

MINIMUM BIT FLIPS TO CONVERT INTEGER

★ In this problem, we are given two integers `start` and `stop`, and our job is to flip the least possible number of bits in `start` to reach `stop`.

Brute force solution is to obviously convert each number to its binary and then compare how many bits need to be changed.

Optimal Solution involves doing this comparison step using XOR, as XOR returns 1 when bits don't match. Then we can just count number of set bits in the XOR answer.

Pseudocode :

```
minBitsFlip(start, stop) {  
    ans = start ⊕ stop  
    c = 0  
    for (i = 0 → 31) {  
        if (ans & (1 << i)) {  
            c += 1  
        }  
    }  
    return c  
}
```

}

Time Complexity is $O(31)$ and
Space Complexity is $O(1)$.