Basic Pyhon

1.Split this string

In [ ]:
```
s = "Hi there Sam!"

s.split()
```

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

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

In [ ]:
```
planet = "Earth"
diameter = 12742
```

In [24]:
```
planet = "Earth"
diameter = 12742
print('The diameter of {} is {} kilometers.'.format(planet,diameter))
```

```
The diameter of Earth is 12742 kilometers.
```

In this nest dictinoaey grab the word "hello"

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

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

Numpy

In [1]:
```
import numpy as np
```

4.1 Create an array of 10 zero?

4.2 Create an array of 10 fives?

In [2]:
```
import numpy as np
array=np.zeros(10)
array
```

Out[2]:
```
array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

In [3]:
```
import numpy as np
array=np.ones(10)*5
array
```

Out[3]:
```
array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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

In [4]:
```
import numpy as np
array=np.arange(20,35,2)
array
```

Out[4]:
```
array([20, 22, 24, 26, 28, 30, 32, 34])
```

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

In [5]:
```
matrix=np.arange(0,9).reshape(3,3)
matrix
```

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

7.Concatenate a and b

a=np.array([1,2,3]),b=no.array([4,5,6])

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

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

Pandas

8. Create the dataframe with 3 rows and 2 columns

In [7]:
```
import pandas as pd
```

In [8]:
```
data = [['Mahesh', 55], ['thillai', 30], ['najith', 31]]
df = pd.DataFrame(data, columns=['Name', 'Age'])
df
```

Out[8]:

	Name	Age
0	Mahesh	55
1	thillai	30
2	najith	31

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

In [9]:
```
abishek = pd.date_range(start ='01-01-2023',
        end ='02-10-2023' )

for val in abishek:
  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
2023-01-06 00:00:00
2023-01-07 00:00:00
2023-01-08 00:00:00
2023-01-09 00:00:00
2023-01-10 00:00:00
2023-01-11 00:00:00
2023-01-12 00:00:00
2023-01-13 00:00:00
2023-01-14 00:00:00
2023-01-15 00:00:00
2023-01-16 00:00:00
2023-01-17 00:00:00
2023-01-18 00:00:00
2023-01-19 00:00:00
2023-01-20 00:00:00
2023-01-21 00:00:00
2023-01-22 00:00:00
2023-01-23 00:00:00
2023-01-24 00:00:00
2023-01-25 00:00:00
2023-01-26 00:00:00
2023-01-27 00:00:00
2023-01-28 00:00:00
2023-01-29 00:00:00
2023-01-30 00:00:00
2023-01-31 00:00:00
2023-02-01 00:00:00
2023-02-02 00:00:00
2023-02-03 00:00:00
2023-02-04 00:00:00
2023-02-05 00:00:00
2023-02-06 00:00:00
2023-02-07 00:00:00
2023-02-08 00:00:00
2023-02-09 00:00:00
2023-02-10 00:00:00
```

10.Create 2D list to DataFrame

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

In [10]:
```
lists = [[1,'aaa', 22], [2,'bbb', 25], [3,'ccc', 24]]

# Create the pandas DataFrame
df = pd.DataFrame(lists, columns = ['s.no','name','Age'])

# print dataframe.
print(df )
```

```
   s.no name  Age
0     1  aaa   22
1     2  bbb   25
2     3  ccc   24
```