

Assignment -1
Python Programming

Assignment Date	24 September 2022
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Student Roll Number	2019PITIT106
Maximum Marks	2 Marks

1. Split this string

```
1 s = "Hi there Sam!"
2 print(s.split())
```

['Hi', 'there', 'Sam!']

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

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

```
1 planet = "Earth"
2 diameter = 12742
3 print("The diameter of {planet} is {diameter} kilometers.".format(planet = "Earth", diameter = 12742))
```

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']}]}]}

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

hello

4. Numpy

- a. Create an array of 10 zeros?

```
1 import numpy as np
2 print(np.zeros(10))
```

[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

b. Create an array of 10 fives?

```
1 import numpy as np
2 print(np.ones(10)*5)
```

[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]

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

```
1 import numpy as np
2 print(np.arange(20,35, 2))
```

[20 22 24 26 28 30 32 34]

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

```
1 import numpy as np
2 print(np.arange(0,9).reshape(3,3))
```

[[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 import numpy as np
2 a=np.array([1,2,3])
3 b=np.array([4,5,6])
4 c= np.concatenate((a, b), axis=0)
5 print(c)
```

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

8. Pandas

- a. Create a dataframe with 3 rows and 2 columns

```
1 import pandas as pd
2 d = [{"Idly", 10}, {"Dosa", 12}, {"Poori", 20}]
3 print(pd.DataFrame(d, columns=["Items", "Price"]))
```

	Items	Price
0	Idly	10
1	Dosa	12
2	Poori	20

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

```
1 import pandas as pd
2 print(pd.date_range(start='01/01/2023', end='02/10/2023'))
```

input

```
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')
```

10. Create 2D list to DataFrame

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

```
1 import pandas as pd
2 lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
3 print(pd.DataFrame(lists, columns=['S.No', 'Letter', 'Digit']))
```

input

	S.No	Letter	Digit
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24

[3 rows x 3 columns]