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**LAB 4:** Create a knowledgebase consisting of first order logic statements and prove the given query using forward reasoning.

**Explanation:**

Forward Reasoning:

* The generalised Modus Ponens rule can be used by forward reasoning.
* From the sentences in the KB which in turn derive new conclusions.
* Forward reasoning is preferred when new fact is added to the database and we want to generate its consequences.

Forward Reasoning Algorithm:

* Forward reasoning is triggered by the addition of new fact “p” into the knowledge base (i.e) the action TELL performed.
* If the new fact is a rename of any other existing sentence in the KB then it is not included in KB.
* With the new fact “p” find all premises that had “p” as premise and if any other premise is already known to hold then its consequences is included in KB.
* The important operation of forward reasoning is renaming: One sentence is a renaming of another if, they are identical except for the names of the variables.

