Problem 3. Majority Queries (Small)

Time limit: 1 second
Memory limit: 256 megabytes

You're given a string S of length n consisting of As and Bs. You are then asked to answer several queries about the contents of the string.

The queries are of the form (i, j) with $0 \leq i \leq j < n$. Each query represents a substring of S from index i to index j (inclusive). Your task is to determine which character occurs more within the substring given by each query.

Note that zero-based indexing is used in S. So the first character of S is denoted $S[0]$ and the last one is $S[n-1]$.

Input

The first line contains n, q, $(1 \leq n, q \leq 100)$, the length of the string, and the number of queries. The next line contains the string S. Then the next q lines each contain two integers, i, j, $(0 \leq i \leq j < n)$, the query points.

Output

Output n lines. On each line, for the corresponding query, if there were more As than Bs, output "A Wins". If there were an equal number As and Bs, output "Tie". If there were more Bs than As then output "B Wins".

Examples

standard input	standard output
5 4 ABBAA 1 2 3 4 1 4 1 3	B Wins A Wins Tie B Wins
10 2 BABAABBBAB 2 7 2 3	B Wins Tie