

Project Name	AI-powered Nutrition Analyzer for fitness Enthusiasts
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## Basic Python

- **Split this string**

```
s = "Hi there
```

```
Sam!"s.split()
```

```
['Hi', 'there', 'Sam!']
```

- **Use .format() to print the following string.**

**Output should be: The diameter of Earth is 12742 kilometers.**

```
planet =
```

```
"Earth"
```

```
diameter =
```

```
12742
```

```
a=("The diameter of {} is {}
```

```
kilometers".format("Eath",12742))print(a)
```

```
The diameter of Eath is 12742 kilometers
```

- **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
```

- **Create an array of 10 zeros?**

- **Create an array of 10 fives?**

```
np.zeros(10)*0
```

```
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.])
```

- **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])
```

- **Create a 3x3 matrix with values ranging from 0 to 8**

```
a=np.arange(0, 9)
print(a.reshape(3,
3))
```

[	[	0	1	2]	]
[	[	3	4	5]	]
[	[	6	7	8]	]

- **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])
```

```
con=np.concatenate((a,
b))print(con)
```

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

- **Create a dataframe with 3 rows and 2 columns**

```
import pandas as
pdimport numpy
as np
```

```
d=np.arange(0, 3)
```

```
df=pd.DataFrame(d, columns=['numbers'])
```

```
print(df)
```

numbers	
0	0
1	1
2	2

- **Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023**

```
from datetime import datetime
```

```
pd.date_range(start="2023-01-01",end="2023-
02-10").to_pydatetime().tolist()
```

[datetime.datetime(2023,	1,	1,	0,	0),
datetime.datetime(2023,	1,	2,	0,	0),
datetime.datetime(2023,	1,	3,	0,	0),
datetime.datetime(2023,	1,	4,	0,	0),
datetime.datetime(2023,	1,	5,	0,	0),

datetime.datetime(2023, 1, 6, 0, 0),
datetime.datetime(2023, 1, 7, 0, 0),
datetime.datetime(2023, 1, 8, 0, 0),
datetime.datetime(2023, 1, 9, 0, 0),
datetime.datetime(2023, 1, 10, 0, 0),
datetime.datetime(2023, 1, 11, 0, 0),
datetime.datetime(2023, 1, 12, 0, 0),
datetime.datetime(2023, 1, 13, 0, 0),

datetime.datetime(2023, 1, 14, 0, 0),
datetime.datetime(2023, 1, 15, 0, 0),
datetime.datetime(2023, 1, 16, 0, 0),
datetime.datetime(2023, 1, 17, 0, 0),
datetime.datetime(2023, 1, 18, 0, 0),
datetime.datetime(2023, 1, 19, 0, 0),
datetime.datetime(2023, 1, 20, 0, 0),
datetime.datetime(2023, 1, 21, 0, 0),
datetime.datetime(2023, 1, 22, 0, 0),
datetime.datetime(2023, 1, 23, 0, 0),
datetime.datetime(2023, 1, 24, 0, 0),
datetime.datetime(2023, 1, 25, 0, 0),
datetime.datetime(2023, 1, 26, 0, 0),
datetime.datetime(2023, 1, 27, 0, 0),
datetime.datetime(2023, 1, 28, 0, 0),
datetime.datetime(2023, 1, 29, 0, 0),
datetime.datetime(2023, 1, 30, 0, 0),
datetime.datetime(2023, 1, 31, 0, 0),
datetime.datetime(2023, 2, 1, 0, 0),
datetime.datetime(2023, 2, 2, 0, 0),
datetime.datetime(2023, 2, 3, 0, 0),
datetime.datetime(2023, 2, 4, 0, 0),
datetime.datetime(2023, 2, 5, 0, 0),
datetime.datetime(2023, 2, 6, 0, 0),
datetime.datetime(2023, 2, 7, 0, 0),
datetime.datetime(2023, 2, 8, 0, 0),
datetime.datetime(2023, 2, 9, 0, 0),
datetime.datetime(2023, 2, 10, 0, 0)]

- **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=['identity','tag','numbers'])
print(df)
```

```

      identity  tag
numbers0  1  aaa    22
1         2  bbb    25
2         3  ccc    24
```