

Assignment -1
Python Programming

Assignment Date	12 September 2022
Student Name	T.Valarmathi
Student Roll Number	912419104035
Maximum Marks	2 Marks

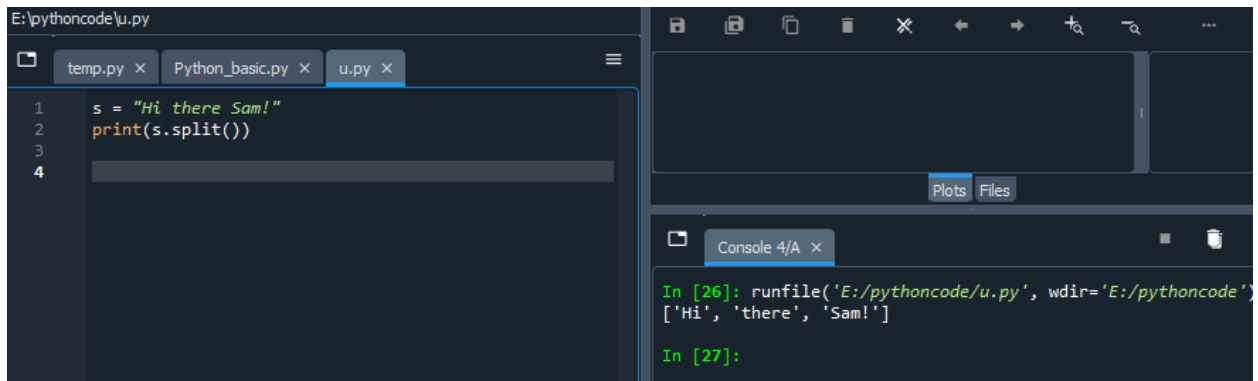
Question-1:

Split this string

"Hi there Sam!"

Solution:

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



```
E:\pythoncode\u.py  
temp.py x Python_basic.py x u.py x  
1 s = "Hi there Sam!"  
2 print(s.split())  
3  
4  
Console 4/A x  
In [26]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncode')  
['Hi', 'there', 'Sam!']  
In [27]:
```

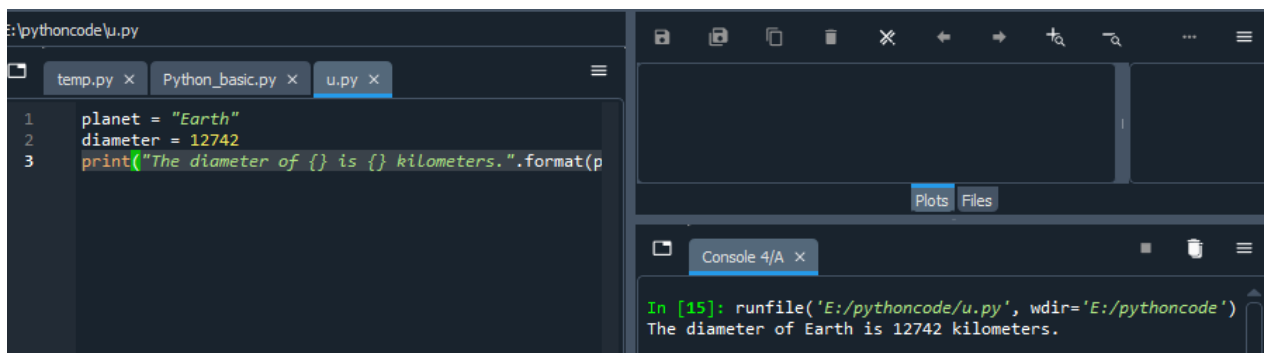
Question-2:

Use .format() to print the following string.

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

Solution:

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



```
E:\pythoncode\u.py  
temp.py x Python_basic.py x u.py x  
1 planet = "Earth"  
2 diameter = 12742  
3 print("The diameter of {} is {} kilometers.".format(p  
Console 4/A x  
In [15]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncode')  
The diameter of Earth is 12742 kilometers.
```

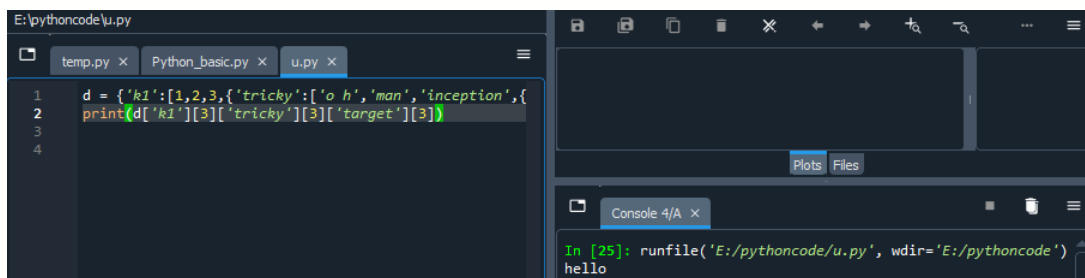
Question-3:

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



The screenshot shows a Jupyter Notebook with a file explorer at the top displaying 'temp.py', 'Python_basic.py', and 'u.py'. The code editor shows the following code:

```
1 d = {'k1':[1,2,3,{'tricky':['o h','man','inception',{'  
2 print(d['k1'][3]['tricky'][3]['target'][3])  
3  
4
```

The console output at the bottom shows:

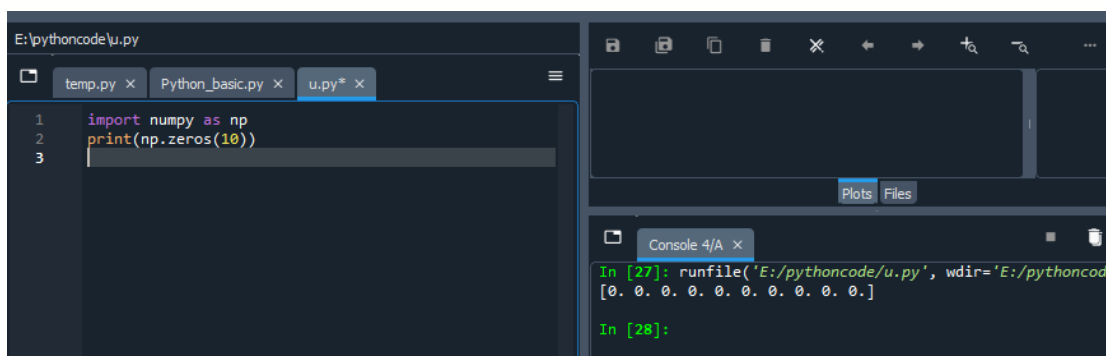
```
In [25]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncode')  
hello
```

Question-4.1:

Create an array of 10 zeros?

Solution:

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



The screenshot shows a Jupyter Notebook with a file explorer at the top displaying 'temp.py', 'Python_basic.py', and 'u.py*'. The code editor shows the following code:

```
1 import numpy as np  
2 print(np.zeros(10))  
3
```

The console output at the bottom shows:

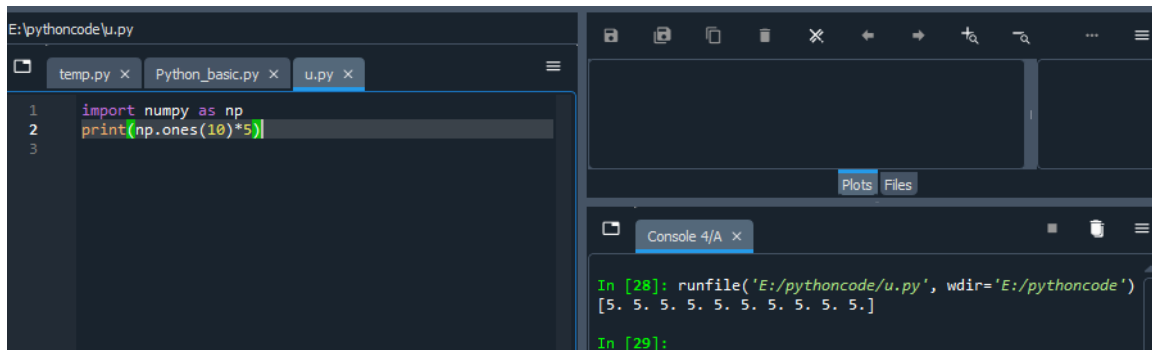
```
In [27]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncod  
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]  
In [28]:
```

Question-4.2:

Create an array of 10 fives?

Solution:

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



The screenshot shows a Jupyter Notebook with a file explorer at the top displaying 'temp.py', 'Python_basic.py', and 'u.py'. The code editor shows the following code:

```
1 import numpy as np  
2 print(np.ones(10)*5)  
3
```

The console output shows the result of the execution:

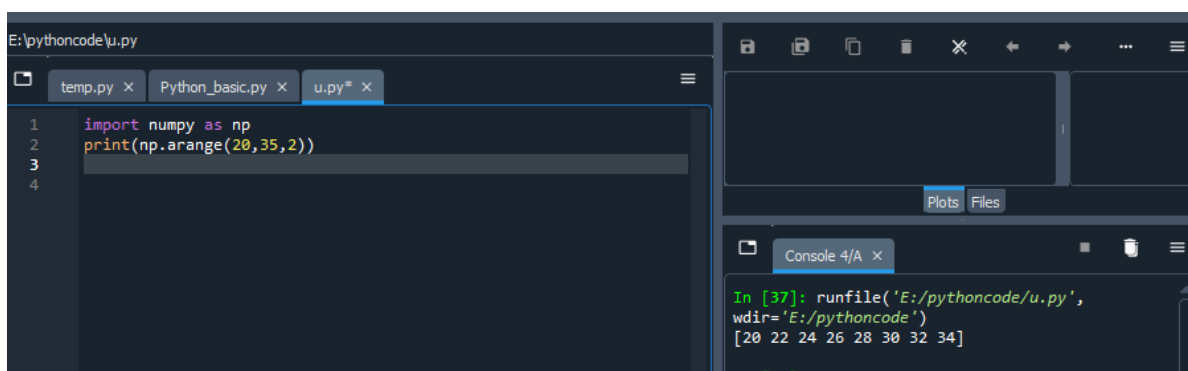
```
In [28]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncode')  
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]  
  
In [29]:
```

Question-5:

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

Solution:

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



The screenshot shows a Jupyter Notebook with a file explorer at the top displaying 'temp.py', 'Python_basic.py', and 'u.py'. The code editor shows the following code:

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

The console output shows the result of the execution:

```
In [37]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncode')  
[20 22 24 26 28 30 32 34]  
  
In [38]:
```

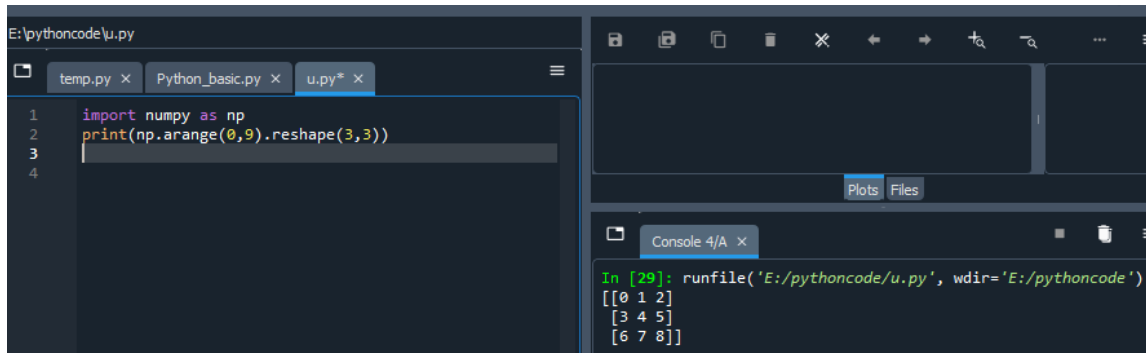
Question-6:

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

Solution:

```
import numpy as np

print(np.arange(0,9).reshape(3,3))
```



```
E:\pythoncode\u.py
temp.py Python_basic.py u.py*
1 import numpy as np
2 print(np.arange(0,9).reshape(3,3))
3
4

Console 4/A x
In [29]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncode')
[[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])
```

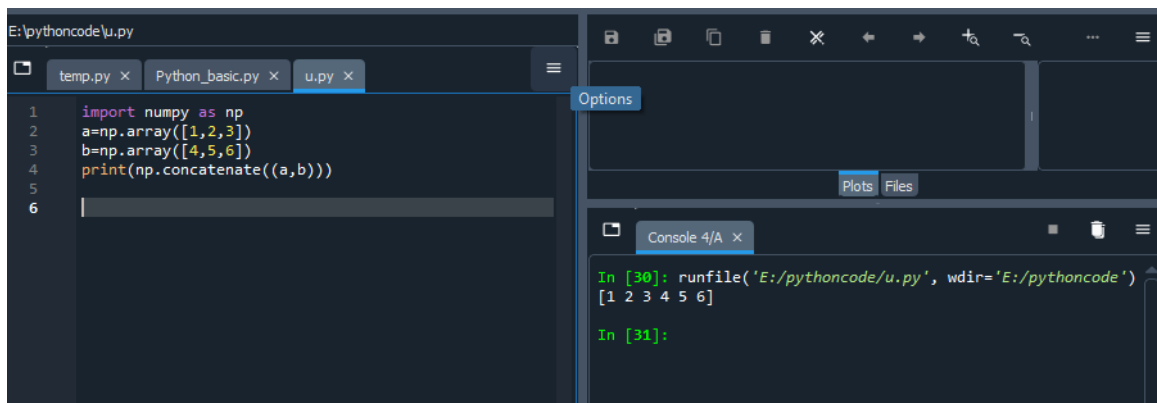
solution:

```
import numpy as np

a=np.array([1,2,3])

b=np.array([4,5,6])

print(np.concatenate((a,b)))
```



```
E:\pythoncode\u.py
temp.py Python_basic.py u.py x
1 import numpy as np
2 a=np.array([1,2,3])
3 b=np.array([4,5,6])
4 print(np.concatenate((a,b)))
5
6

Options
Plots Files
Console 4/A x
In [30]: runfile('E:/pythoncode/u.py', wdir='E:/pythoncode')
[1 2 3 4 5 6]
In [31]:
```

Question-8:

Create a dataframe with 3 rows and 2 columns

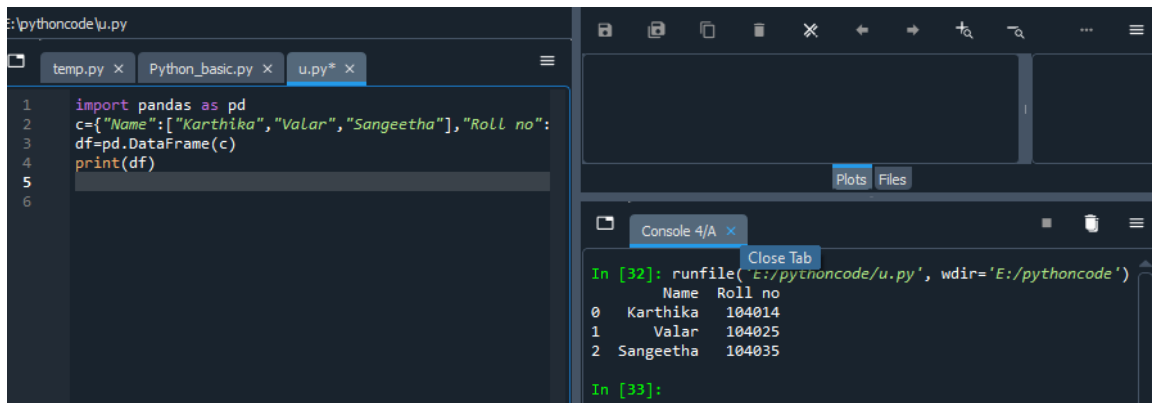
Solution:

```
import pandas as pd
```

```
c={"Name":["Karthika","Valar","Sangeetha"],"Roll no":[104014,104025,104035]}
```

```
df=pd.DataFrame(c)
```

```
print(df)
```



```
import pandas as pd
c={"Name":["Karthika","Valar","Sangeetha"],"Roll no":[104014,104025,104035]}
df=pd.DataFrame(c)
print(df)
```

	Name	Roll no
0	Karthika	104014
1	Valar	104025
2	Sangeetha	104035

Question-9:

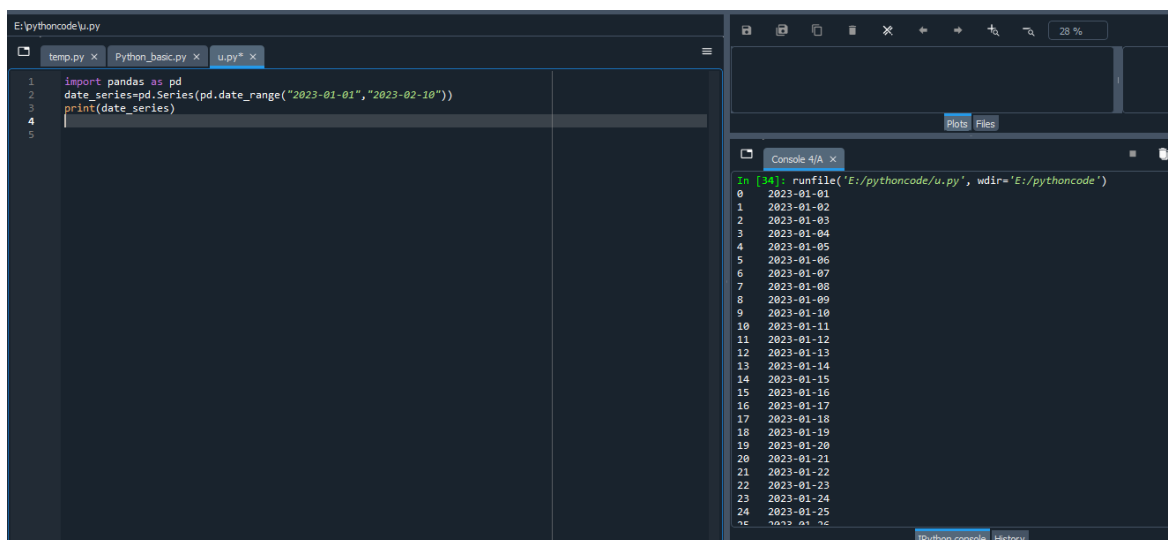
Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

Solution:

```
import pandas as pd
```

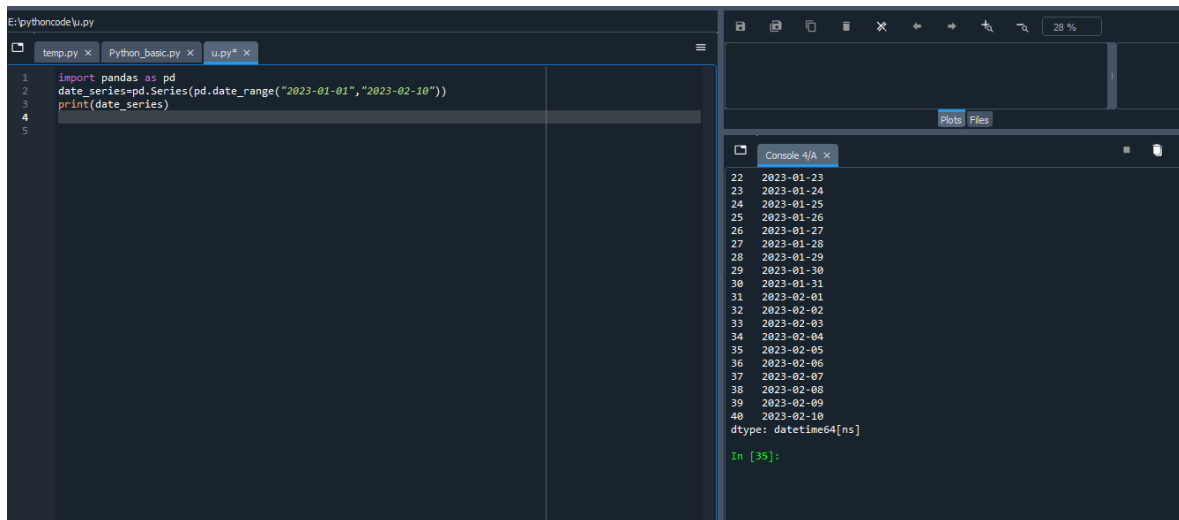
```
date_series=pd.Series(pd.date_range("2023-01-01","2023-02-10"))
```

```
print(date_series)
```



```
import pandas as pd
date_series=pd.Series(pd.date_range("2023-01-01","2023-02-10"))
print(date_series)
```

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



Question-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]]
```

```
list1=zip(lists)
```

```
df=pd.DataFrame(list1)
```

```
print(df)
```

