

▼ Basic Python

▼ 1. Split this string

```
s = "Hi there Sam!"  
  
s.split()  
  
['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  
  
txt='The diameter of {} is {} kilometers.'  
txt.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]  
  
'hello'
```

▼ Numpy

```
import numpy as np
```

▼ 4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
np.zeros(10)  
  
array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

```
np.ones(10)*5  
  
array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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

```
np.arange(20,35,2)  
  
array([20, 22, 24, 26, 28, 30, 32, 34])
```

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

```
np.arange(0, 9).reshape(3,3)  
  
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])  
np.concatenate((a,b))  
  
array([1, 2, 3, 4, 5, 6])
```

▼ Pandas

▼ 8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
```

```
data={'Name':['Tom','nick','krish'],
      'Age':[20,21,19]}
pd.DataFrame(data)
```

	Name	Age
0	Tom	20
1	nick	21
2	krish	19

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

```
import pandas
from datetime import date,timedelta
sdate=date(2023,1,1)
edate=date(2023,2,11)
print(pandas.date_range(sdate,edate-timedelta(days=1),freq='d'))

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', '2023-02-01',
               '2023-02-02', '2023-02-03', '2023-02-04', '2023-02-05',
               '2023-02-06', '2023-02-07', '2023-02-08', '2023-02-09',
               '2023-02-10'],
              dtype='datetime64[ns]', freq='D')
```

▼ 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]]  
pd.DataFrame(lists,columns=['Id','name','marks'])
```

	Id	name	marks
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24

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