

Problem 4. Majority Queries (Large)

Time limit: 1 second
Memory limit: 256 megabytes

This is the same as the previous problem except that the string S of As and Bs can have length up to 100,000, and the number of queries can be up to 100,000. The time limit is still 1 second.

Example

standard input	standard output
1 1 B 0 0	B Wins