

## Assignment -1

### Python Programming

Assignment Date	08 September 2022
Student Name	Mr. K Dinesh Kumar
Student Roll Number	510119104014
Maximum Marks	2 Marks

## Basic Python

### 1. Split this string

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

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

```
s=s.split()
```

```
print(s);
```

```
['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
```

```
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']}]}]}
```

```
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?

```
import numpy as np
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
```

An array of 10 zeros:  
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

```
import numpy as np
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

An array of 10 fives:  
[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(20,36,2)
print("Array of all the even integers from 20 to 35")
print(array)
```

Array of all the even integers from 20 to 35  
[20 22 24 26 28 30 32 34]

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

```
import numpy as np
array=np.arange(0,9).reshape(3,3)
print(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])**

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

array([1, 2, 3, 4, 5, 6])

## Pandas

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

```
import pandas as pd
```

```
import pandas as pd
data={"A":[10,20,30],"B":[40,50,60]}
df=pd.DataFrame(data)
print(df)
```

	A	B
0	10	40
1	20	50
2	30	60

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

```
import pandas as pd
x=pd.date_range(start='1-1-2023',end='10-2-2023',freq='5H')
for val in x:
    print(val)
```

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## 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=['S.No', 'Name', 'Age'])  
print(df)
```

	S.No	Name	Age
0	1	aaa	22

1	2	bbb	25
2	3	ccc	24