LAB 5

The following KB and Questions are given:
KB:
   -If patient has cough and patient has infection then patient has pneumonia.
   -If temperature is more than 38 then patient has fever.
   -If patient was sick for at least 2 days and patient has fever then patient has infection.

Questions:
   -What is patient temperature? (answer is a number)
   -For how many days has the patient been sick? (answer is a number)
   -Has patient cough? (answer is yes/no)

1. The program interface should address the questions to the user. Based on the answers, the system will know whether or not the patient has cough, the temperature is more than 38 and patient was sick for at least 2 days.

2. The knowledge must be expressed as positive Horn propositional clauses, in the form [[n(w), s, n(p)], [a, n(w), n(r), n(t)], [q]]. With n(p) the negation of p was noted (this is provided just for example).

3. Only the user's answers will be given at the console; the KB expressed as a list of lists is read from a file.

4. Based on KB and the answers provided by the user, the system should say whether or not "patient has pneumonia" can be logically entailed. The output (of both reasoning algorithms) is written on the console.

5. The reasoning mechanisms are the backward chaining and forward chaining algorithms. Both procedures will be implemented in the versions presented at the course (from Ronald Brachman, Hector Levesque. Knowledge representation and reasoning, Morgan Kaufmann 2004).

6. The program should run (that means asking for user's answers and providing the output) repeatedly until "stop" is written in the console.

The program will be presented during Lab 7. For 10, the implementation will be done in PROLOG. If you use another programming language, the maximum mark will be 8. This grade will be the first grade (out of two) for the second project.
!!! THE CODE WILL HAVE NO COMMENTS AT ALL. A program with any comments included will not be considered at all.
If the student has no idea about the implementation, the program will not be considered at all.

2p the language
1p getting the user's answers and expressing knowledge as required at 2 and 3
1p for the versions required at 5
2p the program running for different answers from the user
4p explanations of the code that implements the problem

If only one chaining algorithm is implemented, you get half of the points for the last 3 items.