Experiment Name: Write a prolog program to describe the Family relations.

Solution:

%facts

male(jhon).

male(alex).

male(Bbb).

male(pince).

male(jm).

male(tom).

male(ally).

female(mary).

female(ana).

female(pat).

female(pam).

female(liz).

parent(jhon, mary).

parent(mary, alex).

parent(mary, ana).

parent(alex, bob).

parent(ana, jim).

parent(jhon, prince).

parent(prince, pat).

parent(pat, jim).

parent(jim, pam).

parent(jim, tom).

parent(prince, ally).

parent(ally, liz).

%rules

%father

father(X, Y):- male(X), parent(X, Y).

%mother

mother(X, Y):- female(X), parent(X, Y).

%grandfather

grandfather(X, Y):- male(X), parent(X, Z), parent(Z, Y).

%grandmother

grandmother(X, Y):- female(X), parent(X, Z), parent(Z, X).

%sister

sister(X, Y):-

        female(X),

        parent(Z, X),

        parent(Z, Y),

        X \= Y.

%brother

brother(X, Y):-

        male(X),

        parent(Z, X),

```prolog
        parent(Z, Y),
        X \= Y.


%aunty
aunty(X, Y):-
        parent(Z, Y),
        sister(X, Z).


%uncle
uncle(X, Y):-
        parent(Z, Y),
        brother(X, Z).


%cousin
cousin(X, Y):-
        parent(A, X),
        parent(B, Y),
        parent(U, A),
        parent(U, B),
        A \= B.


%predecessor
predecessor(X, Z):-
        parent(X, Z).


predecessor(X, Z):-
        parent(X, Y),
        predecessor(Y, Z).
```