CODEFORCES$^{\beta}$
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HOME   TOP   CONTESTS   GYM   PROBLEMSET   GROUPS   RATING   API   HELP   KOTLIN HEROES 🏆   CALENDAR

PROBLEMS   SUBMIT CODE   MY SUBMISSIONS   STATUS   HACKS   ROOM   STANDINGS   CUSTOM INVOCATION

D. Dirty Deeds Done Dirt Cheap

time limit per test: 3 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

You are given n pairs of integers $(a_1, b_1), (a_2, b_2), \ldots, (a_n, b_n)$. All of the integers in the pairs are distinct and are in the range from 1 to $2 \cdot n$ inclusive.

Let's call a sequence of integers $x_1, x_2, \ldots, x_{2k}$ *good* if either

- $x_1 < x_2 > x_3 < \ldots < x_{2k-2} > x_{2k-1} < x_{2k}$, or
- $x_1 > x_2 < x_3 > \ldots > x_{2k-2} < x_{2k-1} > x_{2k}$.

You need to choose a subset of distinct indices $i_1, i_2, \ldots, i_t$ and **their order** in a way that if you write down all numbers from the pairs in a single sequence (the sequence would be $a_{i_1}, b_{i_1}, a_{i_2}, b_{i_2}, \ldots, a_{i_t}, b_{i_t}$), this sequence is good.

What is the largest subset of indices you can choose? You also need to construct the corresponding index sequence $i_1, i_2, \ldots, i_t$.

Input

The first line contains single integer n ($2 \le n \le 3 \cdot 10^5$) — the number of pairs.

Each of the next n lines contain two numbers — a_i and b_i ($1 \le a_i, b_i \le 2 \cdot n$) — the elements of the pairs.

It is guaranteed that all integers in the pairs are distinct, that is, every integer from 1 to $2 \cdot n$ is mentioned exactly once.

Output

In the first line print a single integer t — the number of pairs in the answer.

Then print t distinct integers $i_1, i_2, \ldots, i_t$ — the indexes of pairs in the corresponding order.

Examples

input   Copy

```
5
1 7
6 4
2 10
9 8
3 5
```

output   Copy

```
3
1 5 3
```

input   Copy

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

output   Copy

```
3
3 2 1
```

Note

The final sequence in the first example is $1 < 7 > 3 < 5 > 2 < 10$.

The final sequence in the second example is $6 > 1 < 3 > 2 < 5 > 4$.

Codeforces Global Round 3

Finished

Practice

⭐

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++11 5.1.0   ▼

Choose file: 选择文件   未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

Submit

→ Last submissions

Submission	Time	Verdict
54981762	Jun/02/2019 16:31	**Accepted**
54980993	Jun/02/2019 16:10	Wrong answer on test 6

→ Problem tags

greedy   sortings   *1800

No tag edit access

→ Contest materials

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Server time: Jun/02/2019 21:42:54^{UTC+8} (f1).
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