Project 2 – Logic Programming: Family Relationship Reasoning

Part 1: Prolog
- Represents a simple family tree using facts (male, female, parent).
- Derives father, mother, sibling, grandparent, and ancestor using rules.
- Uses recursion in the ancestor/2 predicate.

Part 2: Answer Set Programming (ASP)
- Mirrors the Prolog relationships in clingo syntax.
- Adds a choice rule for lives_in_city/1 to create multiple answer sets.
- Includes a #minimize statement over sibling pairs as a simple optimization.

Comparison:
- Prolog uses backward chaining and answers specific queries.
- ASP generates complete stable models (answer sets) and supports optimization and non-monotonic reasoning more naturally.