

# E2-H 题题解

王家豪

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## H 题题意

输入 2 个整数  $A, B$  ( $-2^{60} \leq A, B \leq 2^{60}$ ), 求  $X$  ( $|X| \leq 2^{64}$ ) 使得  
 $(A \oplus X) + (B \oplus X) = X$

# 核心思路

A	B	Cin	X	Cout
0	0	0	0	0
0	0	1	1	1
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	0

# 核心代码

```
int c = 0;
for (int i = 0; i < N; i++) {
    if (A[i] == B[i]) {
        X[i] = c;
        c ^= A[i];
    } else {
        X[i] = c ^ 1;
    }
}
```

时间复杂度:  $O(t \log(max))$

# 完整代码

```
#include <stdio.h>
#include <limits.h>

#define N 64

int A[N], B[N];
int X[N];

void get(int T[], long long a) {
    for (int i = 0; i < N; i++) {
        T[i] = (a >> i) & 1;
    }
}

int main() {
    int tt;
    scanf("%d", &tt);
    while (tt--) {
        long long a, b;
        scanf("%lld%lld", &a, &b);
        if (a < 0 && b < 0) {
            printf("I would like to see xf wear a skirt every day !\n");
            continue;
        }
        get(A, a);
        get(B, b);
        int c = 0;
        for (int i = 0; i < N; i++) {
            if (A[i] == B[i]) {
                X[i] = c;
                c ^= A[i];
            } else {
```

```
        X[i] = c ^ 1;
    }
}
long long x = 0;
for (int i = 0; i < 63; i++) {
    x += X[i] * (1LL << i);
}
if (X[63]) {
    x += LLONG_MIN;
}
printf("%lld\n", x);
}
return 0;
}
```