

ASSIGNMENT 1

D.SASHI

Basic Python

1. Split this string

```
s = "Hi there Pavan!"
```

In [25]:

```
s.split()
```

Out[25]:

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

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

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

```
planet = "Earth"  
diameter = 12742
```

In [27]:

```
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,'sidharth']}] } ] }
```

In [29]:

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

Out[29]:

```
'sidharth'
```

Numpy

```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

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

```
a
```

In [31]:

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

Out[31]:

```
b=np.ones(10)*5
```

```
b
```

In [32]:

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

Out[32]:

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

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

```
S
```

In [33]:

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

Out[33]:

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

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

```
C
```

In [34]:

```
array([[0, 1, 2],
       [3, 4, 5],
       [6, 7, 8]])
```

Out[34]:

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])
```

```
np.concatenate((a,b),axis=0)
```

In [35]:

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

Out[35]:

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
```

In [37]:

```
d={"name":["Pavan","Eshoin","Noel"],"age":[19,14,21]}
df=pd.DataFrame(d)
df
```

Out[37]:

	name	age
0	Pavan	19
1	Eshoin	14
2	Noel	21

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

In [38]:

```
p = pd.date_range(start='1-1-2023',end='10-2-2023')
for val in p:
    print(val)
2023-01-01 00:00:00
2023-01-02 00:00:00
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
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```

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]]
```

In [40]:

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

Out[40]:

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