

e-1

March 11, 2025

```
[17]: import numpy as np
      from PIL import Image
      from IPython.display import display
```

```
[18]: a = np.array([
      [1, 2],
      [4, 3],
      [5, 6]
      ])
```

```
[19]: a.ndim # dimns
```

```
[19]: 2
```

```
[20]: a.shape # shape by axis
```

```
[20]: (3, 2)
```

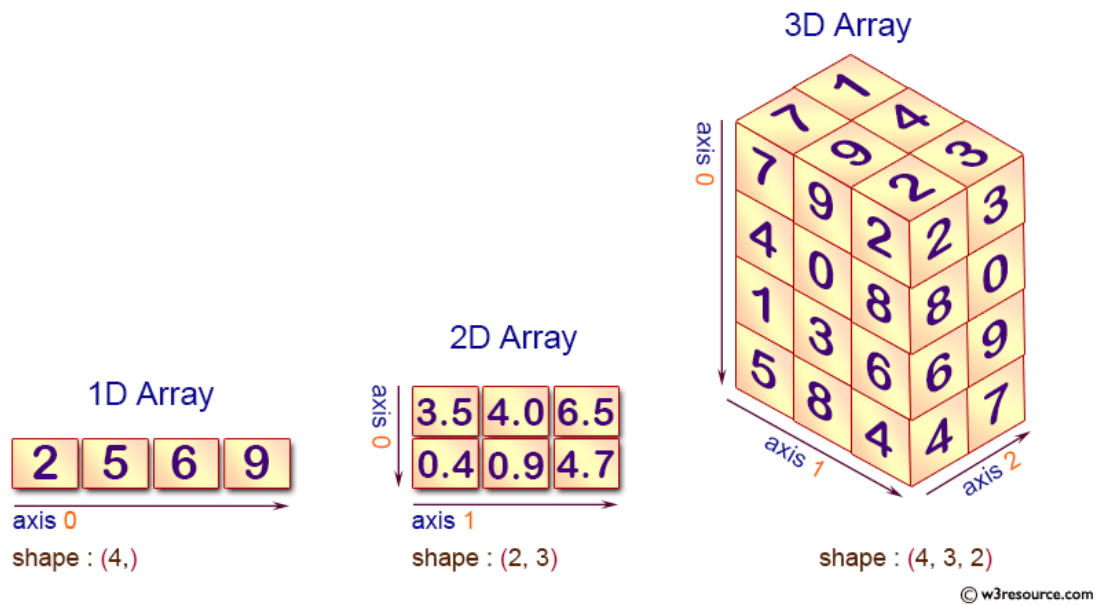
```
[21]: a.dtype # type of data
```

```
[21]: dtype('int64')
```

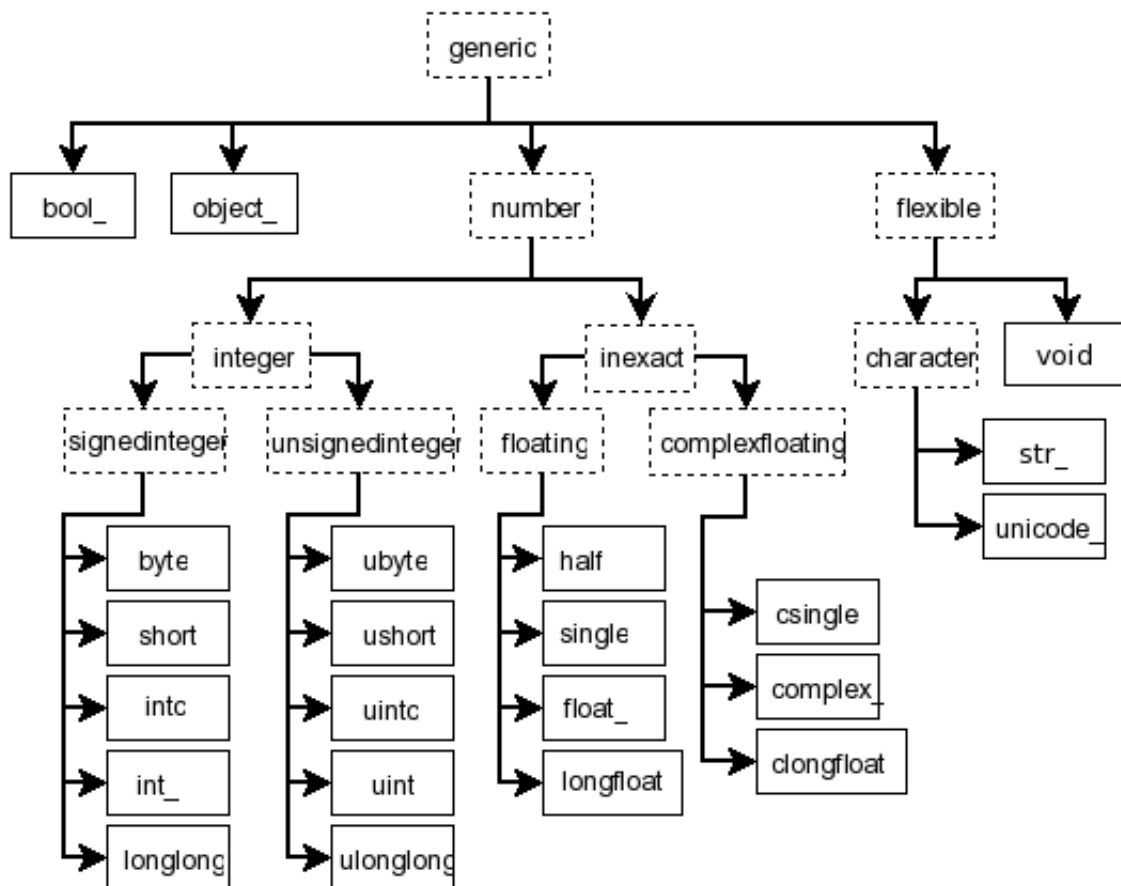
```
[22]: type(a)
```

```
[22]: numpy.ndarray
```

```
[23]: display(Image.open('axis_shape.png'))
```



```
[24]: display(Image.open('dtype_1.png'))
```



```
[25]: display(Image.open('dtype_2.png'))
```

