NAME : MOHANAVEL K
REGISTER NO : 611219106046
DATE : 16/09/2022

Basic Python

1. Split this string

```
s = "Hi there Sam!"

s.split()
['Hi', 'there', 'Sam!']
```

['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 {} is {} kilometers.'.format(planet,diameter)) The
```

diameter of Earth is 12742 kilometers.

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

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

d['k1'][3]['tricky'][3]['target'][3]
```

{"type":"string"}

Numpy

```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

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


array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])

array=np.ones(10)*5
array

array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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

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

```
array([20, 22, 24, 26, 28, 30, 32, 34])
```

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

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

```
array([[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])

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

```
array([1, 2, 3, 4, 5, 6])
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd

Datainput=[['Keerthi',95],['Rithika',96],['Pavithra',98]]
Output=pd.DataFrame(Datainput,columns=['Name','Marks'])
Output
```

	Name	Marks
0	Keerthi	95
1	Rithika	96
2	Pavithra	98

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

```
d=pd.date_range(start='01-01-2023',end='02-10-2023')
s=pd.Series(d)
s
```

```
0   2023-01-01
1   2023-01-02
2   2023-01-03
3   2023-01-04
4   2023-01-05
5   2023-01-06
6   2023-01-07
7   2023-01-08
8   2023-01-09
9   2023-01-10
```

```
10    2023-01-11
11    2023-01-12
12    2023-01-13
13    2023-01-14
14    2023-01-15
15    2023-01-16
16    2023-01-17
17    2023-01-18
18    2023-01-19
19    2023-01-20
20    2023-01-21
21    2023-01-22
22    2023-01-23
23    2023-01-24
24    2023-01-25
25    2023-01-26
26    2023-01-27
27    2023-01-28
28    2023-01-29
29    2023-01-30
30    2023-01-31
31    2023-02-01
32    2023-02-02
33    2023-02-03
34    2023-02-04
35    2023-02-05
36    2023-02-06
37    2023-02-07
38    2023-02-08
39    2023-02-09
40    2023-02-10
dtype: datetime64[ns]
```

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]]
```

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
d=pd.DataFrame(lists)
d
```

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