DATE :13/10/2022
PROJECT NAME : Natural Disaster Intensity Analysis and Classification
TEAM ID:PNT2022TMID25540

Basic Python

1. Split this string

```
s = "Hi there Sam!"
x=s.split()
print(x)
```

```
['Hi', 'there', 'Sam!']
```

2. Use .format() to print the following string.

Output should be: The diameter of Earth is 12742 kilometers.

```
planet = "Earth"
diameter = 12742
print('The diameter of {planet} is {measure}
kilometers'.format(planet="Earth", measure=12742.34))
```

```
The diameter of Earth is 12742.34 kilometers
```

3. In this nest dictionary grab the word "hello"

```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':
[1,2,3,'hello']}]}]}
print(d['k1'][3]['tricky'][3]['target'][3])
```

```
hello
```

Numpy

```
import numpy as np
a = np.array([1, 2, 3, 4, 5])
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
import numpy as np
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
```

```
An array of 10 zeros:
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

```
import numpy as np
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

```
An array of 10 fives:
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

5. Create an array of all the even integers from 20 to 35

```
import numpy as np
array=np.arange(20,35,2)
print("Array of all the even integers from 30 to 70")
print(array)
```

```
Array of all the even integers from 30 to 70
[20 22 24 26 28 30 32 34]
```

6. Create a 3x3 matrix with values ranging from 0 to 8

```
import numpy as np
x =  np.arange(0, 9).reshape(3,3)
print(x)
```

```
[[0 1 2]
 [3 4 5]
 [6 7 8]]
```

7. Concatenate a and b

a = np.array([1, 2, 3]), b = np.array([4, 5, 6])

```
import numpy as np
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
print(np.concatenate((a,b)))
```

```
[1 2 3 4 5 6]
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd

data = {
  "TotalScore": [420, 380, 390],
  "MathScore": [50, 40, 45]
}

#load data into a DataFrame object:
df = pd.DataFrame(data)

print(df)
```

```
   TotalScore  MathScore
0         420         50
```

```
1         380         40
2         390         45
```

9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

```
import datetime

import pandas as pd

test_date = datetime.datetime.strptime("01-7-2022", "%d-%m-%Y")
K = 41
date_generated = pd.date_range(test_date, periods=K)
print(date_generated.strftime("%d-%m-%Y"))
```

```
Index(['01-07-2022', '02-07-2022', '03-07-2022', '04-07-2022', '05-07-
2022',
       '06-07-2022', '07-07-2022', '08-07-2022', '09-07-2022', '10-07-
2022',
       '11-07-2022', '12-07-2022', '13-07-2022', '14-07-2022', '15-07-
2022',
       '16-07-2022', '17-07-2022', '18-07-2022', '19-07-2022', '20-07-
2022',
       '21-07-2022', '22-07-2022', '23-07-2022', '24-07-2022', '25-07-
2022',
       '26-07-2022', '27-07-2022', '28-07-2022', '29-07-2022', '30-07-
2022',
       '31-07-2022', '01-08-2022', '02-08-2022', '03-08-2022', '04-08-
2022',
       '05-08-2022', '06-08-2022', '07-08-2022', '08-08-2022', '09-08-
2022',
       '10-08-2022'],
      dtype='object')
```

10. Create 2D list to DataFrame

lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
print(lists)
```

```
[[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```