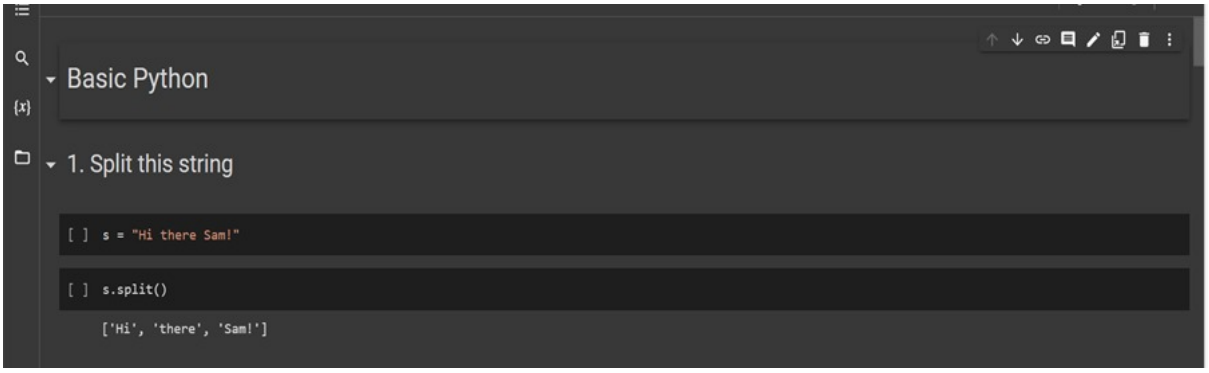
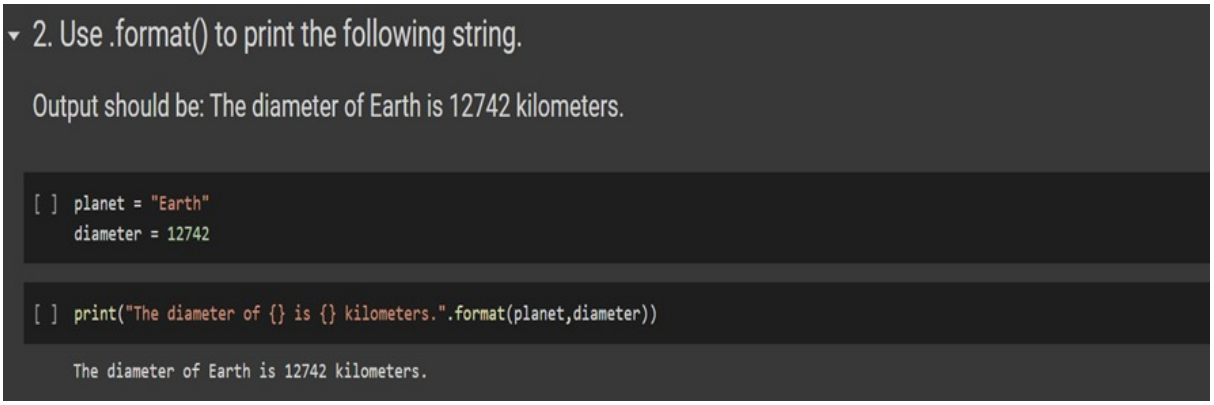
PYTHON PROGRAMMING

ASSIGNMENT-1

ASSIGNMENT DATE	13 September 2022
STUDENT NAME	DEEPA S
STUDENT REGISTRATION NO	820419106009
MAXIMUM MARK	2mark





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])

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

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

Pandas

8. Create a dataframe with 3 rows and 2 columns

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

```
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

```
per1=pd.date_range(start='1-1-2023',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]]

```
[ ] 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
```