```python
In [2]: import numpy as np
```

```python
In [4]: b = np.array([[1,2,3], [4,5,6], [7,8,9]])
        b
```

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

```python
In [5]: b.shape
```

```
Out[5]: (3, 3)
```

```python
In [6]: b.size
        #to check the number of elements in the array
```

```
Out[6]: 9
```

```python
In [7]: b_ins = np.insert(b, 1,[15,13,15], axis=0)
        b_ins
        #to insert in the second column
```

```
Out[7]: array([[ 1,  2,  3],
               [15, 13, 15],
               [ 4,  5,  6],
               [ 7,  8,  9]])
```

```python
In [8]: b_ins2 = np.insert(b,2,[15,13,12], axis=1)
        b_ins2
```

```
Out[8]: array([[ 1,  2, 15,  3],
               [ 4,  5, 13,  6],
               [ 7,  8, 12,  9]])
```

```python
In [9]: x = np.matrix('1,2,3;4,5,6;7,8,9')
        x
```

```
Out[9]: matrix([[1, 2, 3],
               [4, 5, 6],
               [7, 8, 9]])
```

```python
In [10]: x.shape
```

```
Out[10]: (3, 3)
```

```python
In [11]: x.size
```

```
Out[11]: 9
```

```python
In [13]: x[2,1] = -5
         x
         # to change the element of 3rd row 2nd column
```

```
Out[13]: matrix([[ 1,  2,  3],
                [ 4,  5,  6],
                [ 7, -5,  9]])
```

```python
In [14]: x[1, :]
         #to get the 2nd column in the matrix
```

```
Out[14]: matrix([[4, 5, 6]])
```

```python
In [15]: arr = np.array([[1,2,3], [4,5,6], [7,-8,9]])
         arr
```

```
Out[15]: array([[ 1,  2,  3],
                [ 4,  5,  6],
                [ 7, -8,  9]])
```

```python
In [16]: arr[1]
```

```
Out[16]: array([4, 5, 6])
```

```python
In [17]: # Matrix Mulitplication
         x*x
```

```
Out[17]: matrix([[ 30,  -3,  42],
                [ 66,   3,  96],
                [ 50, -56,  72]])
```

```python
In [18]: # Array Multiplication
         arr*arr
```

```
Out[18]: array([[ 1,  4,  9],
                [16, 25, 36],
                [49, 64, 81]])
```