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

```
name="Mathav Krishnan"
age=20
print(name,age)
```

```
Mathav Krishnan 20
```

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

```
X="Datascience is used to extract meaningful insights."
X.split()
```

```
['Datascience', 'is', 'used', 'to', 'extract', 'meaningful', 'insights.']
```

3. Make a function that gives multiplication of two numbers

```
def multiply(x,y):
    return x * y
result = multiply(2,5)
print(result)
```

```
10
```

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

```
statesandcapitals= {
    'California':'Los Angeles',
    'Texas':'Houston',
    'New York':'New York City',
    'Florida':'Miami',
    'Illinois':'Chicago'
}
print("States:",statesandcapitals.keys())
print("\nCapitals:",statesandcapitals.values())
```

```
States: dict_keys(['California', 'Texas', 'New York', 'Florida', 'Illinois'])

Capitals: dict_values(['Los Angeles', 'Houston', 'New York City', 'Miami', 'Chi
```

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

```
num=list(range(0,1001))
print(num)
```

```
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21,
```

6. Create an identity matrix of dimension 4 by 4

```
import numpy as np
i_matrix = np.eye(4)
print(i_matrix)
```

```
[[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

```
import numpy as np
elements=np.arange(1,10)
matrix=np.reshape(elements,(3,3))
print(matrix)
```

```
[[1 2 3]
 [4 5 6]
 [7 8 9]]
```

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

```
import numpy as np
arr1 = np.array([[1, 2, 3], [4, 5, 6], [7, 8, 9]])
arr2 = np.array([[10, 11, 12], [13, 14, 15], [16, 17, 18]])
result = arr1 + arr2
print(result)
```

```
[[11 13 15]
 [17 19 21]
 [23 25 27]]
```

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)
dates=[]
current_date=start_date
while current_date<=end_date:
    dates.append(current_date)
    current_date += timedelta(days=1)
for date in dates:
    print(date)
```

```
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
2023-02-13
2023-02-14
2023-02-15
2023-02-16
2023-02-17
2023-02-18
2023-02-19
2023-02-20
2023-02-21
2023-02-22
2023-02-23
2023-02-24
2023-02-25
2023-02-26
2023-02-27
2023-02-28
2023-03-01
```

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
dict={'Brand':['Maruti','Renault','Hyundai'],'Sales':[250,200,240]}
df=pd.DataFrame(dict)
print(df)
```

```
      Brand  Sales
0   Maruti    250
1  Renault    200
2  Hyundai    240
```

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