EX: 12 PROLOG

DATE :

Aim:

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

Program:

```
male (peter)
male (john)
male (chris)
male (kevin)
female ( jeny )
female ( lisa)
female ( helen)
parentof (chris, Peter)
parentof ( chris, betty )
parentof (helen, betty )
parentof (helen, Peter)
Parentof (kevin, chris)
Parentof ( kevin, lisa)
parentof ( jeny, john)
parentof (jeny, helen)
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)
grandmother (x,y) :- female(y),
parentof (x,z),
Parentof (z,y).
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:

male(Peter) - true
father (chris, peter) - true
father (chris, betty) - false
grandfather (kevin, peter) - true
grandfather (jenny, Peter) - true
grandmother (Jenny, Peter) - false.
mother (chris, x) x= helen
brother (helen, chris) - true
brother (chris, helen) - false.
father (x,y)
x= chris,
y= peter,
x= helen
y = peter
x= Jeny
y = John
x = kevin.

emale(y),

ue
se
eter) - true
ter) - true
ter) - false.
betty
- true
- false.

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:

The program for prolog is successfully executed & the output is verified