SmartBridge Applied Data Science

Name: Routhu Sai Praneeth

Mail: routhusai.praneeth2020@vitstudent.ac.in

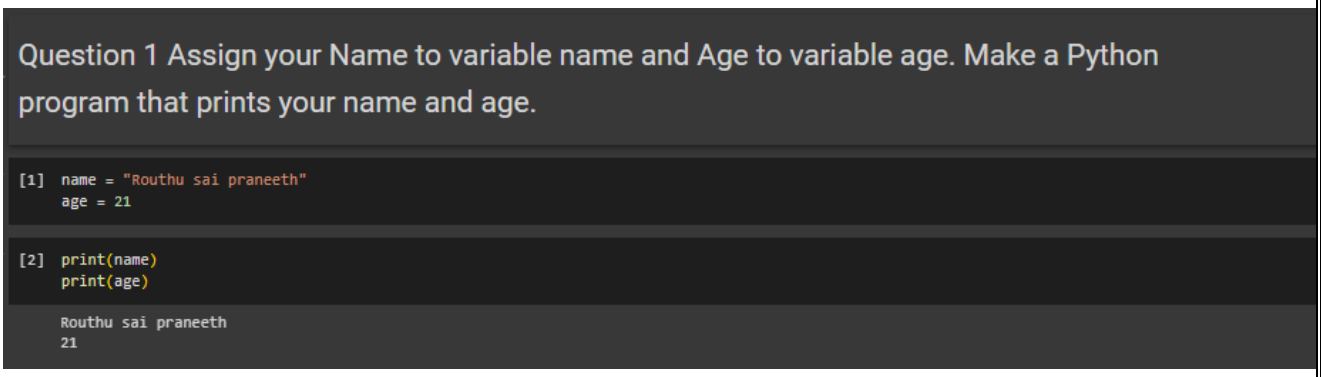
ADS Assignment 1

Drive Link to Colab File:

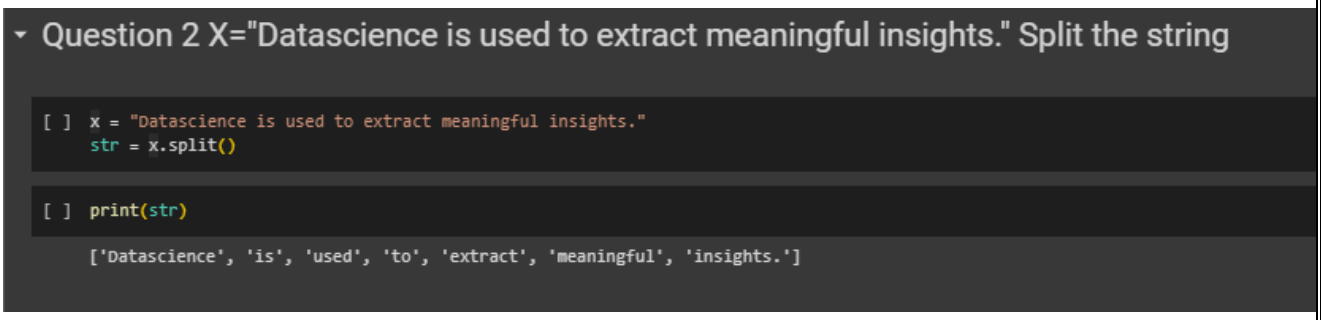
Link

Tasks:

1. **Assign your Name to variable name and Age to variable age. Make a Python program that prints your name and age.**



2. **X="Datascience is used to extract meaningful insights." Split the string**



3. **Make a function that gives multiplication of two numbers**

Question 3 Make a function that gives multiplication of two numbers

```
[ ]  def mul(a,b):
         return a*b
```

```
[ ]  mul(45,23)
```

```
1035
```

4. **Create a Dictionary of 5 States with their capitals. also print the keys and values.**

Question 4 Create a Dictionary of 5 States with their capitals. also print the keys and values.

```
[ ]  dict = {
        "andhra pradesh" : "amaravati",
        "Tamil nadu" : "chennai",
        "Kerala" : "Trivandrum",
        "telangana" : "Hyderabad",
        "Karnataka" : "Bengaluru"
    }
```

```
[ ]  dict.keys()
```

```
dict_keys(['telangana', 'andhra pradesh', 'Tamil nadu', 'Kerala', 'Karnataka'])
```

```
[ ]  dict.values()
```

```
dict_values(['Hyderabad', 'amaravati', 'chennai', 'Trivandrum', 'Bengaluru'])
```

5. **Create a list of 1000 numbers using range function.**

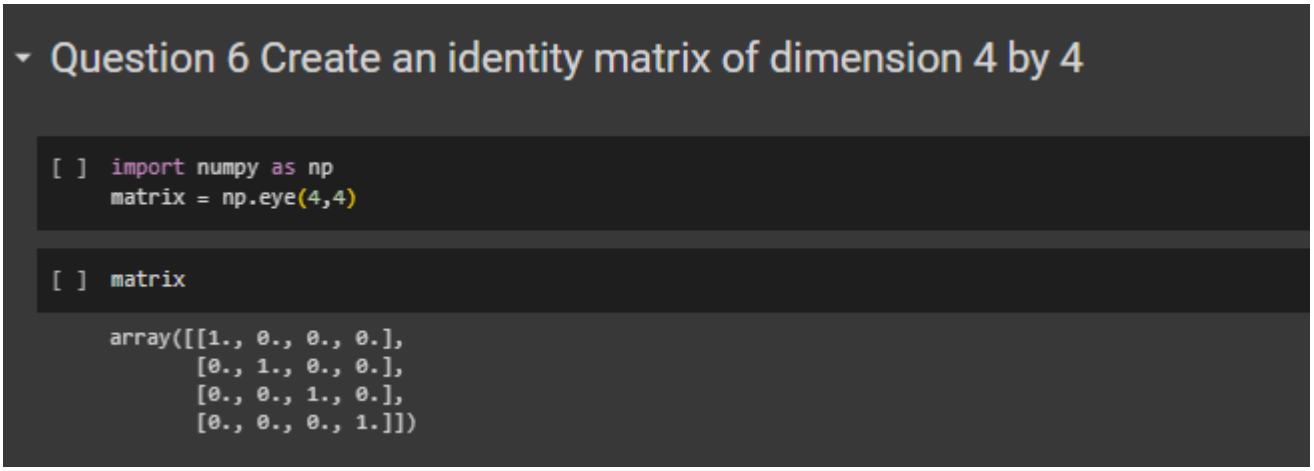
Question 5 Create a list of 1000 numbers using range function.

```
[ ]  nums = []
     for i in range(1,1001):
         nums.append(i)
```

```
[ ]  nums
```

```
936,
937,
938,
939,
940,
941,
942,
943,
944,
945,
946,
947,
948,
949,
950,
951,
952,
953,
954,
955,
956,
957,
958,
959,
```

6. **Create an identity matrix of dimension 4 by 4**



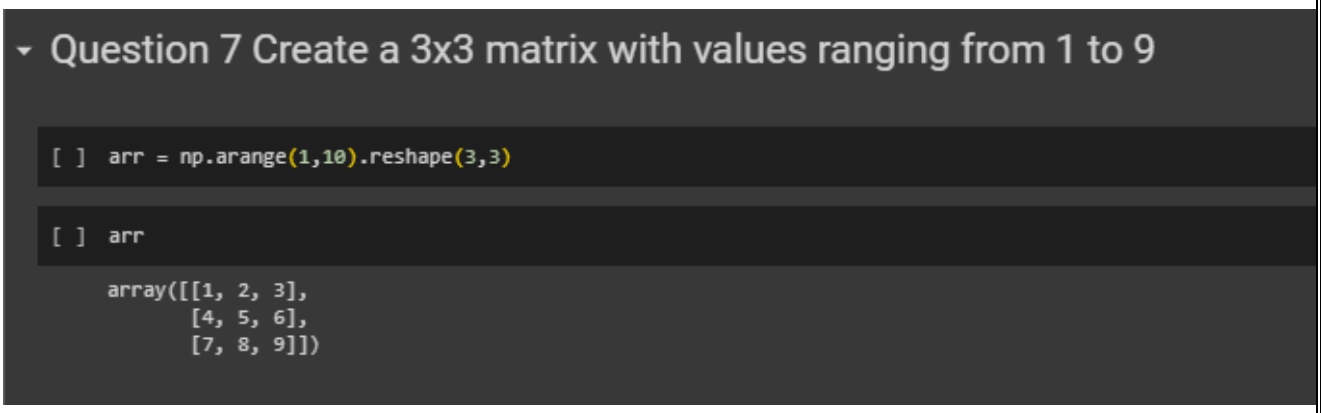
Question 6 Create an identity matrix of dimension 4 by 4

```
[ ] import numpy as np
    matrix = np.eye(4,4)
```

```
[ ] matrix
```

```
array([[1., 0., 0., 0.],
       [0., 1., 0., 0.],
       [0., 0., 1., 0.],
       [0., 0., 0., 1.]])
```

7. **Create a 3x3 matrix with values ranging from 1 to 9**



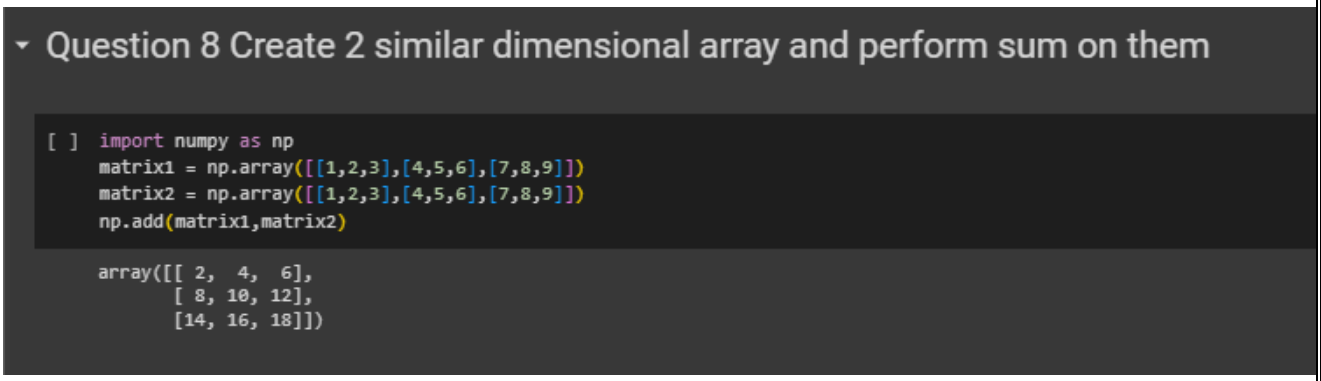
Question 7 Create a 3x3 matrix with values ranging from 1 to 9

```
[ ] arr = np.arange(1,10).reshape(3,3)
```

```
[ ] arr
```

```
array([[1, 2, 3],
       [4, 5, 6],
       [7, 8, 9]])
```

8. **Create 2 similar dimensional array and perform sum on them.**



Question 8 Create 2 similar dimensional array and perform sum on them

```
[ ] import numpy as np
    matrix1 = np.array([[1,2,3],[4,5,6],[7,8,9]])
    matrix2 = np.array([[1,2,3],[4,5,6],[7,8,9]])
    np.add(matrix1,matrix2)
```

```
array([[ 2,  4,  6],
       [ 8, 10, 12],
       [14, 16, 18]])
```

9. **Generate the series of dates from 1st Feb, 2023 to 1st March, 2023 (both inclusive)**

Question 9 Generate the series of dates from 1st Feb, 2023 to 1st March, 2023 (both inclusive)

```
[ ] from datetime import date, timedelta

    start_date = date(2023, 2, 1)
    end_date = date(2023, 3, 1)

    delta = timedelta(days=1)
    current_date = start_date

    while current_date <= end_date:
        print(current_date)
        current_date += delta
```

```
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
2023-02-10
2023-02-11
2023-02-12
```

10. Given a dictionary, convert it into corresponding dataframe and display it dictionary = {'Brand': ['Maruti', 'Renault', 'Hyndai'], 'Sales' : [250, 200, 240]}

Question 10 Given a dictionary, convert it into corresponding dataframe and display it

```
[ ] dictionary = {
        'Brand': ['Maruti', 'Renault', 'Hyndai'], 'Sales' : [250, 200, 240]
    }
```

```
[ ] import pandas as pd
    df = pd.DataFrame(dictionary)
```

```
[ ] df
```

	Brand	Sales
0	Maruti	250
1	Renault	200
2	Hyndai	240

```
[ ]
```