

▼ Basic Python

▼ 1. Split this string

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

```
a=s.split()  
print(a)
```

▼ 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 Earth is {0} kilometers".format(diameter))
```

▼ 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']}]}]}
```

```
d['k1'][3]['tricky'][3]['target'][3]
```

▼ 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.zeros(10)
print(array)
```

```
import numpy as np
array=np.ones(10)*5
print(array)
```

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

```
import numpy as np
array = np.arange(20,35,2)
print(array)
```

▼ 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)
```

▼ 7. Concatenate a and b

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

```
import numpy as np
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
np.concatenate((a,b),axis=0)
```

▼ Pandas

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

```
import pandas as pd
```

```
import pandas as pd
data = [['tom', 10], ['nick', 15], ['juli', 14]]
```

```
df = pd.DataFrame(data, columns=['Name', 'Age'])  
print(df)
```

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

```
import pandas as pd  
per1 = pd.date_range(start = '1-1-2023', end = '02-10-2023')  
for val in per1:  
    print(val)
```

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]]  
df = pd.DataFrame(lists, columns = ['roll_no', 'alpha', 'reg_no'])  
print(df)
```