

19IT075 Ravikumar K

Assignment-1

▼ Basic Python

▼ 1. Split this string

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

```
s=s.split(" ")  
for i in s:  
    print(i)
```

```
↳ 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 {} 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']}]}]}
```

```
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?

```
arr1=np.zeros(10)  
print(arr1)
```

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

```
arr2=np.ones(10)*5  
print(arr2)
```

```
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

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

```
arr3=np.arange(20,35,2)  
print(arr3)
```

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

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

```
arr4=np.arange(0,9).reshape(3,3)  
print(arr4)
```

```
[[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])  
c=np.concatenate((a,b))  
print(c)
```

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

▼ Pandas

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

```
import pandas as pd
```

```
data={
    "Name":["Harish","Ajay","Madhavan"],
    "Age":[21,20,19]
}
df=pd.DataFrame(data)
print(df)
```

	Name	Age
0	Harish	21
1	Ajay	20
2	Madhavan	19

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

```
df=pd.date_range("01-01-2023","10-02-2023")
print("Dates")
print(df)
```

```
Dates
DatetimeIndex(['2023-01-01', '2023-01-02', '2023-01-03', '2023-01-04',
               '2023-01-05', '2023-01-06', '2023-01-07', '2023-01-08',
               '2023-01-09', '2023-01-10',
               ...,
               '2023-09-23', '2023-09-24', '2023-09-25', '2023-09-26',
               '2023-09-27', '2023-09-28', '2023-09-29', '2023-09-30',
               '2023-10-01', '2023-10-02'],
              dtype='datetime64[ns]', length=275, freq='D')
```

▼ 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]]
```

```
df=pd.DataFrame(lists)
print(df)
```

	0	1	2
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24

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