**INPUT FORMAT:**

Input file will be named ‘input.txt’

Input file will have the following format

<NQ = NUMBER OF QUERIES>

<QUERY 1>

….

….

<QUERY NQ>

<NS = NUMBER OF GIVEN SENTENCES IN THE KNOWLEDGE BASE>

<SENTENCE 1>

…

…

<SENTENCE NS>

• Each query will be a single literal of the form Predicate(Constant) or ~Predicate(Constant).

• Variables are all single lowercase letters.

• All predicates (such as Sibling) and constants (such as John) are case-sensitive alphabetical strings that begin with an uppercase letter.

• Each predicate takes at least one argument. Predicates will take at most 100 arguments. A given predicate name will not appear with different number of arguments.

• There will be at most 100 queries and 1000 sentences in the knowledge base.

• See the sample input for spacing patterns.

• There are no syntax errors in the given input.

• All variables are assumed to be universally quantified. This program does not handle existential quantifiers.

• Given knowledge base is assumed to be consistent.

**OUTPUT FORMAT:**

<ANSWER 1>

…

<ANSWER NQ>

Where each answer is ‘TRUE’ if we can prove the corresponding query from given KB and ‘FALSE’ otherwise.