

Question 1 Inputs for "I win the game".

Test Cases:

1) Case 1: $a=1, b=1$

2) Case 2: $a=1, b=0$

3) Case 3: $a=2, b=3$

4) Case 4: $a=4, b=4$

Question 2 * Order of evaluation & precedence:

1. Bitwise AND ($\&$)

2. Relational operators (\geq, \leq)

3. Bitwise XOR (\wedge)

4. Bitwise OR (\mid)

* Logic of the condition:

The program prints "I win the game" if either:

(i) $a \& b \geq 1$ or,

(ii) $a \oplus b \leq 1$

Subcondition 1: $a \& b \geq 1$

Subcondition 2: $a \oplus b \leq 1$

The program evaluates whether either sub-condition is True.

* Inputs for "I win the game"

(i) $a=1, b=1$

(ii) $a=1, b=0$

(iii) $a=2, b=3$

(iv) $a=4, b=4$

* The program evaluates the two subconditions in the specified precedence order.

* If either condition is True, the program prints "I win the game".

* Otherwise, it prints "I lose the game".