EX.NO: 6

PROLOG

AIM:

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

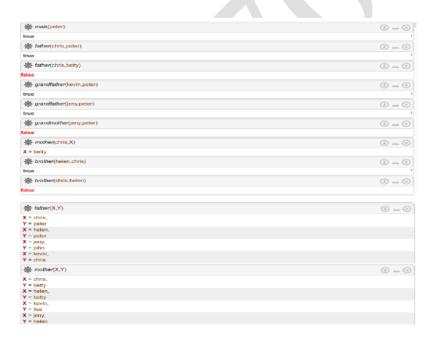
SOURCE CODE:

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} & grandmother(X,Y)\text{:-} female(Y), \\ & parentOf(X,Z), parentOf(Z,Y). \\ & brother(X,Y)\text{:-} male(Y), \\ & father(X,Z), \\ & father(Y,W), Z\text{==}W. \\ & sister(X,Y)\text{:-} female(Y), \\ & father(X,Z), \\ & father(Y,W), Z\text{==}W. \\ \end{split}
```

OUTPUT:







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