Assignment -1

Python Programming

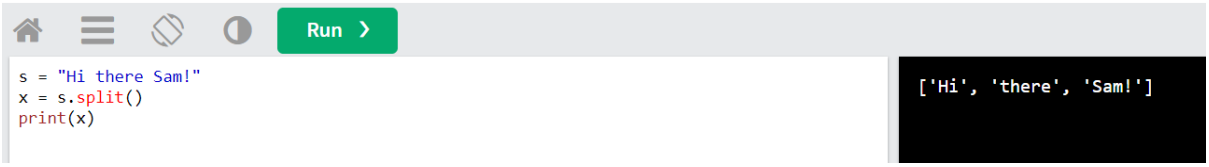
Assignment Date	18 September 2022
Student Name	THRUN KUMAR R
Student Roll Number	211519205173
Maximum Marks	2 Marks

Question-1:

Split this string

s = "Hi there Sam!"

Ans

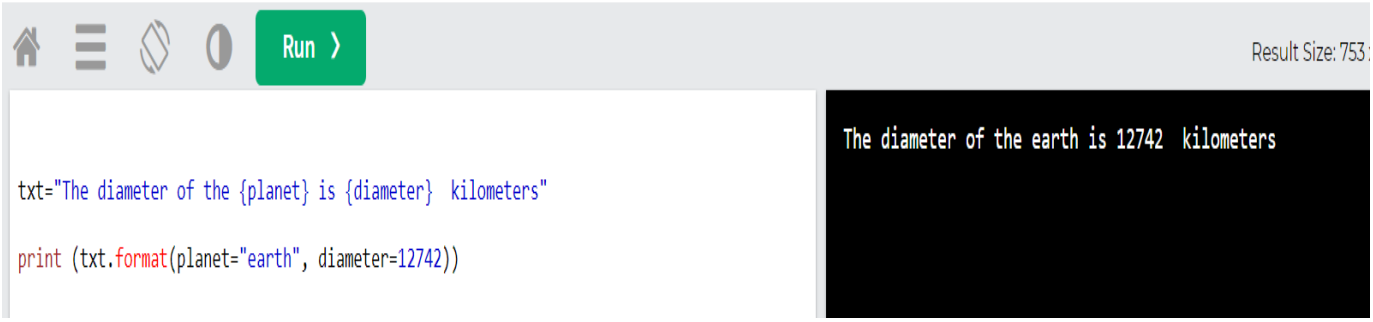


Question-2:

Use .format() to print the following string.

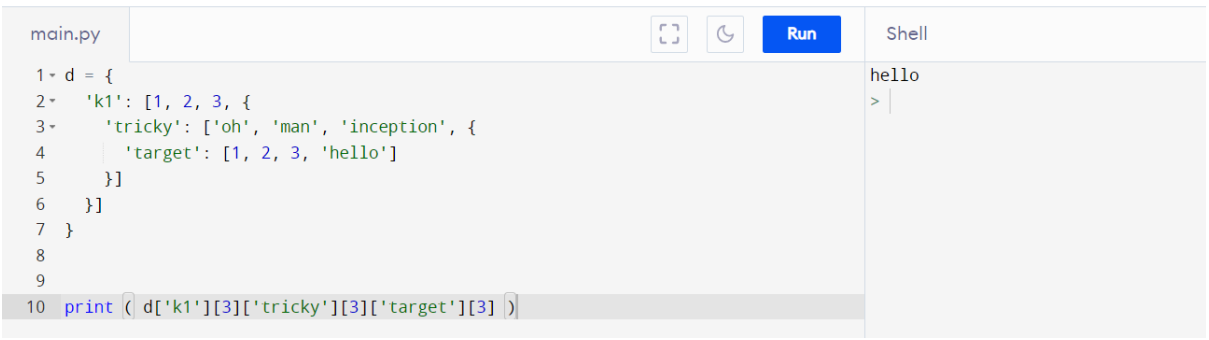
Output should be: The diameter of Earth is 12742 kilometers.

Ans



Question 3. In this nest dictionary grab the word "hello"

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



Question 4.1 Create an array of 10 zeros?

main.py

```
1 import numpy as np
2 array=np.zeros(10)
3 print("An array of 10 zeros:")
4 print(array)
```

Shell

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

Question 4.2 Create an array of 10 fives?

main.py

```
1 import numpy as np
2 array=np.ones(10)*5
3 print("An array of 10 fives:")
4 print(array)
```

Shell

```
An array of 10 fives:
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
>
```

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

Ans

main.py

```
1 import numpy as np
2 array=np.arange(20,35,2)
3 print("Array of all the even integers from 30 to 70")
4 print(array)
```

Shell

```
Array of all the even integers from 30 to 70
[20 22 24 26 28 30 32 34]
>
```

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

Ans

main.py

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

Shell

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

Question 7. Concatenate a and b

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

main.py

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

Shell

```
[1 2 3 4 5 6]
>
```

Question 8. Create a dataframe with 3 rows and 2 columns

main.py

Run

Shell

```
import pandas as pd
data = {'Name':['Renault', 'Duster', 'Maruti'], 'Ratings':[9.0, 8.0, 5.0]}
df = pd.DataFrame(data )
print(df)
```

```
   Name  Ratings
0  Renault      9.0
1   Duster      8.0
2   Maruti      5.0
>
```

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

main.py

Run

Shell

```
import datetime
import pandas as pd

# initializing date
test_date = datetime.datetime.strptime("01-1-2023", "%d-%m-%Y")

# initializing K
K = 41

date_generated = pd.date_range(test_date, periods=K)
print(date_generated.strftime("%d-%m-%Y"))
```

```
Index(['01-01-2023', '02-01-2023', '03-01-2023', '04-01-2023', '05-01-2023',
       '06-01-2023', '07-01-2023', '08-01-2023', '09-01-2023', '10-01-2023',
       '11-01-2023', '12-01-2023', '13-01-2023', '14-01-2023', '15-01-2023',
       '16-01-2023', '17-01-2023', '18-01-2023', '19-01-2023', '20-01-2023',
       '21-01-2023', '22-01-2023', '23-01-2023', '24-01-2023', '25-01-2023',
       '26-01-2023', '27-01-2023', '28-01-2023', '29-01-2023', '30-01-2023',
       '31-01-2023', '01-02-2023', '02-02-2023', '03-02-2023', '04-02-2023',
       '05-02-2023', '06-02-2023', '07-02-2023', '08-02-2023', '09-02-2023',
       '10-02-2023'],
      dtype='object')
>
```

Question 10. Create 2D list to DataFrame

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

Ans:

main.py

Run

Shell

```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df = pd.DataFrame(lists, columns =[ 'slno ', 'Name', 'Age'])
print(df)
```

```
   slno  Name  Age
0     1   aaa   22
1     2   bbb   25
2     3   ccc   24
>
```