ASSIGNMENT 1

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1. Split this string

```
[2]  s = "Hi there suji!"

[3]  print(s.split())

     ['Hi', 'there', 'suji!']
```

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

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

```
[10]  planet = "Earth"
      diameter = 12742

[11]  print("The diameter of {0} is {1} kilometers.".format(planet,diameter))

      The diameter of Earth is 12742 kilometers.
```

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

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

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

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      hello
```

Numpy

```
[ ]  import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
[15]  a=np.zeros(10)
      print(a)

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

```
      a=np.ones(10)*5
      print(a)

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

---

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

```
[17]  a=np.arange(20,35,2)
      print(a)

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

Double-click (or enter) to edit

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

```
[18]  m=np.arange(0,9).reshape(3,3)
      print(m)

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

7. Concatenate a and b

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

```
[19]  a = np.array([1, 2, 3])
      b = np.array([4, 5, 6])
      print(np.concatenate((a,b),axis=0))

      [1 2 3 4 5 6]
```

8. Create a dataframe with 3 rows and 2 columns

```
[8] import pandas as pd
    import matplotlib.pyplot as plt
    import numpy as np
```

```
data=[["Arunshanmugam","Mentor"],["sujitha","leader"],["lakshmi devi","Member"]]
print(pd.DataFrame(data,columns=["Name","Role"]))
```

```
              Name    Role
0  Arunshanmugam  Mentor
1        sujitha  leader
2   lakshmi devi  Member
```

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

```
[6] from datetime import datetime

    date=pd.date_range(start="2023-01-01",end="2023-02-10")
    print(pd.Series(date))
```

```
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
```

0s   completed at 13:54

```
     21    2023-01-22
[6]  22    2023-01-23
     23    2023-01-24
     24    2023-01-25
     25    2023-01-26
     26    2023-01-27
     27    2023-01-28
     28    2023-01-29
     29    2023-01-30
     30    2023-01-31
     31    2023-02-01
     32    2023-02-02
     33    2023-02-03
     34    2023-02-04
     35    2023-02-05
     36    2023-02-06
     37    2023-02-07
     38    2023-02-08
     39    2023-02-09
     40    2023-02-10
     dtype: datetime64[ns]
```

10. Create 2D list to DataFrame

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

```
lists = [[1, 'xxx', 22], [2, 'yyy', 25], [3, 'zzz', 24]]
pd.DataFrame(lists,columns=["S.No.","Name","Quantity"])
```

	S.No.	Name	Quantity
0	1	xxx	22
1	2	yyy	25
2	3	zzz	24

0s   completed at 13:54