8_boolean_fancy_index

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

boolean index

```
In [ ]: test_array = np.array([1, 4, 0, 2, 3, 8, 9, 7], float)
        test_array > 3
```

```
In [ ]: test_array[test_array > 3]
```

```
In [ ]: condition = test_array < 3
        test_array[condition]
```

```
In [ ]: A = np.array([
        [12, 13, 14, 12, 16, 14, 11, 10,  9],
        [11, 14, 12, 15, 15, 16, 10, 12, 11],
        [10, 12, 12, 15, 14, 16, 10, 12, 12],
        [ 9, 11, 16, 15, 14, 16, 15, 12, 10],
        [12, 11, 16, 14, 10, 12, 16, 12, 13],
        [10, 15, 16, 14, 14, 14, 16, 15, 12],
        [13, 17, 14, 10, 14, 11, 14, 15, 10],
        [10, 16, 12, 14, 11, 12, 14, 18, 11],
        [10, 19, 12, 14, 11, 12, 14, 18, 10],
        [14, 22, 17, 19, 16, 17, 18, 17, 13],
        [10, 16, 12, 14, 11, 12, 14, 18, 11],
        [10, 16, 12, 14, 11, 12, 14, 18, 11],
        [10, 19, 12, 14, 11, 12, 14, 18, 10],
        [14, 22, 12, 14, 11, 12, 14, 17, 13],
        [10, 16, 12, 14, 11, 12, 14, 18, 11]])
        B = A < 15
        B
```

```
In [ ]: B.astype(np.int)
```

fancy index

```
In [ ]: a = np.array([2, 4, 6, 8], float)
```

```
In [ ]: a[a>4]
```

```
In [ ]: a.take(b) #take : bracket index
```

```
In [ ]: a = np.array([[1, 4], [9, 16]], float)
        b = np.array([0, 0, 1, 1, 0], int)
        c = np.array([0, 1, 1, 1, 1], int)
        a[b,c] # b row index, c column index
```

```
In [ ]: a = np.array([[1, 4], [9, 16]], float)
        a[b]
```