

# Assignment 1

## Python Programming

Assignment Date	07 November 2022
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Maximum Marks	2

### 1. Slip the String s =

```
"Hi there Sam"; s=s.split()
print(s);
['Hi', 'there', 'Sam']
```

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

```
planet = "Earth" diameter =12742 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 ']}]}]} lst=
[1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]a=lst[3][1][2];
print(a)
['hello']
```

## Numpy

import numpy as np **4.1 Create an array**

**of 10 zeros?** import numpy as

```
np array=np.zeros(10)

print("An array of 10zero") An array of
10zero print(array) [0. 0. 0. 0. 0. 0. 0. 0. 0.
0.]
```

### 4.2 Create an array of 10 fives?

```
import numpy as np array =
np.ones(10)*5print("An array of
10 five")An array of 10 five
print(array)
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

### 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 of all the even
integers from 20 to 35") Array of all the even integers from 20 to 35
print(array)
[20 22 24 26 28 30 32 34]
```

### 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)

[[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])
```

```
import numpy as np 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 import

```
pandas as pd
```

**8. Create a dataframe with 3 rows and 2 columns** data = [['TOM',

20], ['NICK', 21], ['KRISH', 14], ['JACK', 18]] df=

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

	Name	Age
0	TOM	20
1	NICK	21
2	KRISH	14
3	JACK	18

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

```
import pandas as pd
```

```
dRan1 = pd.date_range(start='1-1-2023', periods = 41)print(dRan1)
```

```
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', '2023-01-11', '2023-01-12',  
                '2023-01-13', '2023-01-14', '2023-01-15', '2023-01-16',  
                '2023-01-17', '2023-01-18', '2023-01-19', '2023-01-20',  
                '2023-01-21', '2023-01-22', '2023-01-23', '2023-01-24',  
                '2023-01-25', '2023-01-26', '2023-01-27', '2023-01-28',  
                '2023-01-29', '2023-01-30', '2023-01-31', '2023-02-01',  
                '2023-02-02', '2023-02-03', '2023-02-04', '2023-02-05',  
                '2023-02-06', '2023-02-07', '2023-02-08', '2023-02-09',  
                '2023-02-10'],  
               dtype='datetime64[ns]', freq='D')
```

```
dtype='datetime64[ns]', freq='D')
```

## 10. Create 2D list to DataFrame

```
import pandas as pd
```

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

```
list= {'name':['aaa', 'bbb', 'ccc'],  
       'points':[22,25,24]}  
df =
```

```
pd.DataFrame(list,index=['1','2','3'])  
df
```

	name	points
1	aaa	22
2	bbb	25
3	ccc	24