Gaming Array

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Andy loves playing games. He wants to play a game with his little brother, Bob, using an array, A, of n distinct integers. The rules are as follows:

- Bob always plays first and the two players move in alternating turns.
- In a single move, a player chooses the maximum element currently present in the array and removes it as well as all the other elements to its right. For example, if $A = [2, 3, 5, 4, 1]$, then it becomes $A = [2, 3]$ after the first move because we remove the maximum element (i.e., 5) and all elements to its right (i.e., 4 and 1).
- The modifications made to the array during each turn are permanent, so the next player continues the game with the remaining array. The first player who is unable to make a move loses the game.

Andy and Bob play g games. Given the initial array for each game, can you find and print the name of the winner on a new line? If Andy wins, print `ANDY`; if Bob wins, print `BOB`.

Input Format

The first line contains a single integer denoting g (the number of games). The $2 \cdot g$ subsequent lines describe each game array over two lines:

1. The first line contains a single integer, n, denoting the number of elements in A.
2. The second line contains n distinct space-separated integers describing the respective values of $a_0, a_1, \ldots, a_{n-1}$ for array A.

Constraints

- Array A contains n distinct integers.

For 35% of the maximum score:

- $1 \leq g \leq 10$
- $1 \leq n \leq 1000$
- $1 \leq a_i \leq 10^5$
- The sum of n over all games does not exceed 1000.

For 100% of the maximum score:

- $1 \leq g \leq 100$
- $1 \leq n \leq 10^5$
- $1 \leq a_i \leq 10^9$
- The sum of n over all games does not exceed 10^5.

Output Format

For each game, print the name of the winner on a new line (i.e., either `BOB` or `ANDY`).

Sample Input 0

```
2
5
5 2 6 3 4
2
3 1
```

Sample Output 0

```
ANDY
BOB
```

Explanation 0

Andy and Bob play the following two games:

1. Initially, the array looks like this:

In the first move, Bob removes 6 and all the elements to its right, resulting in $A = [5, 2]$:

In the second move, Andy removes 5 and all the elements to its right, resulting in $A = []$:

At this point, the array is empty and Bob cannot make any more moves. This means Andy wins, so we print `ANDY` on a new line.

2. In the first move, Bob removes 3 and all the elements to its right, resulting in $A = []$. As there are no elements left in the array for Andy to make a move, Bob wins and we print `BOB` on a new line.

Submissions:2389

Max Score:35
Difficulty: Medium

Rate This Challenge:

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Current Buffer (saved locally, editable) Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         Scanner in = new Scanner(System.in);
11         int g = in.nextInt();
12         for(int a0 = 0; a0 < g; a0++){
13             int n = in.nextInt();
14         }
15     }
16 }
17
```

Line: 1 Col: 1

Upload Code as File Test against custom input Run Code Submit Code