

## ▼ Basic Python

### ▼ 1. Split this string

```
s = "Hi there Sam!"
```

```
s = "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
```

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

```
print(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?

```
import numpy as np
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

```
An array of 10 fives:
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

```
import numpy as np
array=np.arange(20,36,2)
print("An array of all the integers from 30 to 70:")
print(array)
```

```
An array of all the integers from 30 to 70:
[20 22 24 26 28 30 32 34]
```

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

```
a=np.array((1,2,3))
b=np.array((4,5,6))
np.stack((a,b),axis=1)
```

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

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

```
import numpy as np
x = np.arange(0,9).reshape(3,3)
print(x)
```

```
[[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.stack((a,b),axis=1)
```

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

## ▼ Pandas

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

```
import pandas as pd
```

```
import pandas as pd
data = [['srivishnu',77],['srinithi gayathri',78],['srivignesh',79]]
df = pd.DataFrame(data,columns=['name','register no'])
df
```

	name	register no
0	srivishnu	77
1	srinithi gayathri	78
2	srivignesh	79

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

```
import datetime

day_delta=datetime.timedelta(days=1)

start_date = datetime.date.today()
end_date= start_date + 41*day_delta
for i in range((end_date - start_date).days):
    print(start_date + i*day_delta)
```

```
2022-09-15
2022-09-16
2022-09-17
2022-09-18
2022-09-19
2022-09-20
2022-09-21
2022-09-22
2022-09-23
```

2022-09-24  
2022-09-25  
2022-09-26  
2022-09-27  
2022-09-28  
2022-09-29  
2022-09-30  
2022-10-01  
2022-10-02  
2022-10-03  
2022-10-04  
2022-10-05  
2022-10-06  
2022-10-07  
2022-10-08  
2022-10-09  
2022-10-10  
2022-10-11  
2022-10-12  
2022-10-13  
2022-10-14  
2022-10-15  
2022-10-16  
2022-10-17  
2022-10-18  
2022-10-19  
2022-10-20  
2022-10-21  
2022-10-22  
2022-10-23  
2022-10-24  
2022-10-25

## ▼ 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]]
```

```
import pandas as pd
```

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]  
ls = pd.DataFrame(data, columns = ['tag', 'number'])  
df
```

	name	register no	
0	srivishnu	77	
1	srinithi gayathri	78	
2	srivignesh	79	

```
from google.colab import drive  
drive.mount('/content/drive')
```

Mounted at /content/drive

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