EX.NO : 6

PROLOG

AIM:

To develop a family tree program using PROLOG with all possible facts, rules and queries.

SOURCE CODE:

KNOWLEDGE BASE:

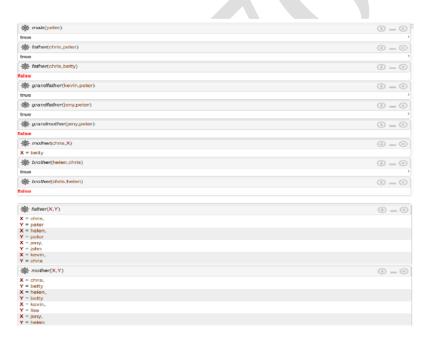
```
/*FACTS :: */
male(peter).
male(john). male(chris).
male(kevin).
female(betty).
female(jeny). female(lisa).
female(helen).
parentOf(chris,peter).
parentOf(chris,betty).
parentOf(helen,peter).
parentOf(helen,betty).
parentOf(kevin,chris).
parentOf(kevin,lisa).
parentOf(jeny,john).
parentOf(jeny,helen).
/*RULES :: */
/* son,parent
* son,grandparent*/
father(X,Y):-male(Y), parentOf(X,Y).
mother(X,Y):- female(Y), parentOf(X,Y).
grandfather(X,Y):-male(Y),
parentOf(X,Z), parentOf(Z,Y).
```

$$\begin{split} & grand mother(X,Y)\text{:- female}(Y), \\ & parentOf(X,Z), \ parentOf(Z,Y). \end{split}$$

brother(X,Y):- male(Y), father(X,Z), father(Y,W), Z==W.

sister(X,Y):- female(Y), father(X,Z), father(Y,W), Z==W.

OUTPUT:





RESULT: Thus the above python code is executed successfully and output is verified.