

Day3

Bitwise Operators

- Bitwise OR
- Bitwise AND
- Left Shift
- Right Shift

Logical Operators ¶

1. AND
2. OR
3. NOT

And Truth Table

| a | b | a and b |
|---|---|---------|
| 0 | 0 | 0 |
| 0 | 1 | 0 |
| 1 | 0 | 0 |
| 1 | 1 | 1 |

Membership Operators

Identity Operators

In [1]:

```
a = 5
b = 6

print(a and b) ## Both values should be true except 0 every is True
```

6

In [2]:

```
a = 5
b = 0

print(a and b)
```

0

In [3]:

```
a = 5  
b = 6  
  
print(a or b)
```

5

In [4]:

```
a = 0  
b = 6  
  
print(a and b)
```

0

In [5]:

```
not 6
```

Out[5]:

False

In [6]:

```
not 0
```

Out[6]:

True

Bitwise Left Shift Operator

In [7]:

```
a = 10  
b = 2  
  
print(a << b)
```

40

10 - 001010 2

101000

In [10]:

```
a = 10  
b = 4  
  
print(a >> b)
```

0

a - 001010

000010

In [12]:

```
a = 15 # 1111 --> 1111000  
b = 2  
  
a << b  
  
#111100
```

Out[12]:

60

In [13]:

```
a >> 4  
## 0000
```

Out[13]:

3

Member Shift operators

- not
- not in

In [18]:

```
string = "APS SDC"  
  
"A P" in string
```

Out[18]:

True

In [15]:

```
"0" not in string
```

Out[15]:

True

Identity Operators

1. is
2. is not

In [22]:

```
a = [5]
b = [5]
c = a

a is c
```

Out[22]:

True

Type Conversion

In [23]:

```
print(bin(5))
```

0b101

In [24]:

```
print(hex(10))
```

0xa

In [25]:

```
print(oct(10))
```

0o12

In [27]:

```
print(int('101', 2))
print(int('101', 8))
print(int('101', 16))
```

5
65
257

In [28]:

```
print(ord("A"))
```

65

In [29]:

```
print(chr(65))
```

A