Assignment date	10 November 2022
Student Name	Ms. S.Keerthika
Student Roll Number	821719106014
Maximum Marks	2 Marks

Basic Python

1. Split this string

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

```
s = 'Hi there Sam!'
s.split()
```

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

italicized text## 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']}]}]}
```

```
lst = [1,2,[3,4],[5,[100,200,['hello']],23,11],1,7]
lst[3][1][2][0]
```

```
'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)
```

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

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

```
print(np.arange(20,36,2)) [20 22 24 26 28 30 32 34]
```

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

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

```
array([[0, 1, 2],
[3, 4, 5],
       [6,  7,  8]])
```

7. Concatinate a and b

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

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

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

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd import numpy as np

A = np.random.randint(10,size=(3,2))
A
([[9,2],
     [4,3],
[2,3]])
df=pd.DataFrame(A)
df
```

```
   0  1
0  6  3
1  7  3
```

```
2  4  9
```

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

```
per1=pd.date_range(start='01-01-2023',
end='02-10-2023')
for val in per1:
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]]

```
import pandas as pd
import numpy as np
arr=np.array([[1,'aaa',22],[2,'bbb',25],[3,'ccc',24]])
df=pd.DataFrame(arr) print(df)
```

```
   0    1   2
0  1  aaa  22
1  2  bbb  25
2  3  ccc  24
```