Write the prolog program to implement family tree.

AIM

To write a Prolog program to represent a family tree and find relationships like father, mother, and siblings.

ALGORITHM

1. Start the program.
2. Define parent facts to store parent–child relationships.
3. Define male and female facts for gender information.
4. Write rules:
    - father(F, C) if F is male and parent of C.
    - mother(M, C) if M is female and parent of C.
    - sibling(X, Y) if X and Y share a parent and are not the same person.
5. Load the program into Prolog.
6. Query the program to find family relationships.
7. Stop.

```
% Parent facts
parent(john, mary).
parent(john, tom).
parent(mary, alice).
parent(mary, bob).

% Gender facts
male(john). male(tom). male(bob).
female(mary). female(alice).

% Rules
father(F, C) :- parent(F, C), male(F).
mother(M, C) :- parent(M, C), female(M).
sibling(X, Y) :- parent(P, X), parent(P, Y), X \= Y.
```

OUTPUT:

```
?-
% c:/Users/gayathri/Downloads/parent.pl compiled 0.00 sec, 12 clauses
?- father(F, alice).
false.

?- sibling(bob, S).
S = alice .

?- mother(M, bob).
M = mary.

?-  father(F, C).
F = john,
C = mary ;
F = john,
C = tom ;
false.

?- sibling(X, Y).
X = mary,
Y = tom ;
X = tom,
Y = mary ;
X = alice,
Y = bob ;
X = bob,
Y = alice ;
false.

?-
```

RESULT

The program successfully represents a family tree and retrieves information about fathers, mothers, and siblings from the database.