Assignment -1
Python Programming
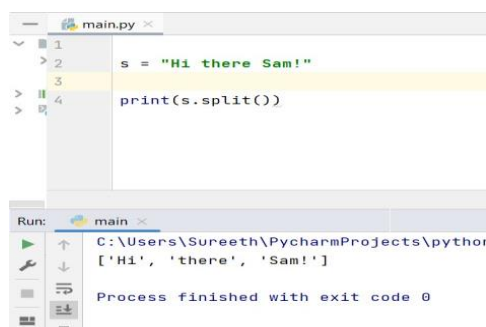
Assignment Date	19 September 2022
Student Name	Mr. G.Bala Viswanath
Student Roll Number	113219071008
Maximum Marks	2 Marks

Question-1:

1. Split this string

Solution:

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

```
main.py
1
2    s = "Hi there Sam!"
3
4    print(s.split())

Run:    main
        C:\Users\Sureeth\PycharmProjects\pytho
        ['Hi', 'there', 'Sam!']

        Process finished with exit code 0
```
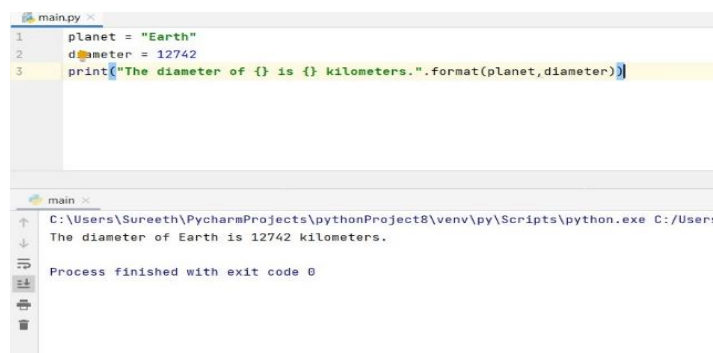
Question-2:

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))
```

```
main.py
1    planet = "Earth"
2    diameter = 12742
3    print("The diameter of {} is {} kilometers.".format(planet,diameter))

main
    C:\Users\Sureeth\PycharmProjects\pythonProject8\venv\py\Scripts\python.exe C:/Users
    The diameter of Earth is 12742 kilometers.

    Process finished with exit code 0
```

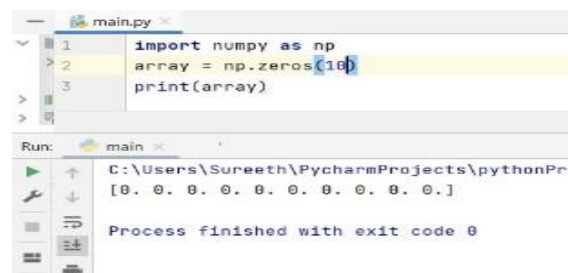## 3. In this nest dictionary grab the word "hello"

Solution:

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

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

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

main
C:\Users\Sureeth\PycharmProjects\pythonProject8\venv\py\Scripts\python.exe C:/Users/Sureeth/F
hello

Process finished with exit code 0
```

4.1 Create an array of 10 zeros?

Solution:

```python
import numpy as np
array = np.zeros(10)
print(array)
```

```
main.py
1   import numpy as np
2   array = np.zeros(10)
3   print(array)

Run:    main
C:\Users\Sureeth\PycharmProjects\pythonPr
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

Process finished with exit code 0
```
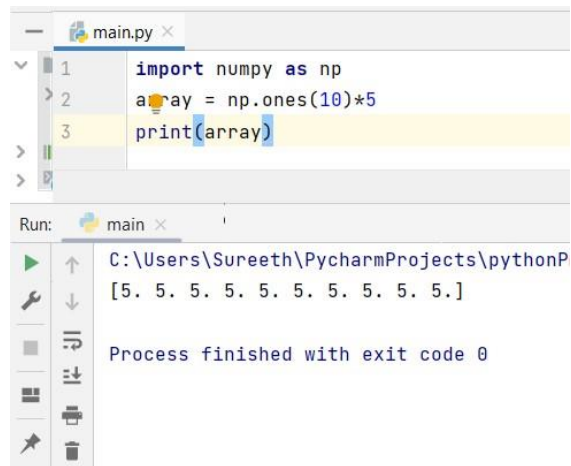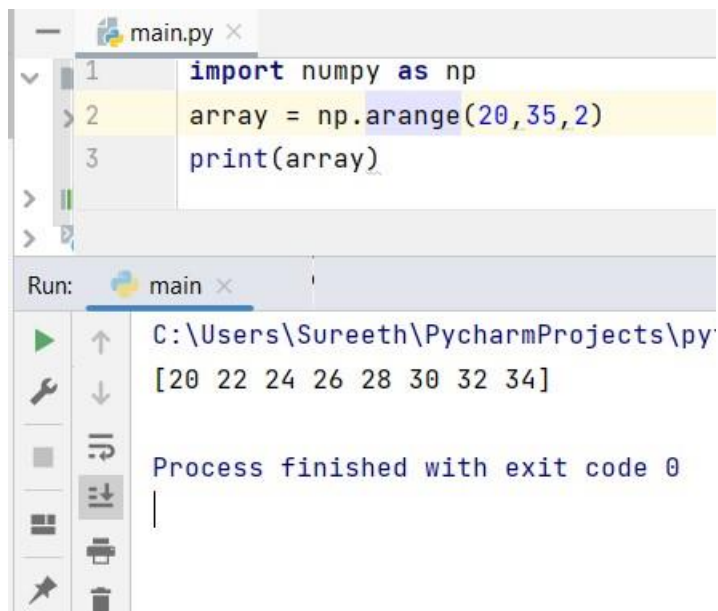
4.2 Create an array of 10 fives?

Solution:

```python
Import numpy as np
array = np.ones(10)*5
```

```
print(array)
```


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

Solution:

```
Import numpy as np
array = np.arange(20,35,2)
print(array)
```
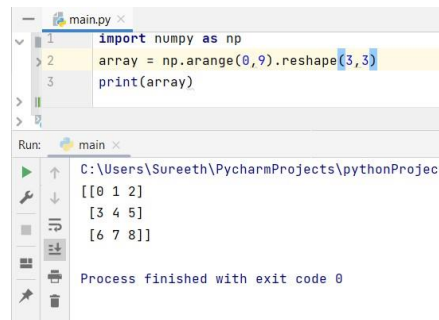
6. Create a 3x3 matrix with values ranging from 0 to 8

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


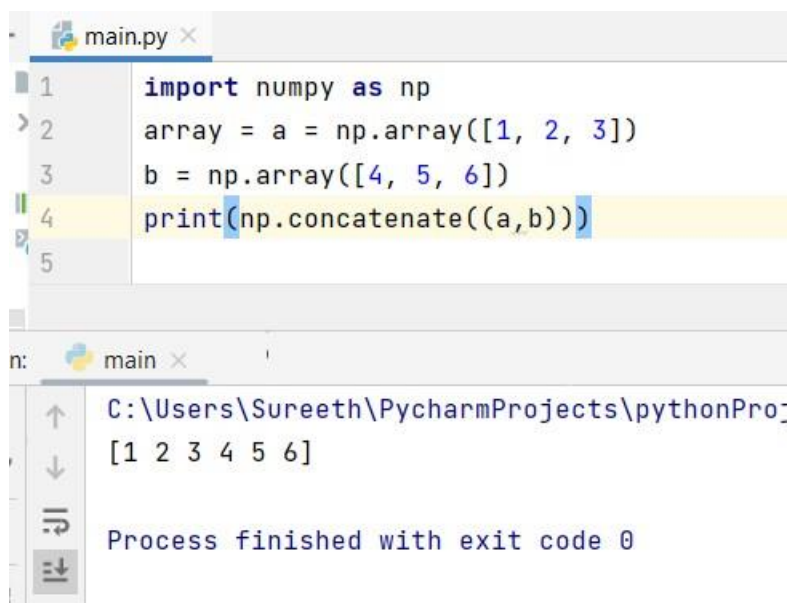# 7. Concatinate a and b

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

```python
import numpy as np
array = a = np.array([1,2,3])
b = np.array([4,5,6])
print(np.concatenate((a,b)))
```
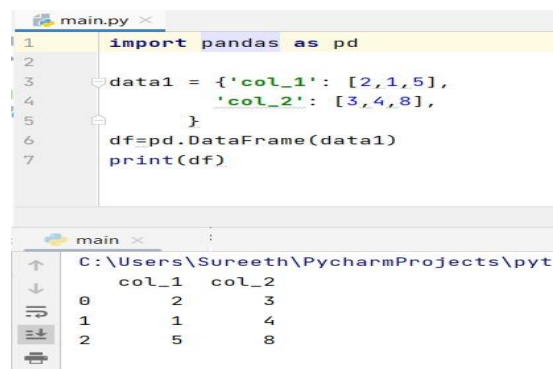
8. Create a dataframe with 3 rows and 2 columns

Solution:

```python
import pandas as pd

data = {'col_1': [2,1,5],
        'col_2': [3,4,8],
       }
df=pd.DataFrame(data)
print(df)
```


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

Solution:

```python
import pandas as pd
date=pd.date_range(start='01.01.2023',end='10.02.2023')
print(date)
```

```
main.py ×
1    import pandas as pd
2
3    dates=pd.date_range(start='01.01.2023',end='10.02.2023')
4    print(dates)
```

```
main ×
C:\Users\Sureeth\PycharmProjects\pythonProject8\venv\py\Scripts\python.ex
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')

Process finished with exit code 0
```

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)
```

```python
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df1=pd.DataFrame(lists)
print(df1)
```

```
C:\Users\Sureeth\PycharmProjects\pythonProject8\venv\py\Scripts\pyth
   0    1   2
0  1  aaa  22
1  2  bbb  25
2  3  ccc  24

Process finished with exit code 0
```