

# INTRO. TO LOGIC & FUNCT. PROG.

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In this assignment, you will write a simplified version of a baby Propositional Prolog interpreter in OCaml.

You will first define an ML data type to represent the structure of a legitimate Prolog program.

- A program is a set (list) of clauses.
- A clause can either be a fact or a rule. A fact has a head but no body. A rule has a head and a body.
- The head is a single atomic formula. A body is a sequence of atomic formulas.
- An atomic formula is a propositional letter.
- A goal is a set (list) of atomic formulas.

You need to use resolution as the parameter-passing mechanism.

You also need to develop a back-tracking strategy to explore the resolution search space. You need to be able to replace a goal by subgoals, as found by body of a program clause whose head resolved with the chosen subgoal.

Try different strategies: Depth first exploration of subgoals (stack); then breadth first exploration of subgoals (queue).

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