

## ▼ 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

print("The diameter of {a} is {b} kilometer".format(a= planet,b=diameter))

The diameter of Earth is 12742 kilometer
```

### ▼ 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

```
import numpy as np
```

### ▼ Create an array of 10 zeros?

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

```
values=[]
for i in range(20,35):
    if i%2==0:
        values.append(i)
np.array(values)

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])
```

## ▼ Pandas

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

```
import pandas as pd
```

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



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]]
```

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