



时间限制：C/C++/Rust/Pascal 5秒，其他语言10秒
空间限制：C/C++/Rust/Pascal 1024 M，其他语言2048 M
64bit IO Format: %lld

C++ (clang++18)

1

ACM模
请通过
入输出
出描述

题目描述

There is a min-priority queue Q , initially empty. Gellyfish will perform m operations on it. Each belongs to one of the two types:

- **Insertion**: Given l, r . Gellyfish will generate a uniformly random integer x from the range $[l, r]$ and then insert it into Q .
- **Extraction**: Delete the current minimum element in Q . It's guaranteed that Q is not empty.

After all the operations are done, Gellyfish wants you to foretell the expected product of all the remaining elements in Q , taking modulo 998244353.

输入描述:

Each test contains multiple test cases. The first line contains the number of test cases t ($1 \leq t \leq 200$). The description of the test cases follows.

The first line of each test case contains two integers m and v ($1 \leq m \leq 500, 1 \leq v \leq 500$).

Then m lines follow; the i -th contains one or three integers, denoting an operation. If the operation is an insertion, then there will be three integers $o = 1, l, r$ ($1 \leq l \leq r \leq v$), separated by space; if the operation is an extraction, then the input line consists of a single integer $o = 2$.

It is guaranteed that the sum of m over all test cases does not exceed 2000. It's also guaranteed that the priority queue is not empty when performing an extraction operation.

输出描述:

For each test case, output a single line containing an integer: the expected product of all the remaining elements in the priority queue, modulo 998244353.

示例1

输入

复制

```
5
2 1
1 1 1
2
```

运行结果 自测数据