

EX.NO: 06**PROLOG - FAMILY TREE****AIM:**

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

CODE:The image shows a screenshot of the SWISH Prolog IDE. The window title is "SWISH" with a gear icon. The menu bar includes "File", "Edit", "Examples", and "Help". Below the menu bar, there is a tab labeled "Program" with a plus sign to add more. The main text area contains Prolog code for a family tree. The code defines facts for males (peter, john, chris, kevin) and females (betty, jeny, lisa, helen). It then defines a "parentOf" predicate with facts for each parent-child pair. Finally, it defines rules for "father", "mother", "grandfather", "grandmother", "brother", and "sister" based on the parentOf facts and gender. Line numbers 1 through 26 are visible on the left side of the code editor.

```
1 male(peter).
2 male(john).
3 male(chris).
4 male(kevin).
5
6 female(betty).
7 female(jeny).
8 female(lisa).
9 female(helen).
10
11 parentOf(chris,peter).
12 parentOf(chris,betty).
13 parentOf(helen,peter).
14 parentOf(helen,betty).
15 parentOf(kevin,chris).
16 parentOf(kevin,lisa).
17 parentOf(jeny,john).
18 parentOf(jeny,helen).
19
20 father(X,Y):- male(Y), parentOf(X,Y).
21 mother(X,Y):- female(Y), parentOf(X,Y).
22 grandfather(X,Y):- male(Y),parentOf(X,Z),parentOf(Z,Y).
23 grandmother(X,Y):- female(Y),parentOf(X,Z),parentOf(Z,Y).
24 brother(X,Y):- male(Y), father(X,Z), father(Y,W),Z==W.
25 sister(X,Y):- female(Y), father(X,Z),father(Y,W),Z==W.
26
```

OUTPUT:**GIVING QUERY:**

?- sister(X,Y).

Examples▲ History▲ Solutions▲


☐ table results **Run!**

 *father(X,Y).*

X = chris,

Y = peter

Next 10 100 1,000 Stop

 *mother(X,Y).*

X = chris,

Y = betty

Next 10 100 1,000 Stop

 *sister(X,Y).*

X = Y, **Y** = jeny

Next 10 100 1,000 Stop

RESULT:

Thus, the implementing of family tree program using PROLOG is successfully executed and the output is verified.