

▼ Basic Python

▼ 1. Split this string

Double-click (or enter) to edit

```
d = "Hi there Sam!"

d= d.split()
print(d)

['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 {} kilometres.'.format(planet, diameter));

The diameter ofEarth is 12742 kilometres.
```

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

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

print (d['k1'][3]["tricky"][3]['target'][3])

hello
```

▼ Numpy

▼ 4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
import numpy as np
```

```
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(20,36,2)
```

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

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

```
np.arange(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])
```

```
con = np.concatenate((np.array([1,2,3]), np.array([4,5,6])))  
print(con)
```

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

▼ Pandas

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

```
import pandas as pd
```

```
data= {'name':[' meena','nithya','lea'],'Age':[20,23,25]}  
df = pd.DataFrame(data)  
df
```

	name	Age
0	meena	20
1	nithya	23
2	lea	25

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


```
pd.date_range(start='1/1/2023',end='2/10/2023')  
  
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]]
```

```
df = pd.DataFrame(lists,columns=['col1','col2','col3'])  
df
```

	col	col2	col3	
0	1	aaa	22	
1	2	bbb	25	
2	3	ccc	21	

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