```python
import numpy as np

a = np.array(42)
b = np.array([1, 2, 3, 4, 5])
c = np.array([[1, 2, 3], [4, 5, 6]])                    #provides the ndim attribute that returns an integer
                                                        #that tells us how many dimensions the array have.the no of matrices
d = np.array([[[1, 2, 3], [4, 5, 6]], [[1, 2, 3], [4, 5, 6]]])

print(a.ndim)
print(b.ndim)
print(c.ndim)
print(d.ndim)
```

```
0
1
2
3
```

```python
import numpy as np

arr= np.array([1,2,3,4],ndmin=5)
print(arr)
print("number of dimension:", arr.ndim)
```

```
[[[[[1 2 3 4]]]]]
number of dimension: 5
```

```python
import numpy as np
arr = np.array([1,2,3,4])   #getting the first element from th given array
print(arr[3])
```

```
4
```

```python
import numpy as np
arr = np.array([1,2,3,4])# getting the third and the fourth element and adding them
print(arr[2] +arr[3])
```

```
7
```

```python
#Accessing 2-D Array
import numpy as np
arr= np.array([[1,2,3,4,5], [6,7,8,9,10]])   #accesing the second element from the first raw
print('2nd element on 1st row: ', arr[0, 1])
```

```
2nd element on 1st row:  2
```

```python
#accessing the 5th element in the 2nd row
import numpy as np
arr= np.array([[1,2,3,4,5], [6,7,8,9,10]])

print('5th element on 2nd row: ', arr[1, 4])
```

```
5th element on 2nd row:  10
```

```python
#lements from 3-D arrays we can use comma separated integers
#representing the dimensions and the index of the element.

import numpy as np
arr = np.array([[[1, 2, 3], [4, 5, 6]], [[7, 8, 9], [10, 11, 12]]])

print(arr[0,1,2])
```

```
6
```

```python
#print the last element from the 2nd dim:

import numpy as np

arr = np.array([[1,2,3,4,5], [6,7,8,9,10]])

print('Last element from 2nd dim: ', arr[1, -1]
```

```
Last element from 2nd dim:  10
```

```python
#next topic:slicing an array
#
#Slicing in python means taking elements from one given index to another given index.
#We pass slice instead of index like this: [start:end].
#We can also define the step, like this: [start:end:step]
```

```python
import numpy as np

arr = np.array([1, 2, 3, 4, 5, 6, 7])#th fifthelemenent of an array is not recorded

print(arr[1:5])
```

```
[2 3 4 5]
```

```python
import numpy as np
arr= np.array([1,2,3,4,5,6,7,8])
print(arr[4:])
```

```
[5 6 7 8]
```