Overview:
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The task in this programming assignment is to implement, a knowledge base and an inference engine for the wumpus world. First of all, you have to create a knowledge base (stored as a text file) storing the rules of the wumpus world, i.e., what we know about pits, monsters, breeze, and stench. Second, you have to create an inference engine, that given a knowledge base and a statement determines if, based on the knowledge base, the statement is definitely true, definitely false, or of unknown truth value.

Programming Language :
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Java

Instructions to compile & run the code:
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Compile: Execute following command to compile the code.

javac *.java

Run: Execute following command to run the program.

SYNTAX : java CheckTrueFalse [wumpus-rules-file] [additional-knowledge-file] [input_file]

For e.g. : java CheckTrueFalse wumpus_rules.txt additional_knowledge_file.txt statement.txt

- Argument wumpus_rules.txt specifies the location of a text file containing the wumpus rules, i.e., the rules that are true in any possible wumpus world, as specified above (once again, note that the specifications above are not identical to the ones in the book).
- Argument [additional_knowledge_file] specifies an input file that contains additional information, presumably collected by the agent as it moves from square to square. For example, see additional_knowledge_file.txt.
- Argument [statement_file] specifies an input file that contains a single logical statement. The program should check if, given the information in wumpus_rules.txt and [additional_knowledge_file], the statement in [statement_file] is definitely true, definitely false, or none of the above.

Output:
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Program should create a text file called "result.txt". Depending on what your inference algorithm

determined about the statement being true or false, the output file should contain one of the following four outputs:

- **definitely true**. This should be the output if the knowledge base entails the statement, and the knowledge base does not entail the negation of the statement.
- **definitely false**. This should be the output if the knowledge base entails the negation of the statement, and the knowledge base does not entail the statement.
- **possibly true, possibly false**. This should be the output if the knowledge base entails neither the statement nor the negation of the statement.
- **both true and false**. This should be the output if the knowledge base entails both the statement and the the negation of the statement. This happens when the knowledge base is always false (i.e., when the knowledge base is false for every single row of the truth table).

Note that by "knowledge base" we are referring to the conjunction of all statements contained in wumpus_rules.txt AND in the additional knowledge file.
Also note that the sample code provided below stores the words "result unknown" to the result.txt file. Also, the "both true and false" output should be given when the knowledge base (i.e., the info stored in wumpus_rules.txt AND in the additional knowledge file) entails both the statement from statement_file AND the negation of that statement.

Note:
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- xor connector has code support. But it is not used to write the wumpus rules.