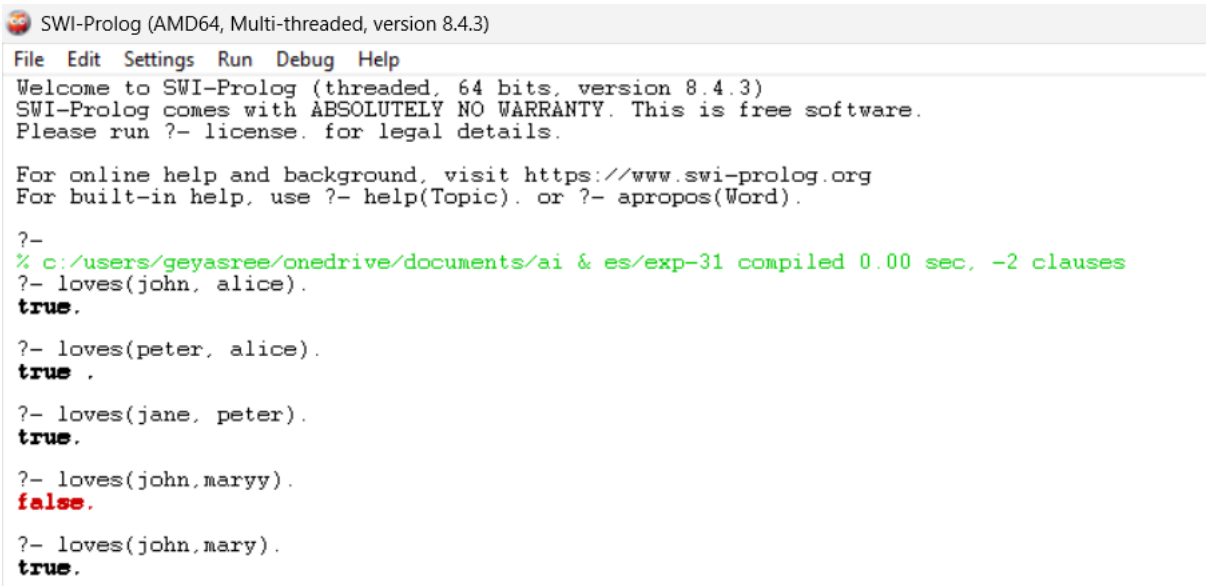
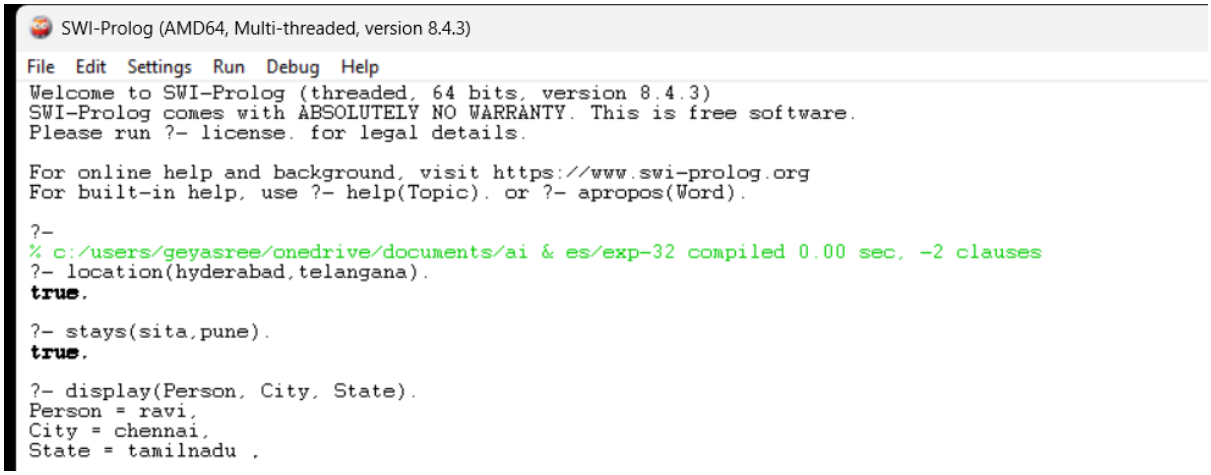
MLA0109 – Artificial Intelligence and Machine Learning

Prolog programs – Day 4

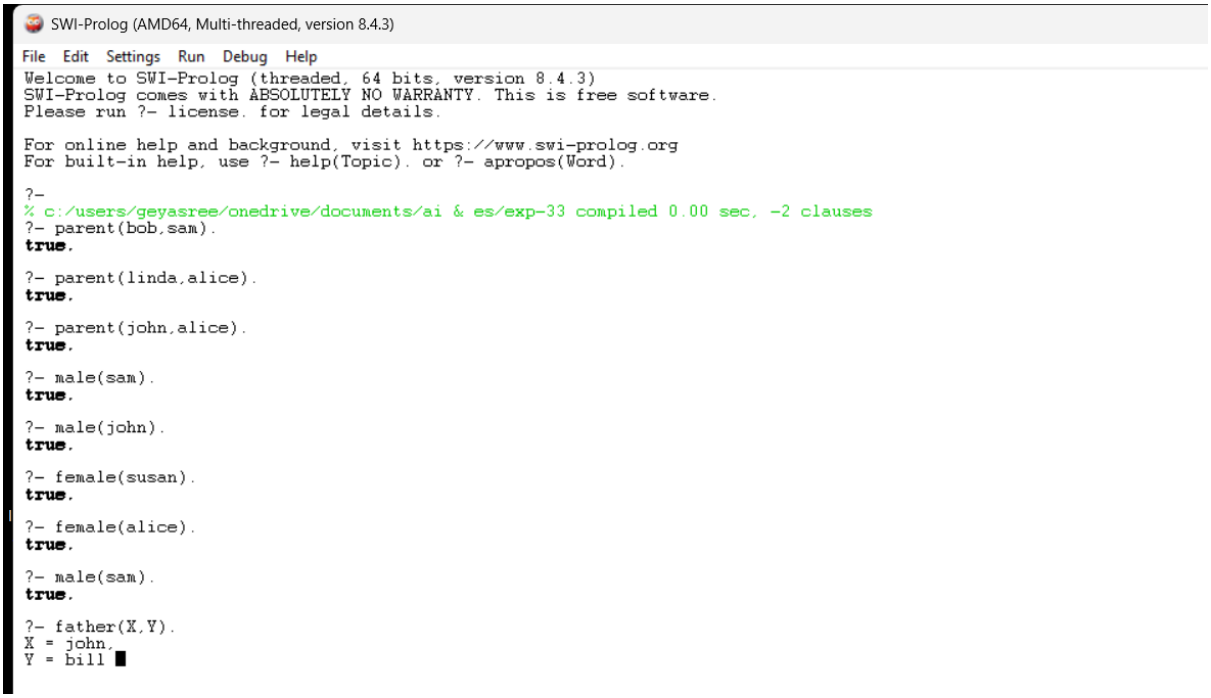
1. **Consider a simple knowledge base describing who loves whom. Define the following relationships in Prolog and write a query to find out who loves someone named "Alice."**
   a) loves(john, mary)
   b) loves(jane, peter)
   c) loves(peter, alice)
   d) loves(john, alice).



2. **Write a Prolog program containing facts related to following predicates**
   a) Location (city, state)
   b) Stays (person, city)
   c) Display: list of persons, state and city
   d) Given person, find the state in which he is staying.



3. **Write a Prolog program that answers bout family members and relationships. Include predicates & clauses which defines sister, brother, father, mother, Grandchild, Grandfather and uncle. The program should be able to answer question such as following :**
   a) Father(X, bob)
   b) Grandson(X,Y)
   c) Uncle (bill, Sue)
   d) Mother (marry, X).

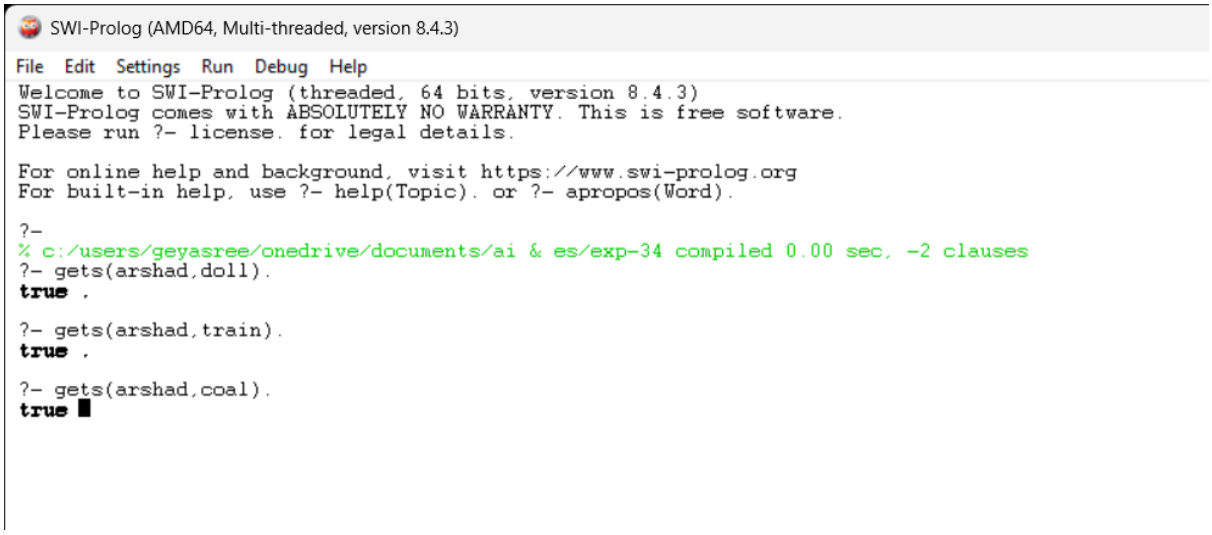


4. **Write simple fact for the statements using PROLOG**

   a) Every boy or girl is a child

   b) Every child gets a doll or a train or a lump of coal

   c) No boy gets any doll

   d) no child who is good gets any lump of coal

   e) Jack is a boy.