EX.NO :

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(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).

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(jeny,peter)
true
grandmother(jeny,peter)
false
mother(chris,X)
X = betty
brother(helen,chris)
true
brother(chris,helen)
false

RESULT :

Thus the python code is implemented successfully and output is verified