

Assignment -1
Python Programming

Assignment Date	19 September 2022
Student Name	Neethiarasan S
Student Roll Number	711719104056
Maximum Marks	2 Marks

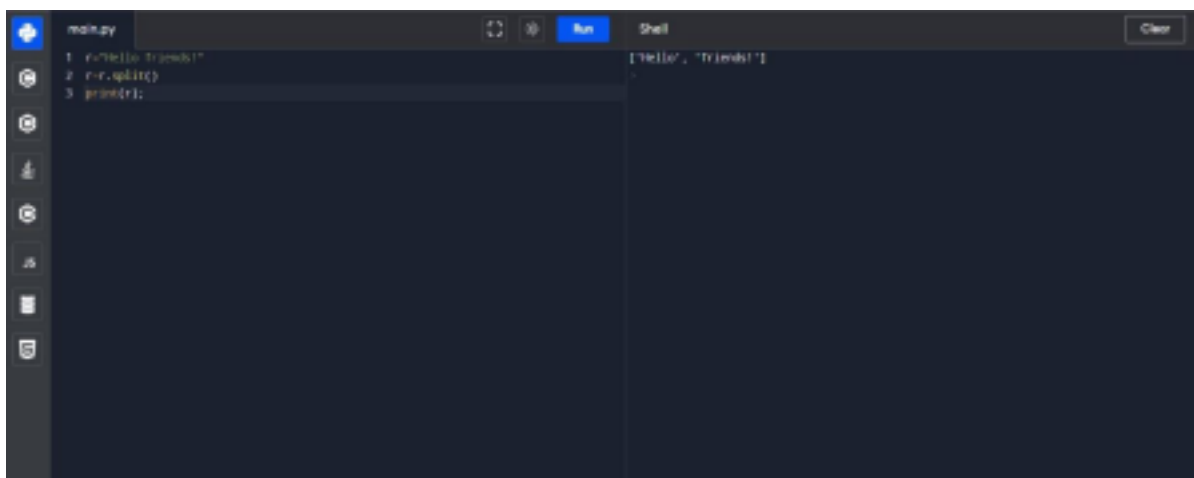
Question-1:

Split this string

Solution: `r="Hello
friends!" r=r.split()
print(r);`

`#.....#`

`#.....#`

A screenshot of a Python IDE window titled 'main.py'. The editor shows three lines of code: `1 r="Hello friends!"`, `2 r=r.split()`, and `3 print(r);`. To the right, a 'Shell' window displays the output: `['Hello', 'friends']`. The IDE has a dark theme and a sidebar with various icons on the left.

Question-2:

Use `.format()` to print the following string.
Output should be: The diameter of Earth is

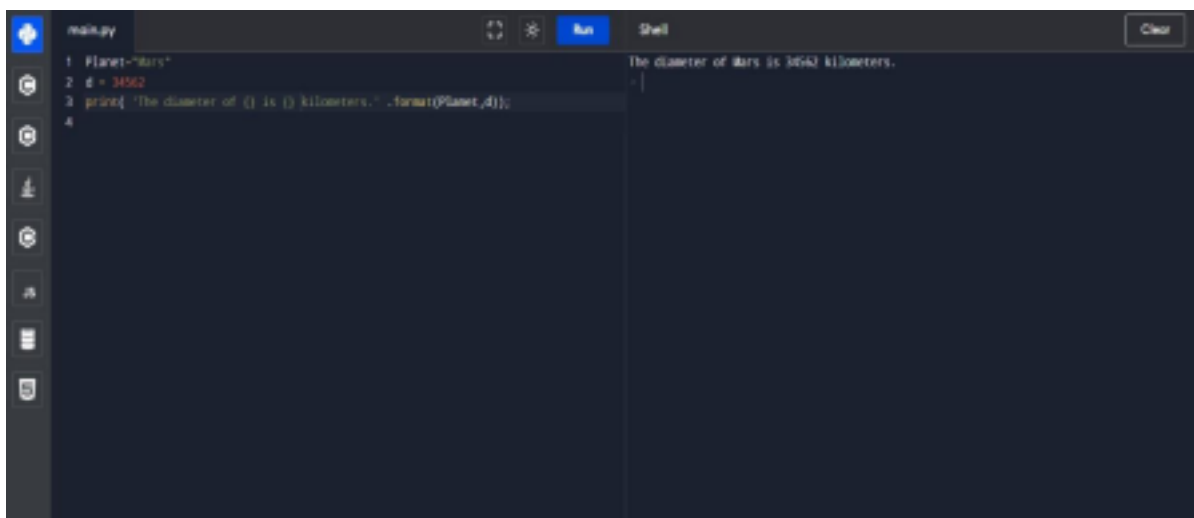
12742 kilometers.

Solution:

```
Planet="Mars"d
```

```
= 34562
```

```
print( 'The diameter of {} is {}kilometers.'  
.format(Planet,d));
```



```
main.py 1.2 Run Shell Clear  
1 Planet="Mars"  
2 d = 34562  
3 print( 'The diameter of {} is {}kilometers.'  
4 .format(Planet,d));  
The diameter of Mars is 34562 kilometers.  
.
```

Question-3:

In this nest dictionary grab the word "hello"

d =

```
{'k1':[1,2,3,{'tricky':['oh','man','inception',{'t  
target':[1,2,3,'hello']}]}}]} Solution:
```

d =

```
{'k1':[1,2,3,{'tricky':['oh','man','inception',{'t  
arget':[1,2,3,'hello']}]}}]}
```

```
print(d['k1'][3]["tricky"][3]['target'][3])
```

```
manjy  Run Shell Clear
1 # -[{"id":1,2,3,"tricky":["ab","aa","inception"],"target":{"id":1,2,3,"hello":1}}] hello
2 print(4["id"][0]["tricky"][0]["target"][0])
3
```

Question-4:

Numpyimport numpy as np

4.1 Create an array of 10 zeros?

Solution: np.zeros(10)

4.2 Create an array of 10 fives?

Solution:np.ones(10)*5

```
Numpy
In [ ]: import numpy as np

4.1 Create an array of 10 zeros?
4.2 Create an array of 10 fives?

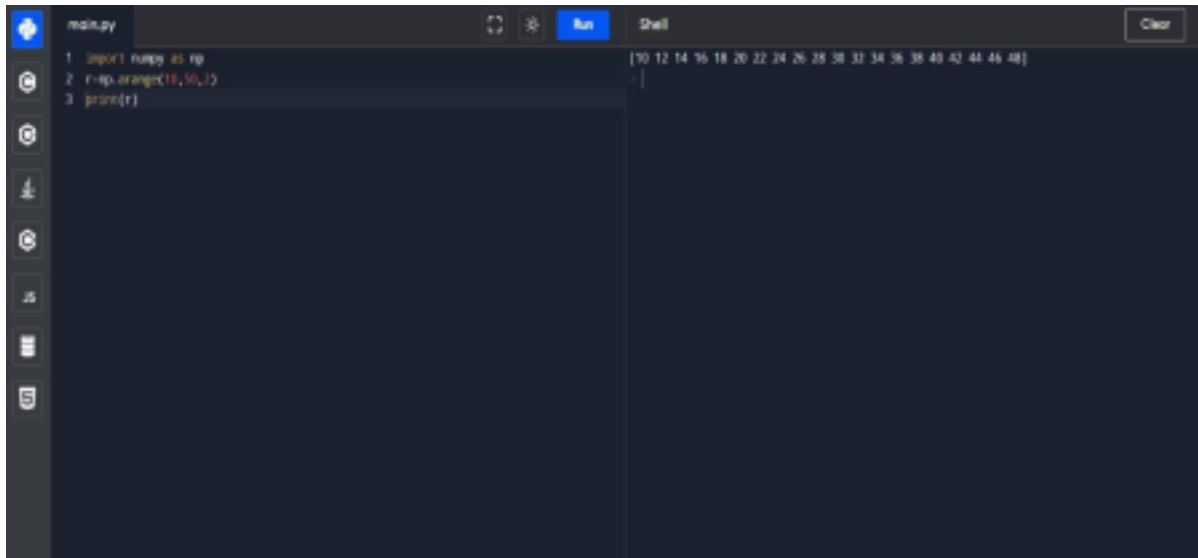
In [ ]: np.zeros(10)
Out[ ]: array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])

In [ ]: np.ones(10)*5
Out[ ]: array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

Question-5:

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

```
import numpy as np  
r=np.arange(10,50,2) print(r)
```



The screenshot shows a Jupyter Notebook window with a dark theme. The code cell contains the following code:

```
1 import numpy as np  
2 r=np.arange(10,50,2)  
3 print(r)
```

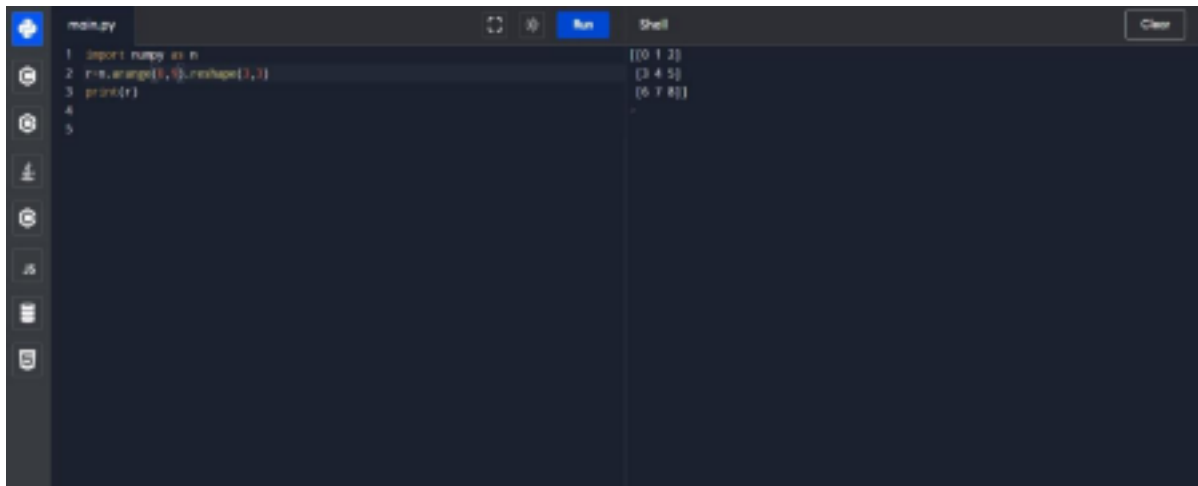
The output of the code is displayed in the shell area on the right:

```
[10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48]
```

Question-6:

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

```
Solution: import numpy as n  
r=n.arange(0,9).reshape(3,3)  
print(r)
```



```
main.py
1 import numpy as n
2 x = n.arange(6).reshape(3,2)
3 print(x)
4
5
```

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

Question-7: Concatenate x and y x =

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

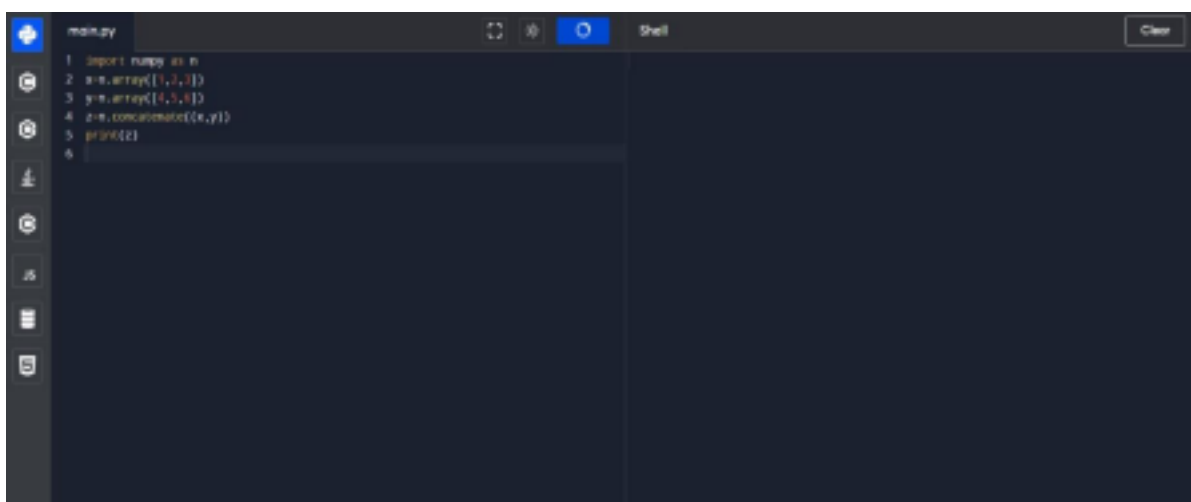
Solution:

`import numpy as n`

`x=n.array([1,2,3])`

`y=n.array([4,5,6])`

`z=n.concatenate((x,y))print(z)`



```
main.py
1 import numpy as n
2 x=n.array([1,2,3])
3 y=n.array([4,5,6])
4 z=n.concatenate((x,y))
5 print(z)
6
```

Pandas

Question-8:

Create a dataframe with 3 rows and 2

columns Solution:

```
import numpy as np
r=np.arange(20,35,2)
print(r)
```

```
main.py
1 import numpy as np
2 r=np.arange(20,35,2)
3 print(r)
4
```

```
[20 22 24 26 28 30 32 34]
```

Question-9:

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

```
import pandas as pd
s=pd.date_range(start='01-01-2023',end='10-02-2023')
for i in s: print(i)
```

```
main.py
1 import pandas as pd
2 s=pd.date_range(start='01-01-2023',end='10-02-2023')
3 for i in s:
4     print(i)
5
```

```
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
```

```
main.py Run Shell Clear
1 import pandas as p
2 s=p.date_range(start="01-01-2023",end="10-02-2023")
3 for i in s:
4     print(i)
5
```

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
-

Question-10:

Create 2D list to DataFrame

```
l = [[1, 'ppp', 22], [2, 'qqq', 25], [3, 'rrr', 24]]
```

Solution:

```
import pandas as p
```

```
l = [[1, 'ppp', 22], [2, 'qqq', 25], [3, 'rrr', 24]]
```

```
s=p.DataFrame(lists,columns=['Tag','PQR','number']) print(s)
```

```
main.py Run Shell Clear
1 import pandas as p
2 l = [[1, 'ppp', 22], [2, 'qqq', 25], [3, 'rrr', 24]]
3 s=p.DataFrame(l,columns=['Tag','PQR','number'])
4 print(s)
5
```

	Tag	PQR	number
0	1	ppp	22
1	2	qqq	25
2	3	rrr	24

-