LAB 6

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 has muscle pain and patient has fever then patient has flu.
- -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 muscle pain? (answer is yes/no)
- -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, the patient was sick for at least 2 days and the patient has muscle pain.

2. The knowledge must be expressed as rules in a production system. The rules and the goal "patient has pneumonia" are read from the same file, but the user's answers will be given at the console. Elements of the working memory (WM) will be represented in whatever format you choose. But to represent a rule, you will use the following format:

   If a and b and c then d ==== [[a,b,c],[d]]

3. Based on the KB and the answers provided by the user, the production system should say whether or not the goal is satisfied. The output YES/NO is written at the console.

4. The production system will be implemented in the version presented at the course (from Ronald Brachman, Hector Levesque. Knowledge representation and reasoning, Morgan Kaufmann 2004).

5. Conflicts (if any) are solved by a strategy (or combination of strategies) that you choose.

6. The initial WM, the WM after receiving the answers to questions and the final WM will be written in a file.

7. 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 second 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
1p for the version required at 4
1p for displaying WM at different steps as required at 6
1p the program running for different answers from the user
4p explanations of the code that implements the problem