

### 1. Split this string

In [1]:

```
s = "Hi there sandhiya!"
```

In [2]:

```
s='Hi there sandhiiya!'
```

```
s.split()
```

Out[2]:

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

### 2. Use .format() to print the following string.

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

In [3]:

```
planet = "Earth"
```

```
diameter = 12742
```

In [4]:

```
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"

In [5]:

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

In [6]:

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

Out[6]:

```
'hello'
```

### Numpy

In [25]:

```
import numpy as np
```

```
array=np.arange(30,71,2)
```

```
print("Array of all the even integers from 30 to 70")
```

```
print(array)
```

Array of all the even integers from 30 to 70

```
[30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70]
```

#### **4.1 Create an array of 10 zeros?**

#### **4.2 create an array of 10 fives?**

In [12]:

```
np.zeros(10)
```

Out[12]:

```
array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

In [13]:

```
np.ones(10) * 5
```

Out[13]:

```
array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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

In [14]:

```
print(np.arange(20,35,2))
```

```
[20 22 24 26 28 30 32 34]
```

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

In [15]:

```
np.arange(0,9) . reshape((3,3))
```

Out[15]:

```
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])
```

In [16]:

```
print('\n---results of a([1,2,3]) and b([4,5,6])---')
```

```
---results of a([1,2,3]) and b([4,5,6])---
```

**Pandas**

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

In [17]:

```
import pandas as pd
```

In [20]:

```
import pandas as pd
```

```
record = {"name":["Laila","Halan"],"marks":["28","25"],"status":["pass","pass"]}
```

```
df = pd.DataFrame(record)
```

```
df
```

Out[20]:

	name	marks	status
0	Latha	28	pass
1	sandhiya	25	pass

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

In [1]:

```
d= (1."Jan", 2023, 10,"Feb", 2023)
```

**Input In [1]**

```
d= (1."Jan", 2023, 10,"Feb", 2023)
```

^

**Syntax Error:** invalid syntax

### 10. Create 2D list to Data Frame

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

In [21]:

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

In [22]:

```
lists = {"s.no": [1, 2, 3], "name": ['aaa','bbb','ccc'], "value": [22, 25, 24]}
```

In [23]:

```
pd.DataFrame(lists)
```

Output [23]:

	<b>s.no</b>	<b>name</b>	<b>value</b>
<b>0</b>	1	aaa	22
<b>1</b>	2	bbb	25
<b>2</b>	3	ccc	24

In [26]:

```
pd.DataFrame(lists,index=["A","B","c"])
```

Out[26]:

	<b>s.no</b>	<b>name</b>	<b>value</b>
<b>A</b>	1	aaa	22
<b>B</b>	2	bbb	25
<b>c</b>	3	ccc	24

In [ ]: