

Bitwise Compliment and Logical Compliment

- 1) Bitwise Compliment (~):** It is a unary operator that flips all the bits of an integer value, including the sign bit. In other words, it performs a bitwise negation. It operates on individual bits of the binary representation of the value. Here's an example:

```
class Bit{  
    public static void main(String[] args){  
        int number = 42; // Binary representation: 00101010  
        int complement = ~number; // Binary representation: 11010101  
        System.out.println (complement); // Output: -43  
    }  
}
```

2) Logical Compliment(!):

The logical complement operator (!) is a unary operator that negates a boolean value. It operates on boolean expressions and returns the opposite boolean value. Here's an example

```
class Log{  
    public static void main(String[] args){  
        boolean isTrue = true;  
        boolean isFalse = !isTrue;  
        System.out.println(isFalse); // Output: false  
    }  
}
```

To summarize:

- Bitwise complement (~) flips all the bits of an integer value, including the sign bit.
- Logical complement (!) negates a boolean value, returning the opposite boolean value.