CSE 404 Artificial Intelligence
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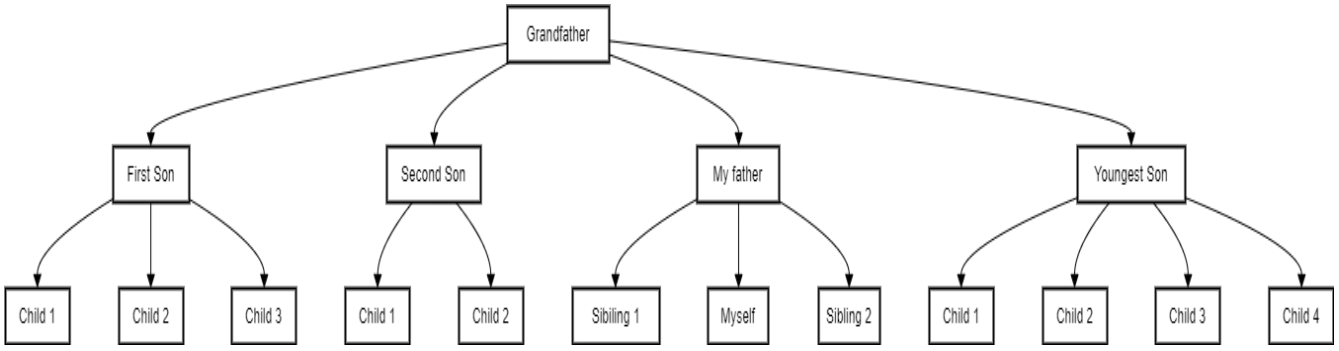
Problem Title-
Family tree using Prolog.

Problem Description-
Implement a basic family relationship tree structure of your own family using Prolog. Write rules to determine the degree and removal for situations up to the 3rd degree and twice removed for cousin relationships.

Tools and Languages used-
VS code,Draw.io

Diagram-



Sample Input-

```
cousin(X,Y) :-
  parent(F1,X),
  parent(F1,Z),
  parent(F2,Y),
  parent(F2,W),
  X \= Y,
  Z \= W,
  F1 \= F2,
  grandfather == F1.

degree_of_cousin(X,Y,N) :-
  cousin(X,Y),
  N is 1.
degree_of_cousin(X,Y,N) :-
  cousin(X,Y),
  parent(Z,X),
  parent(Z,W),
  not(X = W),
  degree_of_cousin(Z,W,N1),
  N is N1 + 1.

removal_of_cousin(X,Y,N) :-
  cousin(X,Y),
  N is 0.
removal_of_cousin(X,Y,N) :-
  cousin(X,Y),
  parent(Z,X),
  parent(Z,W),
  not(X = W),
  removal_of_cousin(Z,W,N1),
  N is N1 + 1.
```

Conclusion and challenges-

I have faced difficulty maintaining the relationship between the cousins in my family.