Assignment- 1

Date	12 October 2022
Team Id	PNT2022TMID37914
Project Name	Natural Disaster Intensity Analysis And Classification Using Artificial intelligence
Assesment No	01

Basic Python

1. **Split this string**

Solution:

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

Output:

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

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

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

Solution :

```
x= "Earth"
y= 12742
print('The diameter of the {} is {} kilometers'.format(x,y))
```

Output:

```
The diameter of Earth is 127
42 kilometers
```

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

Solution :

```
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hell]}]}
    c=d['k1'][3]
    e=c['tricky'][3]
f=e['target'][3]
```

```
print(f)
```

Output:

```
hello
```

Numpy

```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

Solution:

```
a=np.zeros(10)
a
```

Output:

```
[0. 0. 0. 0. 0. 0. 0. 0. 0.
0.]
```

Solution:

```
c=a+5
c
```

Output:

```
[5 5 5 5 5 5 5 5 5 5]
```

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

Solution:

```
np.arange(20,35,2)
```

Output:

```
[20 22 24 26 28 30 32 34]
```

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

Solution:

```
a=np.arange(0,9)
a.reshape(3,3)
```

Output:

```
[[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])

Solution:

```
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
np.concatenate((a,b),axis=0)
```

output:

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

Pandas

8. Create a dataframe with 3 rows and 2 columns

Solution:

```
import pandas as pd


d={"Name":["Vasanth","Shyam","Dhana"],"Age":[20,25,23]}
df=pd.DataFrame(d)
df
```

Output:

	0	1
0	4	0
1	5	1
2	4	1

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

Solution:

```
p = pd.date_range(start='1-1-2023',end='10-2-2023')
for val in p:
print(val);
```

Output:

```
DatetimeIndex(['2023-01-01',
'2023-01-02', '2023-01-03',
'2023-01-04',
               '2023-01-05',
'2023-01-06', '2023-01-07',
'2023-01-08',
               '2023-01-09',
'2023-01-10', '2023-01-11',
'2023-01-12',
               '2023-01-13',
'2023-01-14', '2023-01-15',
'2023-01-16',
               '2023-01-17',
'2023-01-18', '2023-01-19',
'2023-01-20',
               '2023-01-21',
'2023-01-22', '2023-01-23',
'2023-01-24',
               '2023-01-25',
'2023-01-26', '2023-01-27',
'2023-01-28',
               '2023-01-29',
'2023-01-30', '2023-01-31',
               '2023-02-02',
'2023-02-03', '2023-02-04',
'2023-02-05',
               '2023-02-06',
'2023-02-07', '2023-02-08',
'2023-02-09',
               '2023-02-1
0'],
              dtype='datetim
e64[ns]', freq='D')
```

10. Create 2D list to DataFrame

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

Solution:

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


dff=pd.DataFrame(lists)
dff
```

Output:

	0	1	2
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24