

```
print("Hello World")
```

```
Hello World
```

```
import numpy as np
```

```
a = np.array([1, 2.5, 6])  
matrix = np.array([[1, 0], [0, 1]])
```

```
a
```

```
array([1. , 2.5, 6. ])
```

```
b = np.array([1, 2.5, 6], dtype="float32")
```

```
b
```

```
array([1. , 2.5, 6. ], dtype=float32)
```

```
a_random = np.random.rand(5)  
a_ones = np.ones(3)  
a_zeros = np.zeros((3, 3))  
a_empty = np.empty(10, dtype="int64")  
a_range = np.arange(4, 10)
```

```
print(a_random)  
print(a_ones)  
print(a_range)
```

```
[[0.34228755 0.19983794 0.57252219]  
 [0.19210979 0.17529747 0.20346028]  
 [0.54568769 0.67577675 0.39756324]]  
[1. 1. 1.]  
[4 5 6 7 8 9]
```

```
a_random @ a_ones
```

```
array([1.27680211, 1.93109138, 0.90798191])
```

```
print(a_random)  
print(a_random[1:3])  
print(a_random[0:5:2])
```

```
[0.60128865 0.5510969 0.48542947 0.11672078 0.1401818 ]  
[0.5510969 0.48542947]  
[0.60128865 0.48542947 0.1401818 ]
```

```
print(matrix)
print(matrix[1,2:4])
```

```
[[0.59106915 0.95922431 0.18003074 0.29132311 0.39444247]
 [0.3066083  0.21008175 0.25499676 0.60436743 0.83227058]
 [0.62174497 0.46483412 0.93826309 0.26653236 0.60751204]
 [0.43323311 0.50835979 0.08424809 0.66042097 0.88675662]
 [0.39922824 0.88350175 0.55648825 0.30047552 0.26408969]]
[0.25499676 0.60436743]
```

```
matrix[0,0] = 1
print(matrix)
```

```
[[1.          0.95922431 0.18003074 0.29132311 0.39444247]
 [0.3066083  0.21008175 0.25499676 0.60436743 0.83227058]
 [0.62174497 0.46483412 0.93826309 0.26653236 0.60751204]
 [0.43323311 0.50835979 0.08424809 0.66042097 0.88675662]
 [0.39922824 0.88350175 0.55648825 0.30047552 0.26408969]]
```