

Assignment -1
Python Programming

Assignment Date	27 th September 2022
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Student Roll Number	820319205017
Maximum Marks	2 Marks

Basic Python

1. Split this string

In [3]:

```
s = "Hi there Karthikeyan!"
```

In [31]:

```
s.split()
```

Output [31]:

```
['Hi', 'there', 'Karthikeyan!']
```

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

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

In [4]:

```
Planet = "Earth" diameter = 12742
```

In [5]:

```
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"

In [6]:

```
d = {'k1': [1, 2, 3, {'tricky': ['oh','man','inception', {'target': [1, 2, 3,'hello']}]}]}
```

In [7]:

```
d ['k1'] [3]['tricky'] [3]['target'] [3]
```

Output [7]:

```
'hello'
```

NumpyIn [1]:

```
import numpy as np array=np.arange (30,
```

```
71, 2)
```

```
Print ("Array of all the even integers from 30 to 70")Print (array)
```

Array of all the even integers from 30 to 70

```
[30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70]
```

4.1 Create an array of 10 zeroes?

4.2 Create an array of 10 fives?

In [9]:

```
np.zeros(10)
```

Output [9]:

```
array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

In [10]:

```
np.ones (10) * 5
```

Output [10]:

```
array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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

In [14]:

```
Print (np.arange (20, 35, and 2))
```

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

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

In [15]:

```
np.arange (0, 9). Reshape ((3, 3))
```

Output [11]

```
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])
```

In [30]:

```
Print ('\n---Results of a ([1, 2, 3]) and b ([4, 5, 6]) ---')
```

```
---Results of a ([1, 2, 3]) and b ([4, 5, 6]) ---
```

Pandas

8. Create a data frame with 3 rows and 2 columns

In [28]:

```
import pandas as pd
```

In [6]:

```
import pandas as pd
```

```
record = {"Name": ["Jayakumar ", "suriya", ], "marks": ["20", "46", ],  
"status":["fail", "pass"]} df = pd.DataFrame(record)
```

df

Output [6]:

	Name	marks	status
0	Jayakumar	20	fail
1	suriya	46	pass

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

In [16]:

```
import pandas as pd
```

```
dti = pd.date_range(start="2023-01-01",end="10-02-2023").to_pydatetime().tolist()
```

dti

Output[16]:

```
[datetime.datetime (2023, 1, 1, 0, 0),  
datetime.datetime (2023, 1, 2, 0, 0),  
datetime.datetime (2023, 1, 3, 0, 0),  
datetime.datetime (2023, 1, 4, 0, 0),  
datetime.datetime (2023, 1, 5, 0, 0),  
datetime.datetime (2023, 1, 6, 0, 0),  
datetime.datetime (2023, 1, 7, 0, 0),  
datetime.datetime (2023, 1, 8, 0, 0),
```

```
datetime.datetime (2023, 1, 7, 0, 0),
```

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```
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datetime.datetime (2023, 9, 30, 0, 0),  
datetime.datetime (2023, 10, 1, 0, 0),  
datetime.datetime (2023, 10, 2, 0, 0)]
```

10. Create 2D list to Data Frame

```
Lists = [[1, 'acai', 22], [2, 'bob', 25], [3, 'ccc', 24]]
```

In [32]:

```
Lists = [[1, 'acai', 22], [2, 'bob', 25], [3, 'ccc', 24]]
```

In [4]:

```
lists = {"s.no": [1,2,3], "name":['acai','bob','ccc'], "value":[22,25,24] }
```

In [5]:

```
pd.DataFrame(lists)
```

Output[5]:

	s.no	name	value
0	1	acai	22
1	2	bob	25
2	3	ccc	24

In [7]:

```
pd.DataFrame(lists,
```

```
index=["A","B","C"])Output[7]:
```

	s.no	name	value
A	1	Acai	22
B	2	bob	25

	s.no	name	value
C	3	ccc	24

In []: