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C1. Renako Amaori and XOR Game (easy version)

time limit per test: 2 seconds
 memory limit per test: 256 megabytes



*Yup. I couldn't do this any longer.
 No. Freaking. Way.*

— Renako Amaori

This is the easy version of the problem. The only difference between the easy and hard versions is that in the easy version, $a_i, b_i \leq 1$.

Renako is stuck between a rock and a hard place... and by that, of course, I mean Ajisai and Mai! Both of them want to hang out with her, and she just can't decide! So Ajisai and Mai have decided to play the XOR game.

Ajisai and Mai are given arrays a and b of length n ($0 \leq a_i, b_i \leq 1$). They will play a game that lasts for n turns, where Ajisai moves on odd-numbered turns and Mai moves on even-numbered turns. On the i -th turn, the player to move may choose to swap a_i and b_i , or pass.

Note that if a swap occurs, **the index that is being swapped must match the turn number**. For example, on the first turn, Ajisai may choose to swap a_1 and b_1 , or pass. On the second turn, Mai may choose to swap a_2 and b_2 , or pass. This continues for n turns. Thus, only Ajisai can swap odd indices, and only Mai can swap even indices.

Codeforces Round 1065 (Div. 3).


比赛进行中

01:55:53

Contestant



→ 提交?

语言: GNU G++20 13.2 (64 bit, v )

选择文件: [选择文件](#) 未选择文件

提交

At the end of the game, Ajisai achieves a score of $a_1 \oplus a_2 \oplus \dots \oplus a_n$, and Mai achieves a score of $b_1 \oplus b_2 \oplus \dots \oplus b_n$ *. The player with the higher score wins. If the players have the same score, the game ends in a tie.

Determine the outcome of the game with optimal play. More formally, one player is considered to win with optimal play if there exists a strategy for them such that they always win, regardless of their opponent's choices. The game is considered a tie with optimal play if neither player has such a strategy.

* \oplus denotes the bitwise XOR operation

DeepL 翻译

是的我不能再这样下去了。不。办法。

• 天守莲子

这是问题的简易版。简易版和困难版的唯一区别是，在简易版中， $a_i, b_i \leq 1$ 。

莲子陷入了两难的境地.....当然，我指的是阿治纱和小麦！两个人都想和她一起玩，而她却拿不定主意！于是，阿治纱和小舞决定玩 "XOR " 游戏。

给阿治赛和小麦长度为 n ($0 \leq a_i, b_i \leq 1$) 的数组 a 和 b 。他们将下一盘持续 n 轮的棋，其中阿治赛在奇数轮移动，小麦在偶数轮移动。在第 i 轮，下棋者可以选择交换 a_i 和 b_i ，或者弃着。

注意，如果发生交换，**被交换的索引必须与回合数一致**。例如，在第一回合，阿吉赛可以选择交换 a_1 和 b_1 ，或者弃权。第二回合，小麦可以选择交换 a_2 和 b_2 ，或者弃权。这种情况会持续 n 个回合。因此，只有阿吉赛可以交换奇数索引，只有麦可以交换偶数索引。

对局结束时，阿字西得分为 $a_1 \oplus a_2 \oplus \dots \oplus a_n$ ，小麦得分为 $b_1 \oplus b_2 \oplus \dots \oplus b_n$ * 。得分高的一方获胜。如果双方得分相同，则游戏以平局结束。

确定最佳下法的游戏结果。更正式地说，如果存在一种策略，能让一名棋手无论对手如何选择都能获胜，那么这名棋手就被认为是以最优下法获胜的。如果双方都没有这样的策略，那么这盘棋就被认为是平局。

* \oplus 表示 **bitwise XOR 运算**

M↕

Input

The first line contains a single integer t ($1 \leq t \leq 10^4$) — the number of test cases.

The first line of each test case contains a single integer n ($1 \leq n \leq 2 \cdot 10^5$).

The second line of each test case contains n integers, a_1, a_2, \dots, a_n ($0 \leq a_i \leq 1$).

The third line of each test case contains n integers, b_1, b_2, \dots, b_n ($0 \leq b_i \leq 1$).

It is guaranteed that the sum of n over all test cases does not exceed $2 \cdot 10^5$.

讯飞听见 翻译

输入

第一行包含单个整数 t ($1 \leq t \leq 10^4$) — 测试用例的数量。

每个测试用例的第一行包含一个整数 n ($1 \leq n \leq 2 \cdot 10^5$)。

每个测试用例的第二行包含 n 个整数, a_1, a_2, \dots, a_n ($0 \leq a_i \leq 1$)。

每个测试用例的第三行包含 n 个整数, b_1, b_2, \dots, b_n ($0 \leq b_i \leq 1$)。

保证所有测试用例的 n 之和不超过 $2 \cdot 10^5$ 。

M↓

Output

For each test case, output on a single line "Ajisai" if Ajisai wins with optimal play, "Mai" if Mai wins with optimal play, or "Tie" if the game ends in a tie with optimal play.

You may output the answer in any case (upper or lower). For example, the strings "mAi", "mai", "MAI", and "maI" will be recognized as "Mai".

讯飞听见 翻译

输出

对于每个测试用例，如果Ajisai以最佳玩法获胜，则在单行上输出“Ajisai”；如果Mai以最佳玩法获胜，则输出“Mai”；如果游戏以最佳玩法平局结束，则输出“Tie”。

您可以在任何情况下输出答案（上或下）。例如，字符串“Mai”、“Mai”、“Mai”和“Mai”将被识别为“Mai”。

Example

input	Copy
<pre> 6 4 1 0 0 1 1 0 1 1 6 0 1 1 1 1 0 0 0 1 0 1 1 4 0 0 1 0 1 0 1 1 5 1 0 1 1 1 0 1 1 1 0 6 1 1 1 1 1 1 1 1 1 1 1 1 5 0 1 0 0 1 1 0 0 1 1 </pre>	
output	Copy
<pre> Ajisai Mai Tie Ajisai Tie Mai </pre>	



Note

In the first example, one way the game might play out is as follows:

On turn 1, Ajisai chooses to swap a_1 and b_1 . Now the arrays are $a = [1, 0, 0, 1]$ and $b = [1, 0, 1, 1]$.

On turn 2, Mai chooses to pass.

On turn 3, Ajisai chooses to swap a_3 and b_3 . Now the arrays are $a = [1, 0, 1, 1]$ and $b = [1, 0, 0, 1]$.

On turn 4, Mai chooses to swap a_4 and b_4 . Now the arrays are $a = [1, 0, 1, 1]$ and $b = [1, 0, 0, 1]$.

Now, Ajisai's final score is $1 \oplus 0 \oplus 1 \oplus 1 = 1$ and Mai's final score is $1 \oplus 0 \oplus 0 \oplus 1 = 0$. Therefore, Ajisai wins the game.

It is not guaranteed that the above description is representative of optimal play.

讯飞听见 翻译

注意

在第一个示例中，游戏的一种可能方式如下：

在第1回合，Ajisai选择交换 a_1 和 b_1 。

现在数组是 $a = [1, 0, 0, 1]$ 和 $b = [1, 0, 1, 1]$ 。

在第2回合，Mai选择通过。

在第3回合，Ajisai选择交换 a_3 和 b_3 。

现在数组为 $a = [1, 0, 1, 1]$ 和 $b = [1, 0, 0, 1]$ 。

在第4回合，Mai选择交换 a_4 和 b_4 。

现在数组是 $a = [1, 0, 1, 1]$ 和 $b = [1, 0, 0, 1]$ 。

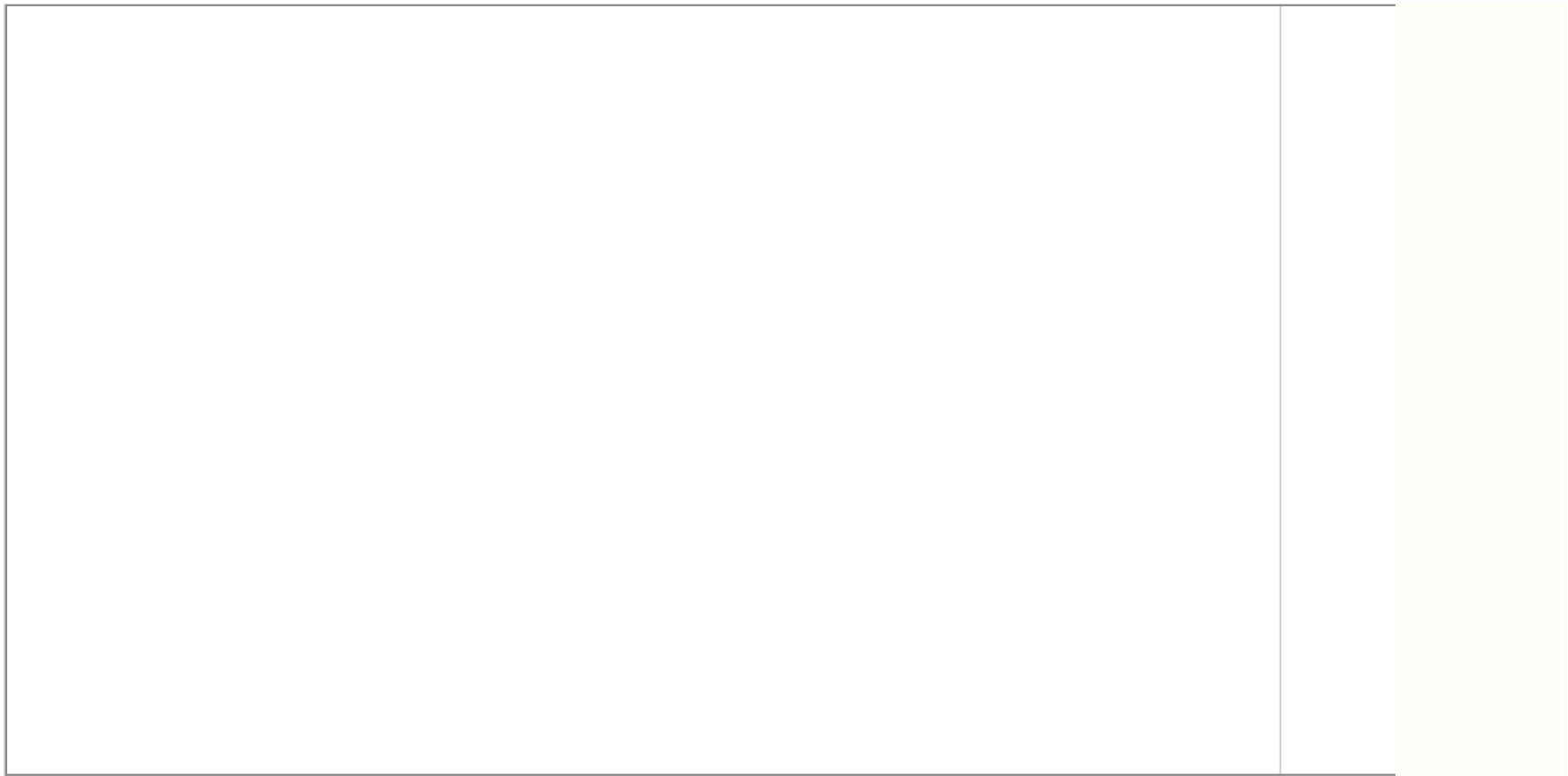
现在，Ajisai的最终得分是 $1 \oplus 0 \oplus 1 \oplus 1 = 1$ ，Mai的最终得分是 $1 \oplus 0 \oplus 0 \oplus 1 = 0$ 。

因此，Ajisai赢得了比赛。

不能保证上述描述是最佳游戏的代表。

GNU G++20 13.2 (64 bit, winlibs)

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► 自定义测试数据(自动保存)

▶📄



iTMO