Assignment -1

Python Programming

Assignment Date	19 September 2022
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Maximum Marks	2 Marks

QUESTION 1:

Split the string

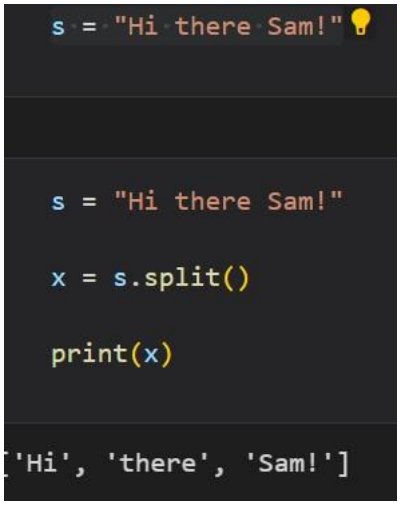
```
s = "Hi there Sam!"
```

SOLUTION:

```
s = "Hi there Sam!"
 x =
s.split()

print(x)
```

RESULTS:



QUESTION 2 :

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

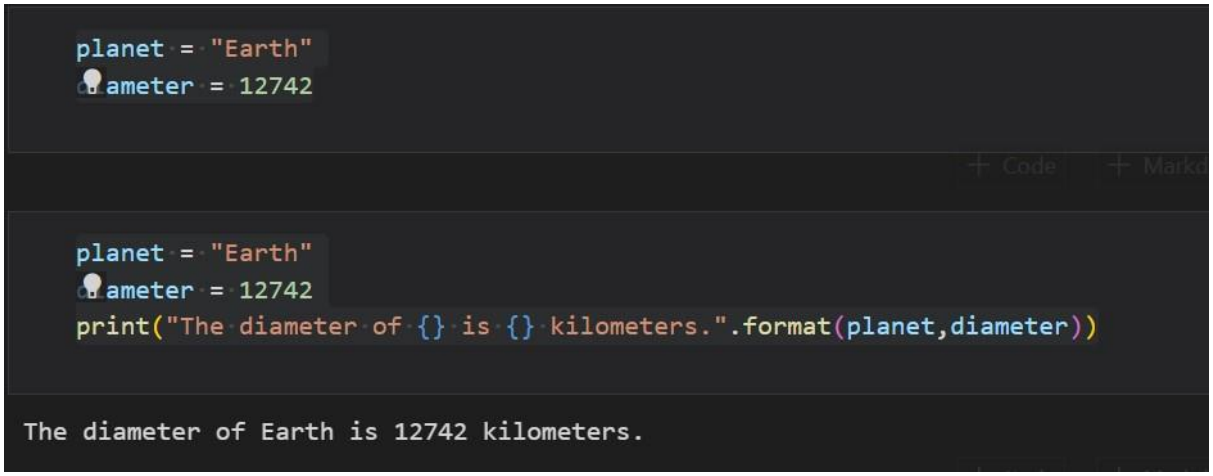
Output should be: The diameter of Earth is 12742 kilometres.

```
planet = "Earth" diameter
= 12742
```

SOLUTION:

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

RESULTS:



QUESTION 3:

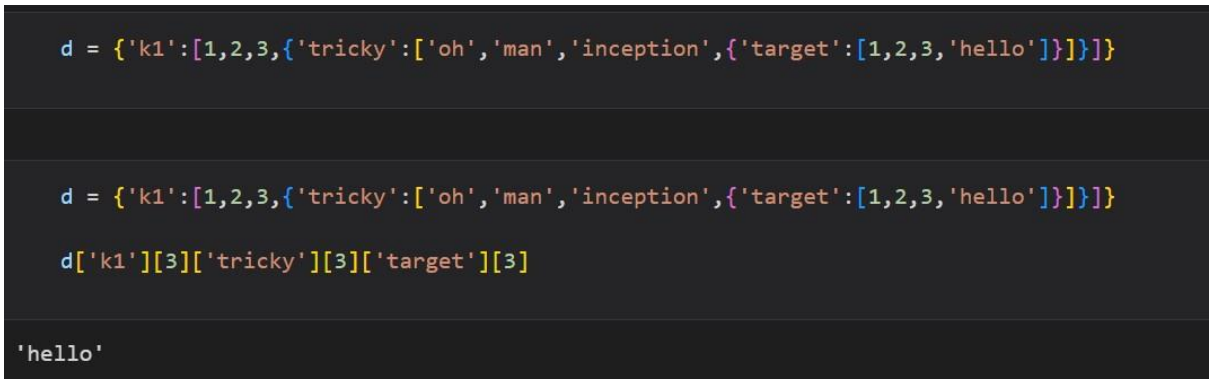
3. In this nest dictionary grab the word “hello”

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

SOLUTION:

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

RESULTS:



QUESTION 4:

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

SOLUTION:

```
import numpy as np
np.zeros(10) import numpy as
np
np.ones(10) * 5
```

RESULTS:

```
import numpy as np
np.zeros(10)
```

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

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

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

QUESTION 5:

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

SOLUTION:

```
import numpy as np np.arange(20,36,2)
```

RESULTS:

```
import numpy as np
np.arange(20,36,2)
```

```
array([20, 22, 24, 26, 28, 30, 32, 34])
```

QUESTION 6:

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

SOLUTION:

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

RESULTS:

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

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

QUESTION 7:

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

SOLUTION:

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

RESULTS:

```
import numpy as np

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

np.concatenate((a , b), axis = 0)
```

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

QUESTION 8:

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd data = [10,20,30]
df = pd.DataFrame(data, columns = ['Numbers'])
```

RESULTS:

```
import pandas as pd
data = [10,20,30]
df = pd.DataFrame(data, columns = ['Numbers'])
```

	Numbers
0	10
1	20
2	30

QUESTION 9:

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

SOLUTION:

```
import pandas as pd dates =  pd.date_range('1st
Jan,2023', periods = 41) s = pd.Series(dates)
print(s)
```

RESULT:

```
 0    2023-01-01
 1    2023-01-02
 2    2023-01-03
 3    2023-01-04
 4    2023-01-05
 5    2023-01-06
 6    2023-01-07
 7    2023-01-08
 8    2023-01-09
 9    2023-01-10
 10   2023-01-11
 11   2023-01-12
 12   2023-01-13
 13   2023-01-14
 14   2023-01-15
 15   2023-01-16
 16   2023-01-17
 17   2023-01-18
 18   2023-01-19
 19   2023-01-20
 20   2023-01-21
 21   2023-01-22
```

```
22   2023-01-23
23   2023-01-24
24   2023-01-25
...
38   2023-02-08
39   2023-02-09
40   2023-02-10
dtype: datetime64[ns]
```

QUESTION 10:

10. Create 2D list to DataFrame

lists = [[1, 'aaa', 22],

[2, 'bbb', 25],

[3, 'ccc', 24]]

SOLUTION:

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

RESULT:

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

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