EXP NO: 6
Date

# PROLOG

**AIM:**

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

**Code**

```
male (peter)
male (john)
male (chris).
male (kevin)

female (betty)
female (jeny)
female (lisa)
female (helen).

parent of (chris, peter).
parent of (chris, betty)
parent of (helen, peter).
parent of (helen, betty).
parent of (kevin, lisa).
parent of (kevin, chris).
parent of (jeny, john)
parent of (jeny, helen).

/* RULES:: */
/* son, parent
   son, grand parent */
father ( x, y):- male (y),
parent of (x, y)
```

```
grand father (x,y):-male(y),
    parent of (x,z),
    parent of (z,y).

grand mother(x,y):-female(y),
    parent of (x,z),
    parent of (z,y),

brother (x,y):-male(y),
    father(x,z),
    father(y,y).
    z == w.
        sister(x,y):-female(y),
        father(x,z)
        father(x,w),
        z == w.
```

# output

```
?- likes(dan,X).
X = sally.

?- married(dan,sally).
true.

?- married(john,brittney).
false.
```

* male(peter)
true
* father(chris,peter)
true
* father(chris,betty)
false
* grandfather(kevin,peter)
true
* grandfather(jerry,peter)
true
* grandmother(jerry,peter)
false
* mother(chris,X)
X = betty
* brother(helen,chris)
true
* brother(chris,helen)
false

* father(X,Y)
X = chris,
Y = peter
X = helen,
Y = peter
X = jerry,
Y = john
X = kevin,
Y = chris

* mother(X,Y)
X = chris,
Y = betty
X = helen,
Y = betty
X = kevin,
Y = lisa
X = jerry,
Y = helen

* grandmother(X,Y)

X = kevin,
Y = betty
X = jerry,
Y = betty

* grandfather(X,Y)

X = kevin,
Y = peter
X = jerry,
Y = peter

* brother(X,Y)

X = Y, Y = chris
X = helen,
Y = chris
X = Y, Y = kevin

* sister(X,Y)

X = Y, Y = jerry
X = chris,
Y = helen
X = Y, Y = helen

Result :
    Thus the prolog programming using
Python is varified