lng',
       'alt', 'url'],
      dtype='object')
```