In [6]:
```
import numpy as np
#one's matric
mx_1s = np.array([[1,2,3],[5,6,7],[9,10,11]])
print(mx_1s)
```

```
[[ 1  2  3]
 [ 5  6  7]
 [ 9 10 11]]
```

In [9]:
```
#an other way to creat one's matrix
mx_1s = np.ones(5) #by default fload type data type
print(mx_1s)
```

```
[1. 1. 1. 1. 1.]
```

In [11]:
```
mx_1s.dtype
```

Out[11]:
```
dtype('float64')
```

In [13]:
```
mx_1s = np.ones((3,4)) #shape row and column
print(mx_1s)
```

```
[[1. 1. 1. 1.]
 [1. 1. 1. 1.]
 [1. 1. 1. 1.]]
```

In [15]:
```
mx_1s = np.ones((3,4),dtype = int) #int type one's matric
print(mx_1s)
```

```
[[1 1 1 1]
 [1 1 1 1]
 [1 1 1 1]]
```

In [17]:
```
#Zero Matrix
mx_0s = np.zeros((4,6))
print(mx_0s)
```

```
[[0. 0. 0. 0. 0. 0.]
 [0. 0. 0. 0. 0. 0.]
 [0. 0. 0. 0. 0. 0.]
 [0. 0. 0. 0. 0. 0.]]
```

In [19]:
```
#converson data type from default(float) to bool
mx_0s = np.zeros((4,6),dtype = bool)
print(mx_0s)
```

```
[[False False False False False False]
 [False False False False False False]
 [False False False False False False]
 [False False False False False False]]
```

In [21]:
```
mx_0s = np.zeros((4,6),dtype = str) #float to string
print(mx_0s)
```

```
[['' '' '' '' '' '']
 ['' '' '' '' '' '']
 ['' '' '' '' '' '']
 ['' '' '' '' '' '']]
```

In [23]:
```
em_str = ''
print(bool(em_str))
```

```
False
```

In [24]:
```
#Empty Matrix       #randomly value defaulty inserted
em_mx = np.empty((3,3))
print(em_mx)
```

```
[[0.00000000e+000 0.00000000e+000 0.00000000e+000]
 [0.00000000e+000 0.00000000e+000 5.27662110e-321]
 [8.34451503e-308 2.46151512e-312 3.33771434e-307]]
```