

Count number of bits to be flipped to convert A to B

Given two numbers 'a' and 'b'. Write a program to count number of bits needed to be flipped to convert 'a' to 'b'.

Example :

Input : a = 10, b = 20

Output : 4

Binary representation of a is 0000**1010**

Binary representation of b is 00010100

We need to flip highlighted four bits in a to make it b.

Input : a = 7, b = 10

Output : 3

Binary representation of a is 0000**0111**

Binary representation of b is 00001010

We need to flip highlighted three bits in a to make it b.

So the number of flips is equal to the number of differences of bits in the exact position of the two binary numbers representations.

Notice that the XOR bitwise operator is there to help us recognize how much one binary number is different from the other one.

So it means that XOR operation loops in each position of the both binary numbers at the same time and if it finds that the value of the two positions are equal it marks that position as 0 else 1.

Means it will mark as 1 on the positions where the two binary numbers are different.