

initializing different types of arrays

```
In [1]: import numpy as np
```

```
In [7]: #all zeros matrix  
x=np.zeros((2,3))
```

```
In [8]: print(x)  
  
[[0. 0. 0.]  
 [0. 0. 0.]]
```

```
In [10]: #all ones matrix  
y=np.ones((2,3))  
print(y)
```

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

```
In [11]: #any other number  
d=np.full((2,3),99)  
print(d)
```

```
[[99 99 99]  
 [99 99 99]]
```

```
In [22]: #any other number(full_like)  
t=np.array([[1,2,3],[4,5,6]])  
e=np.full_like(t,3)  
print(e)
```

```
[[3 3 3]  
 [3 3 3]]
```

```
In [25]: #random no  
f=np.random.rand(2,2)  
g=np.random.random_sample(t.shape)  
print(f)  
print(g)
```

```
[[0.12588293 0.11653083]  
 [0.24385685 0.19472563]]  
[[0.5386557 0.88290426 0.10899864]  
 [0.95870088 0.46450873 0.80206916]]
```

```
In [26]: #random int  
k=np.random.randint(2,5,size=(3,3))  
print(k)
```

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

```
In [27]: print(np.identity(5))
```

```
[[1. 0. 0. 0. 0.]  
 [0. 1. 0. 0. 0.]  
 [0. 0. 1. 0. 0.]  
 [0. 0. 0. 1. 0.]  
 [0. 0. 0. 0. 1.]]
```

```
In [28]: #repeat an array  
arr=np.array([[1,2,3]])  
r1=np.repeat(arr,3,axis=0)  
print(r1)
```

```
[[1 2 3]  
 [1 2 3]  
 [1 2 3]]
```

```
In [29]: #repeat an array  
arr=np.array([[1,2,3]])  
r1=np.repeat(arr,3,axis=1)  
print(r1)
```

```
[[1 1 1 2 2 2 3 3 3]]
```

```
In [31]: #careful about copying!  
a=np.array([1,2,3])  
b=a  
print(b)  
b[0]=2  
print(a)  
print(b)  
#does not actually copy the array but points to the same array
```

```
[1 2 3]  
[2 2 3]  
[2 2 3]
```

```
In [32]: #careful about copying!  
a=np.array([1,2,3])  
b=a.copy()  
print(b)  
b[0]=2  
print(a)  
print(b)
```

```
[1 2 3]  
[1 2 3]  
[2 2 3]
```

```
In [ ]:
```