

PYTHON PROGRAMMING

ASSIGNMENT-1

Assignment Date	13 September 2022
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Student Roll Number	820419106043
Maximum Marks	2 Marks

```
[ ] Basic Python
[ ] 1. Split this string

[ ] s = "Hi there Sam!"

[ ] s.split()

['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']}]}]}

[ ] 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?

```
[ ] 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.]

```
[ ] 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

```
[ ] array=np.arange(20,35,2)
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

```
[ ] 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])
```

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

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

🔍 ▾ Pandas

(x)

📄 ▾ 8. Create a dataframe with 3 rows and 2 columns

```
[ ] import pandas as pd
```

```
1 list=[['alexa',20],['alice',21],['clara',22]]
df=pd.DataFrame(list,columns=['name','age'])
print(df)
```

```
[ ]
```

	name	age
0	alexa	20
1	alice	21
2	clara	22

+ Code + Text

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

```
1 peri=pd.date_range(start='1-1-2023',end='02-10-2023')
for val in peri:
    print (val)
```

```
[ ]
```

```
2023-01-01 00:00:00
2023-01-02 00:00:00
2023-01-03 00:00:00
2023-01-04 00:00:00
2023-01-05 00:00:00
2023-01-06 00:00:00
2023-01-07 00:00:00
2023-01-08 00:00:00
2023-01-09 00:00:00
2023-01-10 00:00:00
2023-01-11 00:00:00
2023-01-12 00:00:00
2023-01-13 00:00:00
2023-01-14 00:00:00
2023-01-15 00:00:00
2023-01-16 00:00:00
2023-01-17 00:00:00
2023-01-18 00:00:00
2023-01-19 00:00:00
2023-01-20 00:00:00
2023-01-21 00:00:00
2023-01-22 00:00:00
2023-01-23 00:00:00
2023-01-24 00:00:00
2023-01-25 00:00:00
2023-01-26 00:00:00
2023-01-27 00:00:00
2023-01-28 00:00:00
2023-01-29 00:00:00
2023-01-30 00:00:00
2023-01-31 00:00:00
2023-02-01 00:00:00
2023-02-02 00:00:00
2023-02-03 00:00:00
2023-02-04 00:00:00
2023-02-05 00:00:00
2023-02-06 00:00:00
2023-02-07 00:00:00
2023-02-08 00:00:00
2023-02-09 00:00:00
2023-02-10 00:00:00
```

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=['sno','name','age'])
print(df)
```

	sno	name	age
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24