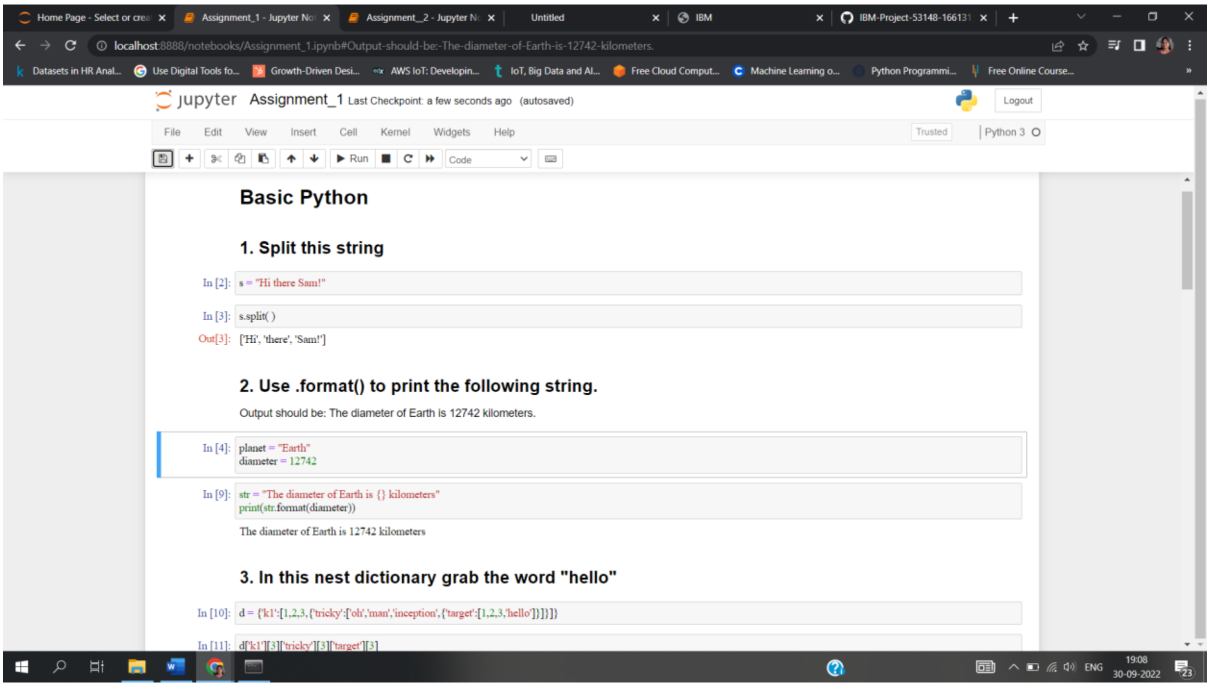
Assignment -1

Applied Data Science

Assignment Date	19 September 2022
Student Name	Varshini P
Student Roll Number	721719104089
Maximum Marks	2 Marks

1.Split the string.

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



Assignment_1 Last Checkpoint: a few seconds ago (autosaved)

Basic Python

1. Split this string

```
In [2]: s = "Hi there Sam!"

In [3]: s.split( )
Out[3]: ['Hi', 'there', 'Sam!']
```

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

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

```
In [4]: planet = "Earth"
        diameter = 12742

In [9]: str = "The diameter of Earth is {} kilometers"
        print(str.format(diameter))

        The diameter of Earth is 12742 kilometers
```

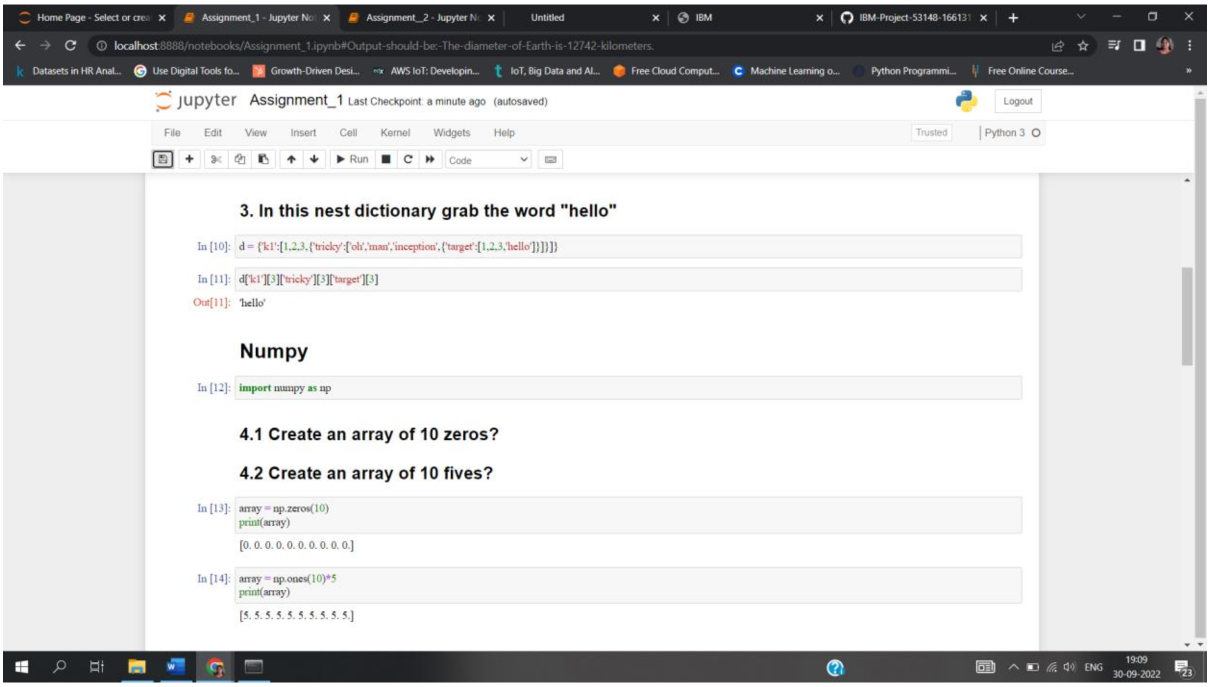
3. In this nest dictionary grab the word "hello"

```
In [10]: d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}

In [11]: d['k1'][3]['tricky'][3]['target'][3]
```

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

4.1 Create an array of 10 zeroes.

4.2 Create an array of 10 fives.



jupyter Assignment_1 Last Checkpoint: a minute ago (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted
Python 3
Run
Code

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

```
In [10]: d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
```

```
In [11]: d['k1'][3]['tricky'][3]['target'][3]
Out[11]: 'hello'
```

Numpy

```
In [12]: import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
In [13]: array = np.zeros(10)
         print(array)

[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

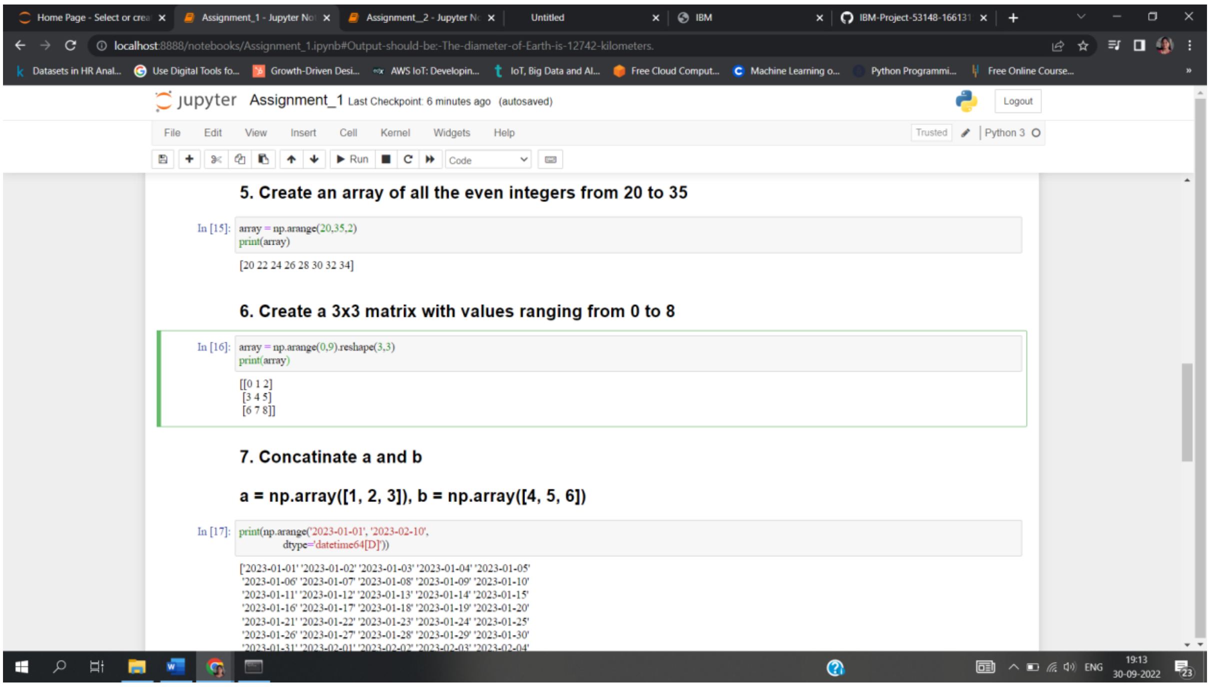
```
In [14]: array = np.ones(10)*5
         print(array)

[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

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

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

7. Concatinate a and b¶

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



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

```
In [15]: array = np.arange(20,35,2)
         print(array)

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

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

```
In [16]: array = np.arange(0,9).reshape(3,3)
         print(array)

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

7. Concatinate a and b

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

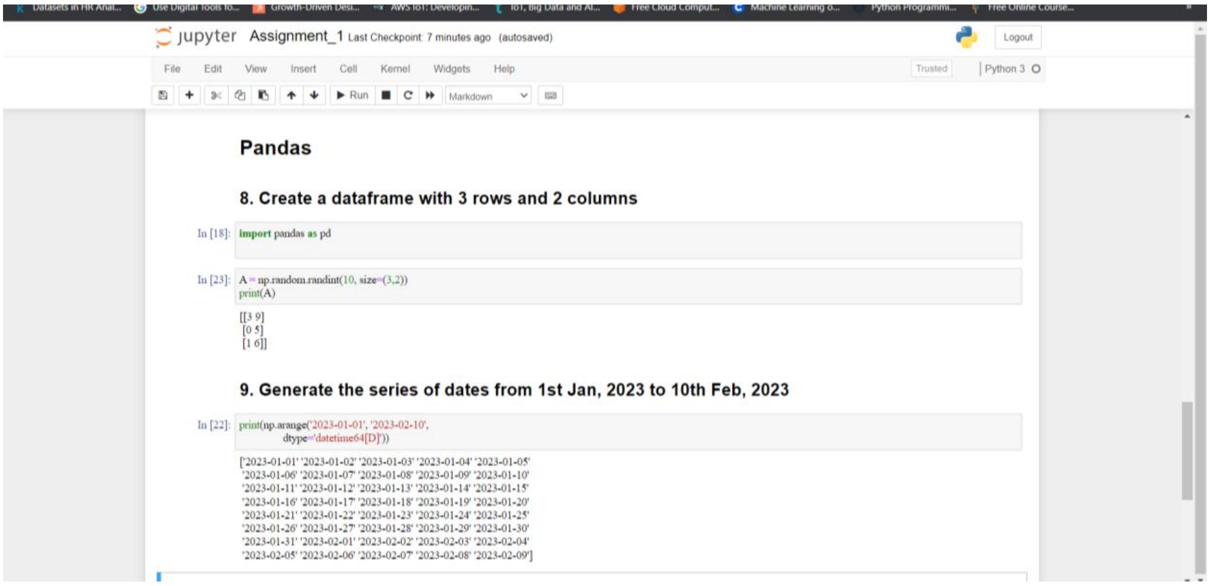
```
In [17]: print(np.arange('2023-01-01', '2023-02-10',
                   dtype='datetime64[D]'))

['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'
 '2023-01-11' '2023-01-12' '2023-01-13' '2023-01-14' '2023-01-15'
 '2023-01-16' '2023-01-17' '2023-01-18' '2023-01-19' '2023-01-20'
 '2023-01-21' '2023-01-22' '2023-01-23' '2023-01-24' '2023-01-25'
 '2023-01-26' '2023-01-27' '2023-01-28' '2023-01-29' '2023-01-30'
 '2023-01-31' '2023-02-01' '2023-02-02' '2023-02-03' '2023-02-04'
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

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

10. Create 2D list to DataFrame



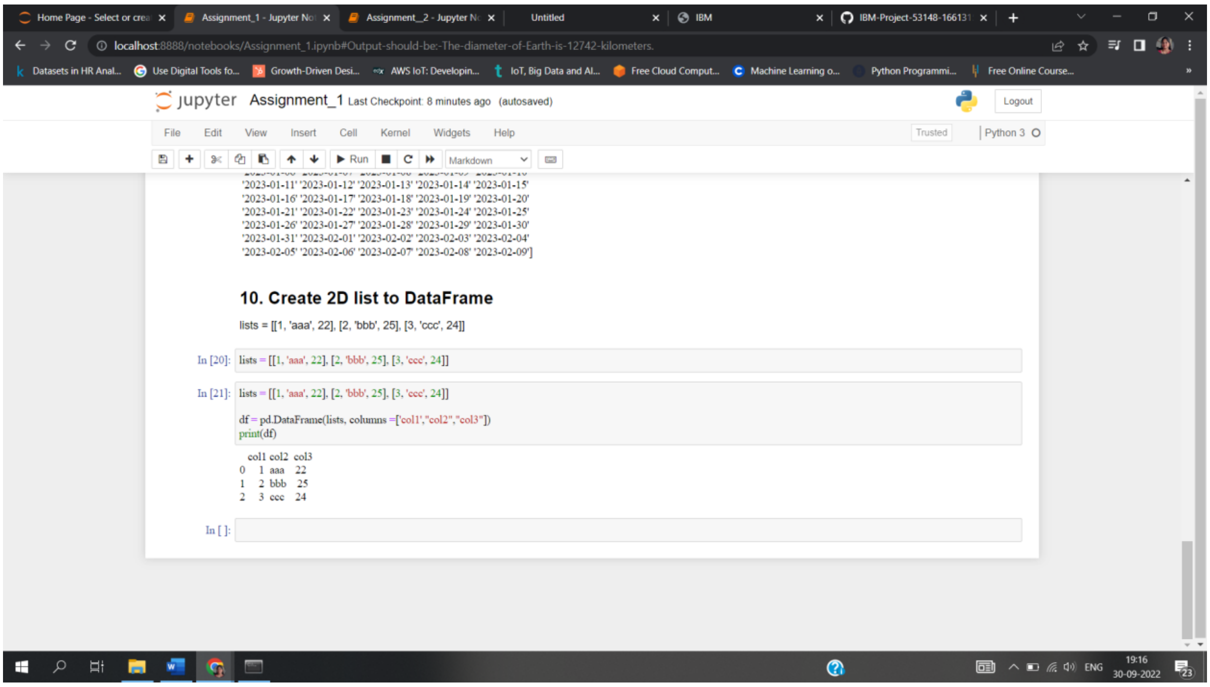
Pandas

8. Create a dataframe with 3 rows and 2 columns

```
In [18]: import pandas as pd

In [23]: A = np.random.randint(10, size=(3,2))
         print(A)

         [[3 9]
          [0 5]
          [1 6]]
```

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

```
In [22]: print(np.arange('2023-01-01', '2023-02-10',
                   dtype='datetime64[D]'))

         ['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'
          '2023-01-11' '2023-01-12' '2023-01-13' '2023-01-14' '2023-01-15'
          '2023-01-16' '2023-01-17' '2023-01-18' '2023-01-19' '2023-01-20'
          '2023-01-21' '2023-01-22' '2023-01-23' '2023-01-24' '2023-01-25'
          '2023-01-26' '2023-01-27' '2023-01-28' '2023-01-29' '2023-01-30'
          '2023-01-31' '2023-02-01' '2023-02-02' '2023-02-03' '2023-02-04'
          '2023-02-05' '2023-02-06' '2023-02-07' '2023-02-08' '2023-02-09']
```


Home Page - Select or crea
Assignment_1 - Jupyter No
Assignment_2 - Jupyter No
Untitled
IBM
IBM-Project-53148-16613
localhost:8888/notebooks/Assignment_1.ipynb#Output-should-be:-The-diameter-of-Earth-is-12742-kilometers.
jupyter
Assignment_1 Last Checkpoint: 8 minutes ago (autosaved)
Logout
File
Edit
View
Insert
Cell
Kernel
Widgets
Help
Trusted
Python 3
Run
Markdown
ENG
19:16
30-09-2022

```
 '2023-01-11' '2023-01-12' '2023-01-13' '2023-01-14' '2023-01-15'
 '2023-01-16' '2023-01-17' '2023-01-18' '2023-01-19' '2023-01-20'
 '2023-01-21' '2023-01-22' '2023-01-23' '2023-01-24' '2023-01-25'
 '2023-01-26' '2023-01-27' '2023-01-28' '2023-01-29' '2023-01-30'
 '2023-01-31' '2023-02-01' '2023-02-02' '2023-02-03' '2023-02-04'
 '2023-02-05' '2023-02-06' '2023-02-07' '2023-02-08' '2023-02-09']
```

10. Create 2D list to DataFrame

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

```
In [20]: lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]

In [21]: lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]

         df = pd.DataFrame(lists, columns =['col1',"col2","col3"])
         print(df)

            col1 col2  col3
         0     1  aaa    22
         1     2  bbb    25
         2     3  ccc    24

In [ ]:
```