

Assignment -1

Python Programming

Assignment Date	17 September 2022
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Student Roll Number	510119104001
Maximum Marks	2 Marks

▼ Basic Python

Question-1:

▼ 1. Split this string

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

```
▶ x = s.split()  
print(x)
```

```
📄 ['Hi', 'there', 'Sam!']
```

Question-2:

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

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

```
[ ] planet = "Earth"  
diameter = 12742
```

```
[ ] txt = "The diameter of {planet} is {diameter} kilometers".format(planet = "Earth", diameter = 12742)  
print(txt)
```

The diameter of Earth is 12742 kilometers

Question-3:

- 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

Question-4:

```
[ ] import numpy as np
```

- 4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
[ ] array = np.zeros(10)  
print("The array of 10 Zeros are:")  
print(array)
```

The array of 10 Zeros are:
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

```
[ ] array = np.ones(10)*5  
print("The array of 10 Fives are:")  
print(array)
```

The array of 10 Fives are:
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]

Question-5:

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

```
[ ] array=np.arange(20,35,2)
    print("Array of all the even integers from 20 to 35 are:")
    print(array)
```

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

Question-6:

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

```
[ ] x = np.arange(0, 9).reshape(3,3)
    print(x)
```

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

Question-7:

- ▼ 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

Question-8:

8. Create a dataframe with 3 rows and 2 columns

```
[4]: import pandas as pd

[5]: data = [['Aravindh', 19], ['Ak', 20], ['ak', 15]]
df = pd.DataFrame(data, columns=['Name', 'Age'])
print(df)
```

	Name	Age
0	Aravindh	19
1	Ak	20
2	ak	15

Question-9:

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

```
[ ] pd.date_range(start='1/1/2023', end='02/10/2023')

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')
```

Question-10:

- ▼ 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, columns = ['S.No', 'Name', 'Age'])
print(df)
```

	S.No	Name	Age
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24