

ASSIGNMENT 1  
Python Programming

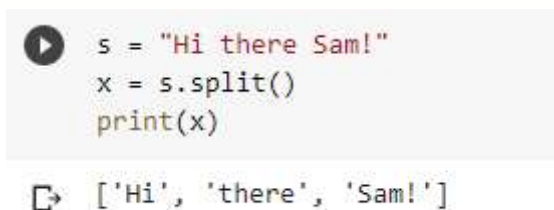
Assignment Date	17 September 2022
Student Name	Sreshta.B
Student Roll Number	211519104156
Maximum Marks	10 Marks

**Q1: Split this String**

**s = "Hi there Sam!"**

Answer:

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

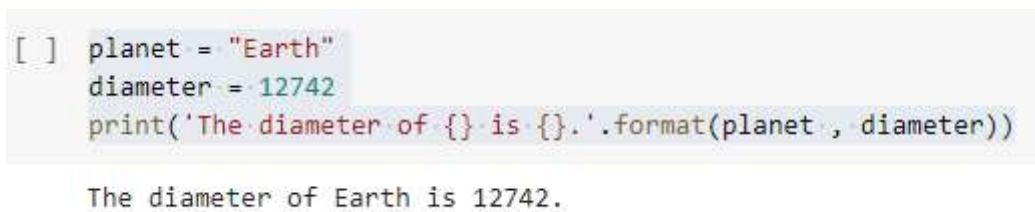


The image shows a code editor snippet with a play button icon. The code defines a string `s = "Hi there Sam!"`, splits it using `s.split()` to create a list `x`, and prints it. The output shown below the code is `['Hi', 'there', 'Sam!']`.

**Q2: Output should be: The diameter of Earth is 12742 kilometers.**

Answer:

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



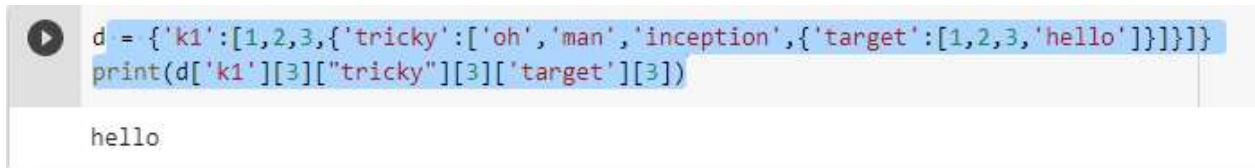
The image shows a code editor snippet with a play button icon. The code defines `planet = "Earth"` and `diameter = 12742`, then prints a formatted string using `print('The diameter of {} is {}'.format(planet , diameter))`. The output shown below the code is `The diameter of Earth is 12742.`

**Q3: In this nest dictionary grab the word "hello"**

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

Answer:

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



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

hello

**Q4: 4.1 Create an array of 10 zeros?**

**4.2 Create an array of 10 fives?**

Answer:

```
import numpy as np  
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.]
```

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

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

**Q5:Create an array of all the even integers from 20 to 35**

Answer:

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

**Q6 :Create a 3x3 matrix with values ranging from 0 to 8**

Answer:

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

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

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**Q7:Concatinate a and b**

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

Answer:

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

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

**Q8:Create a dataframe with 3 rows and 2 columns**

**Answer:**

```
import pandas as pd
data = [['Apple', 100], ['Banana', 15], ['Mango', 150]]
df = pd.DataFrame(data, columns=['Fruit', 'Price'])
df
```

	Fruit	Price
0	Apple	100
1	Banana	15
2	Mango	150

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

**Answer:**

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

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',
               ...,
               '2023-09-23', '2023-09-24', '2023-09-25', '2023-09-26',
               '2023-09-27', '2023-09-28', '2023-09-29', '2023-09-30',
               '2023-10-01', '2023-10-02'],
              dtype='datetime64[ns]', length=275, freq='D')
```

### Q 10:Create 2D list to DataFrame

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

Answer:

```
import pandas as pd
```

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

```
df = pd.DataFrame(lists, columns=['S.no', 'Alphabet', 'Numerical'])
```

df

	S.no	Alphabet	Numerical
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24