Write a program in any language of your choice to perform LL(1) Parsing. Your program should prompt the user to enter a filename. The file contains a grammar (which need not be an LL(1) grammar) in a format that is defined below. Your program then goes to an infinite loop, prompting the user each time to enter an input string (choose some special string to terminate). And for each of these strings that the user enters, your program must report whether or not this string is parsed successfully.

The format of the file containing the grammar is as follows:

The first line is a tab-separated list of non-terminals of this grammar

The second line is a tab-separated list of the terminals of this grammar

The third line indicates which is the start symbol

The fourth line is a blank line

From the fifth line onwards, each production of the grammar is indicated.

An example file could look like follows:

A B T

a b

A

A -> abT

T -> B | Ba

B -> b

Do note that there could be any number of whitespaces between the pipe symbols (|) used for alternation in the grammar. The whitespaces should be ignored.