```
import numpy as np
```

Array Slicing In Numpy

```
a = np.arange(1,51)
a = a.reshape(10,5)
a
```

```
array([[ 1,  2,  3,  4,  5],
       [ 6,  7,  8,  9, 10],
       [11, 12, 13, 14, 15],
       [16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25],
       [26, 27, 28, 29, 30],
       [31, 32, 33, 34, 35],
       [36, 37, 38, 39, 40],
       [41, 42, 43, 44, 45],
       [46, 47, 48, 49, 50]])
```

```
a[0]
```

```
array([1, 2, 3, 4, 5])
```

```
a[2]
```

```
array([11, 12, 13, 14, 15])
```

```
a[0,0]
```

```
1
```

```
a[3,4]
```

```
20
```

```
a[2:5]
```

```
array([[11, 12, 13, 14, 15],
       [16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25]])
```

```
a[0:10]
```

```
array([[ 1,  2,  3,  4,  5],
       [ 6,  7,  8,  9, 10],
       [11, 12, 13, 14, 15],
       [16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25],
       [26, 27, 28, 29, 30],
       [31, 32, 33, 34, 35],
       [36, 37, 38, 39, 40],
       [41, 42, 43, 44, 45],
       [46, 47, 48, 49, 50]])
```

Remember!!! No error for a[0:100]

```
a[0:100]
```

```
array([[ 1,  2,  3,  4,  5],
       [ 6,  7,  8,  9, 10],
       [11, 12, 13, 14, 15],
       [16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25],
       [26, 27, 28, 29, 30],
       [31, 32, 33, 34, 35],
       [36, 37, 38, 39, 40],
       [41, 42, 43, 44, 45],
       [46, 47, 48, 49, 50]])
```

```python
a[:,2]
```

```
array([ 3,  8, 13, 18, 23, 28, 33, 38, 43, 48])
```

```python
a[2:5,4]
```

```
array([15, 20, 25])
```

```python
a[:,:]
```

```
array([[ 1,  2,  3,  4,  5],
       [ 6,  7,  8,  9, 10],
       [11, 12, 13, 14, 15],
       [16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25],
       [26, 27, 28, 29, 30],
       [31, 32, 33, 34, 35],
       [36, 37, 38, 39, 40],
       [41, 42, 43, 44, 45],
       [46, 47, 48, 49, 50]])
```

```python
a[:,2:5]
```

```
array([[ 3,  4,  5],
       [ 8,  9, 10],
       [13, 14, 15],
       [18, 19, 20],
       [23, 24, 25],
       [28, 29, 30],
       [33, 34, 35],
       [38, 39, 40],
       [43, 44, 45],
       [48, 49, 50]])
```

```python
a[:,2:5].dtype
```

```
dtype('int64')
```