

python operator

complemet operator

and operator

or operator

xor(Exclusive OR operator)

left shift operator

right shift operator

```
In [1]: ~30
```

```
Out[1]: -31
```

```
In [2]: ~25
```

```
Out[2]: -26
```

```
In [3]: ~250
```

```
Out[3]: -251
```

```
In [4]: 12&13
```

```
Out[4]: 12
```

```
In [5]: 25&30
```

```
Out[5]: 24
```

```
In [6]: 12|13
```

```
Out[6]: 13
```

```
In [7]: 36&41
```

```
Out[7]: 32
```

```
In [8]: 36|41
```

Out[8]: 45

Xor(Exclusive operator)

In [9]: $12 \wedge 13$

Out[9]: 1

In [10]: $14 \wedge 15$

Out[10]: 1

In [11]: $25 \wedge 30$

Out[11]: 7

In [12]: $45 \wedge 30$

Out[12]: 51

In [1]: `bin(15)`

Out[1]: '0b1111'

In [2]: `bin(20)`

Out[2]: '0b10100'

In [3]: $15 \wedge 20$

Out[3]: 27

left shift

In [13]: $12 \ll 2$

Out[13]: 48

In [15]: $20 \ll 1$

Out[15]: 40

In [16]: $25 \ll 2$

Out[16]: 100

Right shift

In [17]: $12 \gg 2$

Out[17]: 3

In [19]: $25 \gg 2$

Out[19]: 6

In [20]: 50>>3

Out[20]: 6

In []: