

EX: 1

Date:

## 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(jenny).

female(lisa).

female(helen).

ParentOf(chris, peter).

ParentOf(chris, betty).

ParentOf(helen, peter).

ParentOf(helen, betty).

ParentOf(kevin, chris).

ParentOf(kevin, lisa).

ParentOf(jenny, john).

ParentOf(jenny, 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).

grandmother(X,Y):- female(Y),  
ParentOf(X,Z),  
ParentOf(Z,Y).

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

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

~~Output:~~

Result:

that the program of Prolog had been  
executed successfully & output is verified.