University of Asia Pacific

Department of Computer Science & Engineering

Artificial Intelligence Lab

CSE 404

Submitted to:

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Section: B1

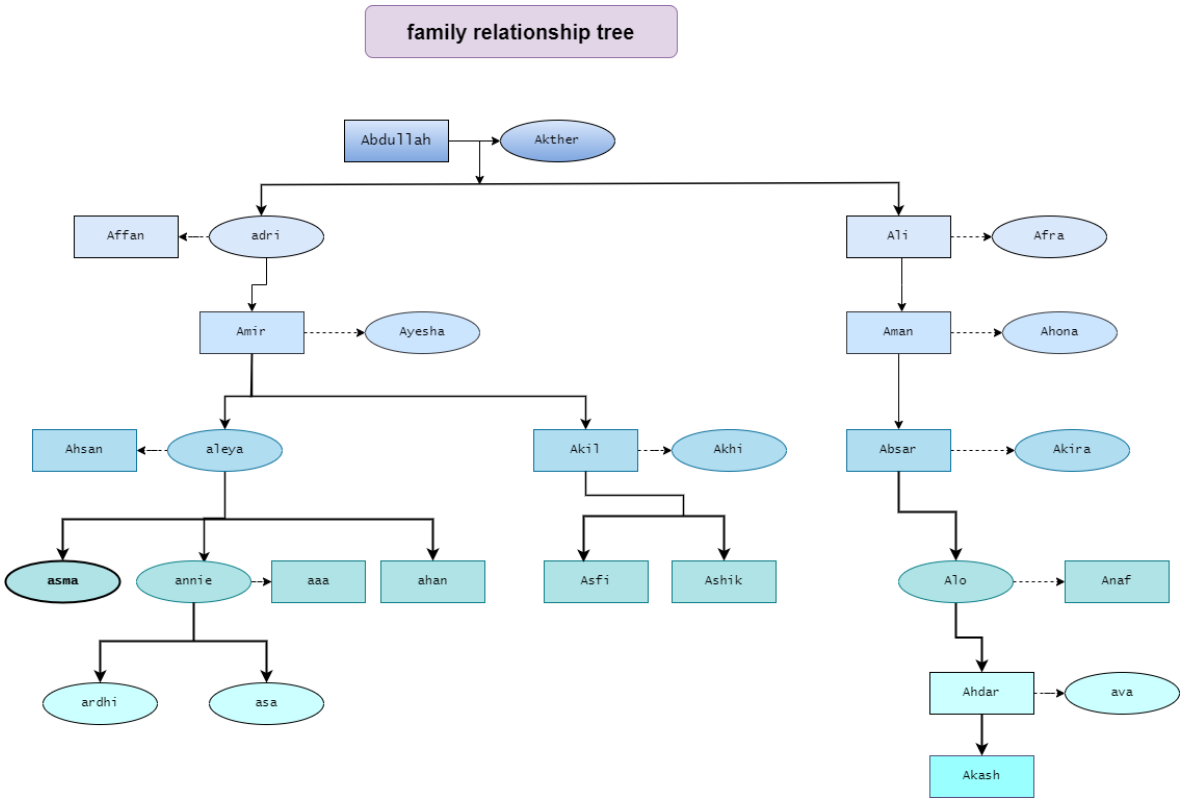
Problem Title:
a family relationship tree structure using Prolog.

Problem Description:
Implement a basic family relationship tree structure of my own family using Prolog. Write rules to determine the degree and removal for up to the 3rd degree and twice removed situations for cousin relationships.

Tools and Languages:

- draw.io for tree diagram
- SWI-Prolog for code
- docs for report
- snipping Tool for input/output screenshot

Diagram:

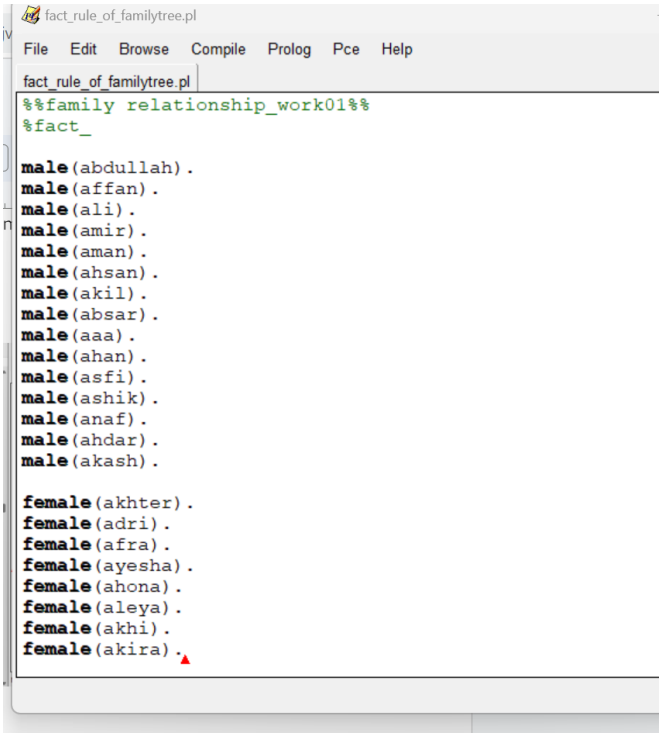


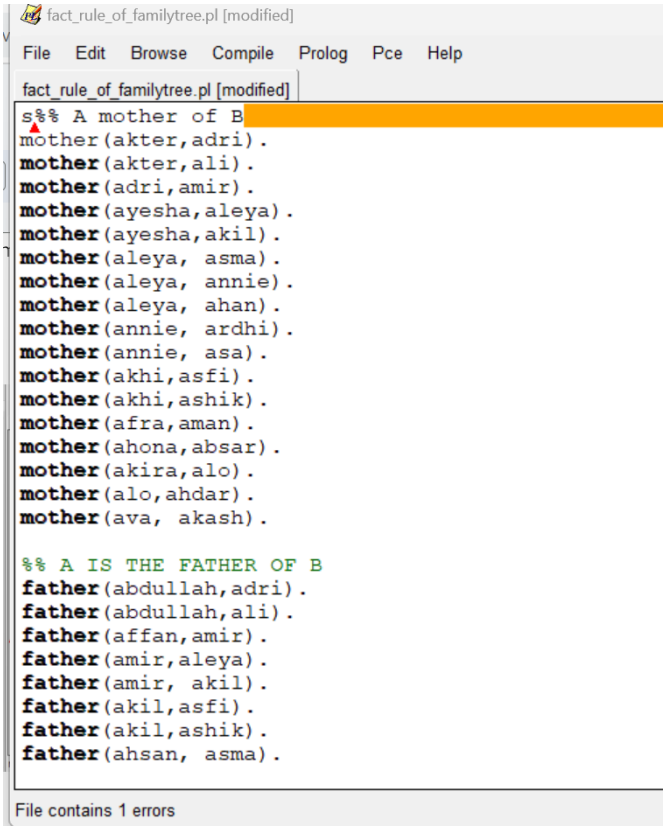
The above diagram is my family relationship tree structure. Now with help of SWI-

Prolog, I remove the first, second, third cousin twice. In the tree, all rectangular boxes represent male entities, and the circle box represents female entities. And the dotted line is parent relationship.

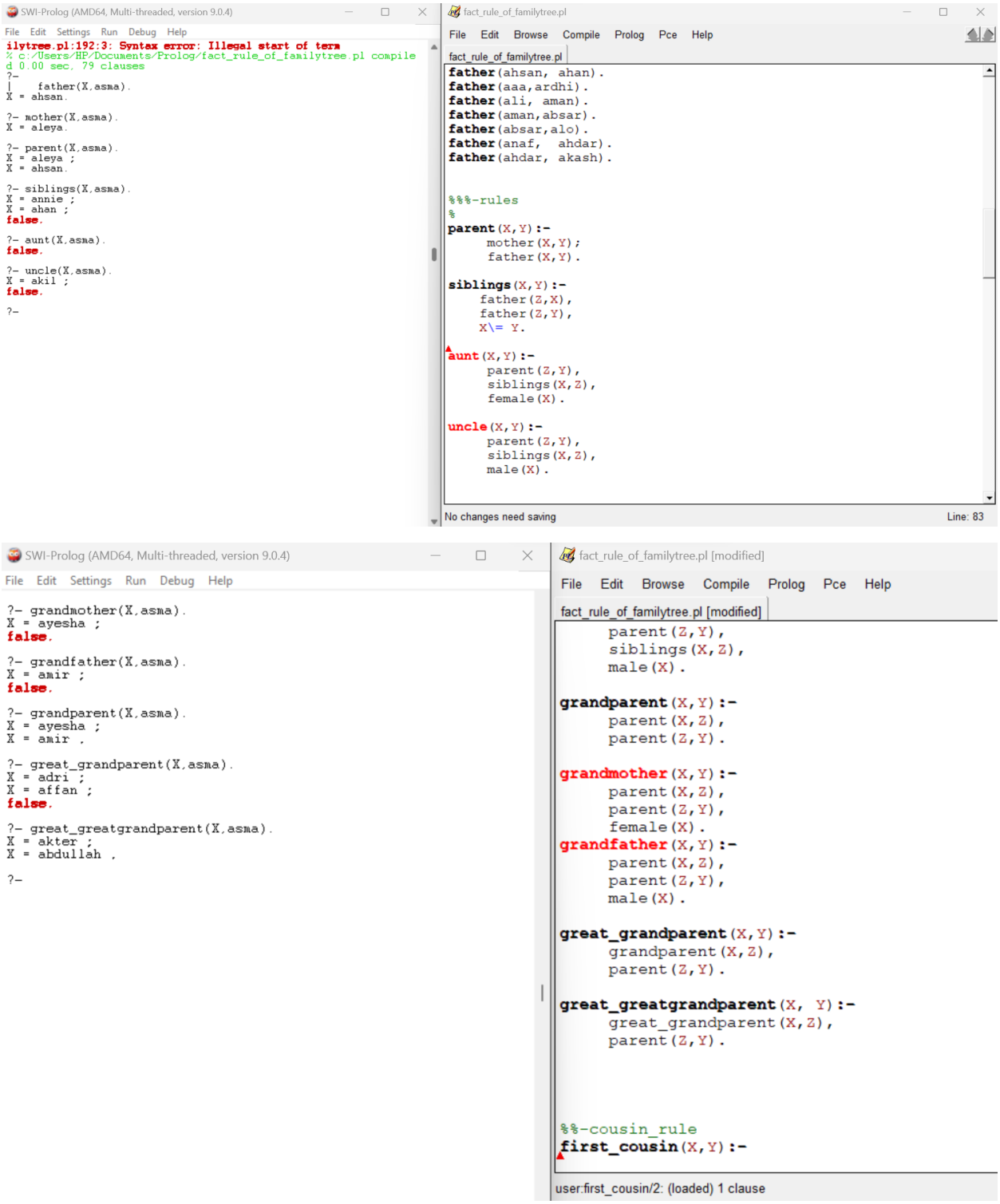
Sample Input / Output:

here is the sample input



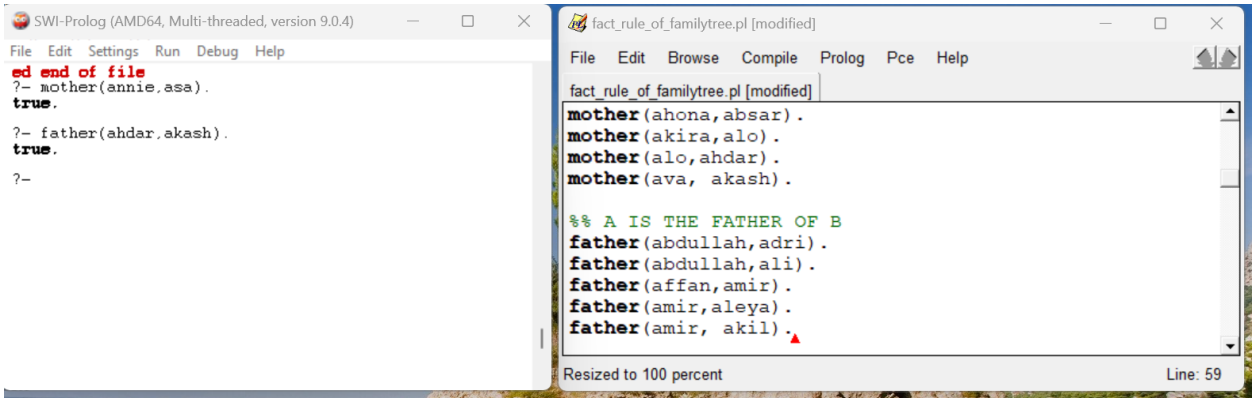


here is the sample output for father, mother, parent,
sibling, uncle, aunt,
grandparent, great-grandparent,
great-great-grandparent,
for an individual person.



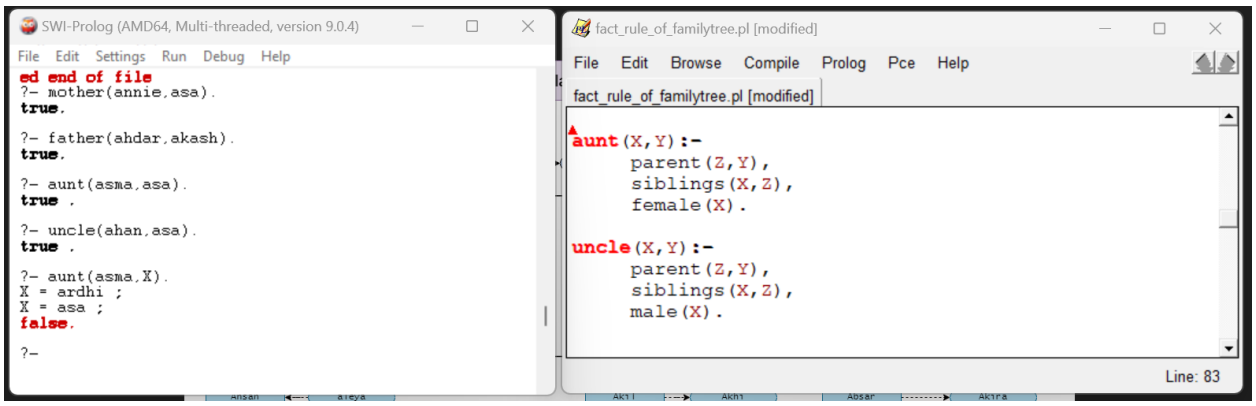
Is X the father of Y?

Is X the mother of Y?

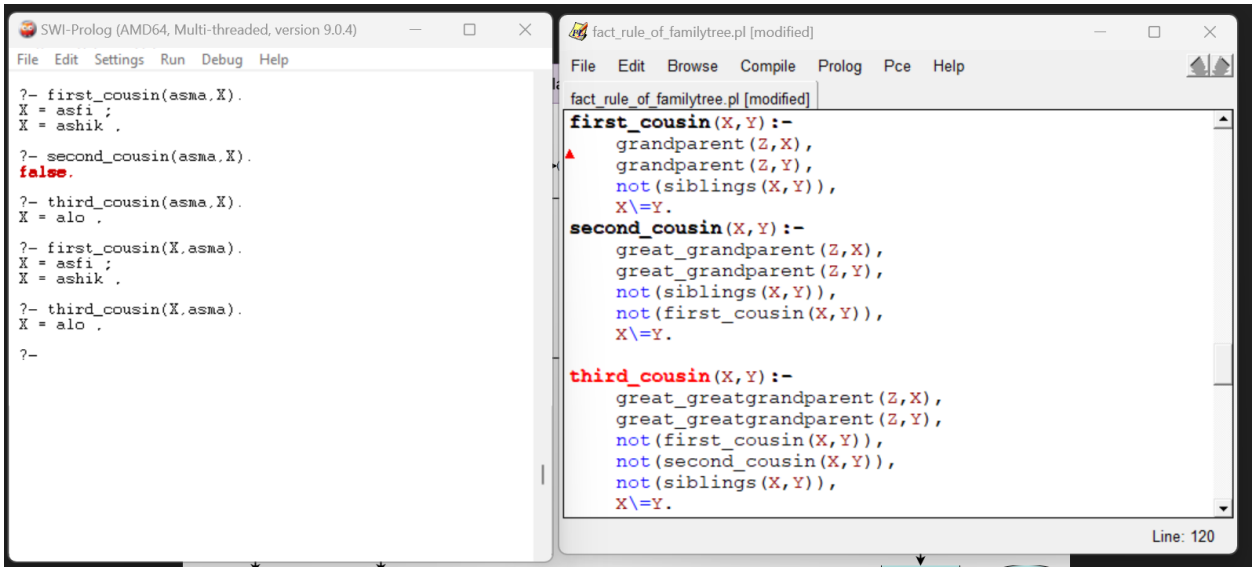


Is X the aunt of Y?

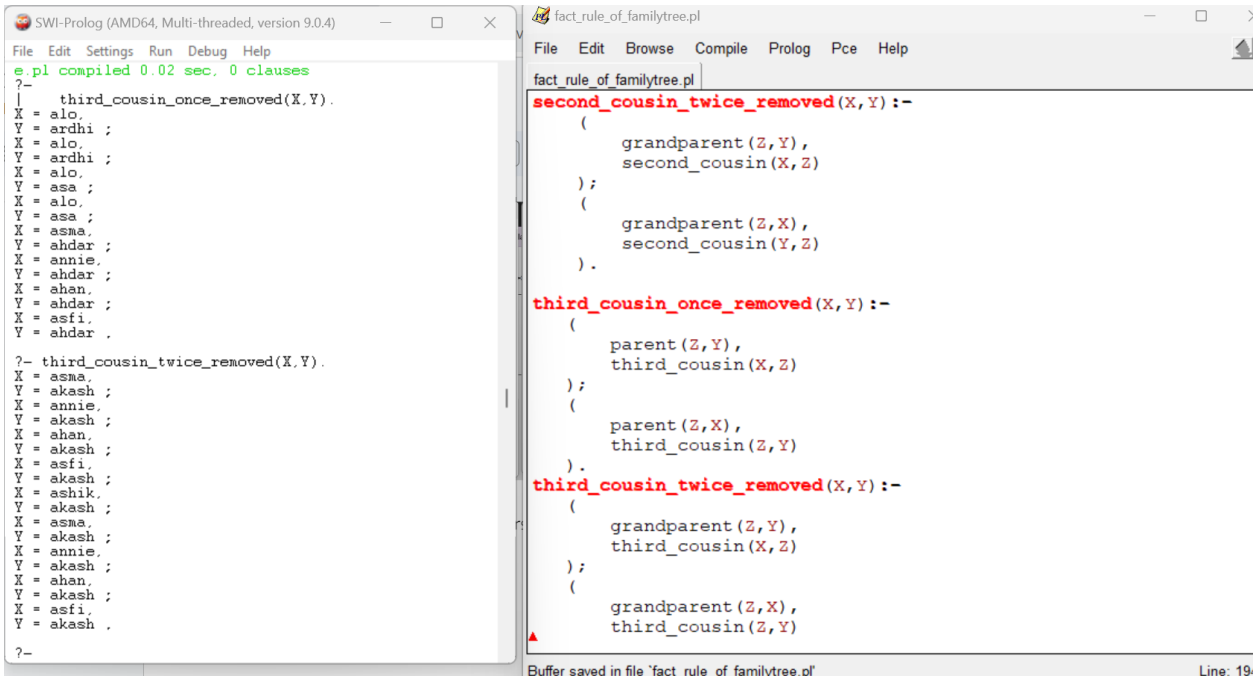
Is X the uncle of Y?



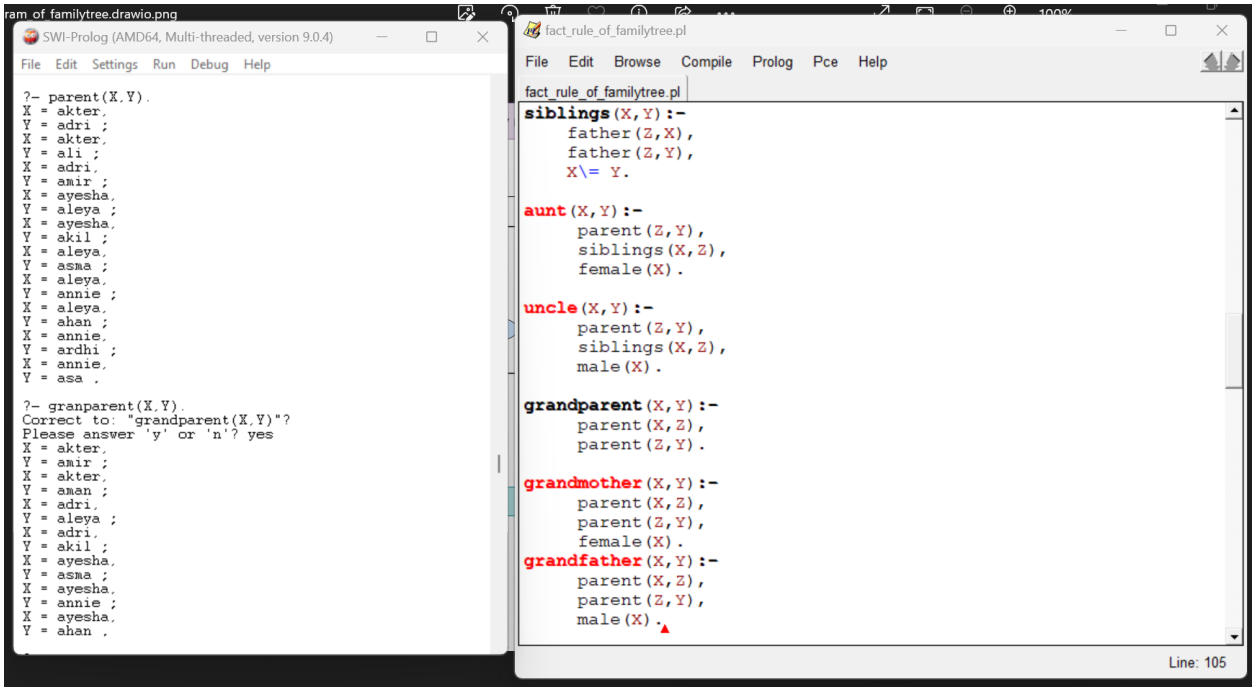
here is the sample input output for first cousin, second cousin, and third cousin for an individual person.

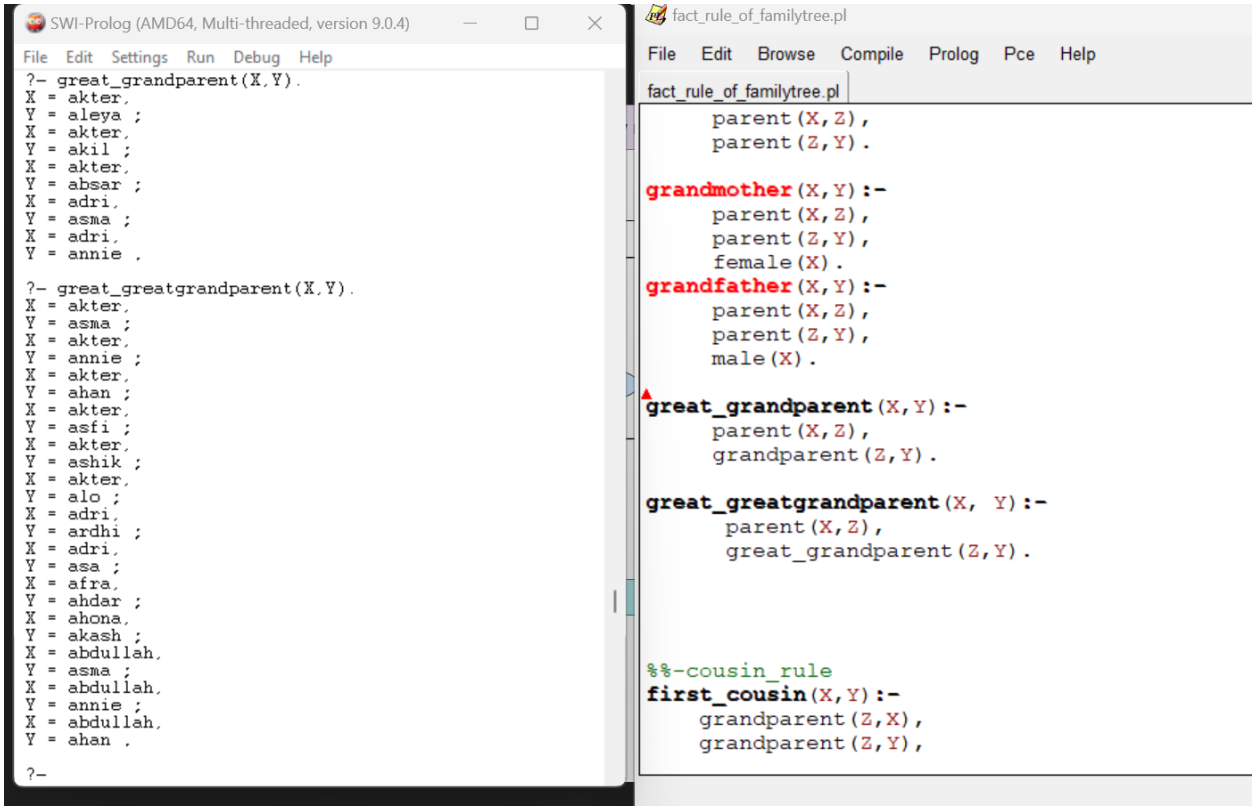


here is the sample input output for first cousin once removed, and first cousin twice removed for an individual person.



Who's relation-





Conclusion and Challenges:

I've faced some minor difficulties during completing this assignment. SWI-Prolog was showing some errors. But after some troubleshooting I was able to fix all the errors of SWI-Prolog.