

## Operadores bitwise

Operador	Significado
<b>&amp;</b>	Operação "E" bit a bit
<b> </b>	Operação "OU" bit a bit
<b>^</b>	Operação "OU-exclusivo" bit a bit

C1	C2	C1 E C2
F	F	F
F	V	F
V	F	F
V	V	V

C1	C2	C1 OU C2
F	F	F
F	V	V
V	F	V
V	V	V

C1	C2	C1 XOR C2
F	F	F
F	V	V
V	F	V
V	V	F

## Demo

(89) 0101 1001 }  
(60) 0011 1100 }  
                  &: 0001 1000 (24)  
                  |: 0111 1101 (125)  
                  ^: 0110 0101 (101)

```
int n1 = 89;  
int n2 = 60;  
System.out.println(n1 & n2);  
System.out.println(n1 | n2);  
System.out.println(n1 ^ n2);
```

## Aplicação comum: verificar bit

(89)	0101	1001	}	&: 0000 0000	(0)
(32)	0010	0000			
(113)	0111	0001	}	&: 0010 0000	(32)
(32)	0010	0000			

```
package course;

import java.util.Scanner;

public class Program {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        int mask = 0b100000;
        int n = sc.nextInt();

        if ((n & mask) != 0) {
            System.out.println("6th bit is true!");
        }
        else {
            System.out.println("6th bit is false");
        }

        sc.close();
    }
}
```