7_numpy_comparison

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

all & any

```
In [ ]: a = np.arange(10)
        a
```

```
In [ ]: a<0
```

```
In [ ]: np.any(a>5), np.any(a<0)
```

```
In [ ]: np.all(a>5) , np.all(a < 10)
```

comparision operation

```
In [ ]: test_a = np.array([1, 3, 0], float)
        test_b = np.array([5, 2, 1], float)
        test_a > test_b
```

```
In [ ]: test_a == test_b
```

```
In [ ]: (test_a > test_b).any()
```

```
In [ ]: a = np.array([1, 3, 0], float)
        np.logical_and(a > 0, a < 3) # and  condition
```

```
In [ ]: b = np.array([True, False, True], bool)
        np.logical_not(b) # NOT  condition
```

```
In [ ]: c = np.array([False, True, False], bool)
        np.logical_or(b, c) # OR  condition
```

```
In [ ]: a
```

```
In [ ]: np.where(a > 0, 3, 2) # where(condition, TRUE, FALSE)
```

```
In [ ]: a = np.arange(5, 15)
        a
```

```
In [ ]: np.where(a>10)
```

```
In [ ]: a = np.array([1, np.NaN, np.Inf], float)
        np.isnan(a)
```

```
In [ ]: np.isfinite(a)
```

argmax & argmin

```
In [ ]: a = np.array([1,2,4,5,8,78,23,3])
        np.argmax(a) , np.argmin(a)
```

```
In [ ]: a=np.array([[1,2,4,7],[9,88,6,45],[9,76,3,4]])
        np.argmax(a, axis=1) , np.argmin(a, axis=0)
```

```
In [ ]:
```