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| **Experiment 5** | |
| **AIM :** | To design and implement an intelligent system, incorporating the matching algorithm and  the rule language. (family tree & knowledge generation) using Swish Prolog.  1. It should provide a fact base updating function.  2. It should provide a function that checks the rules’ LHS and return which rules were  matched.  3. It should support firing RHS according to matches. |
| **CODE:** | /\* Facts \*/  male(manish).  male(shashikant).  male(mahadev).  male(narayan).  male(subhash).  male(nishant).  female(nivedita).  female(madhuri).  female(mandakini).  female(shrijal).  parent\_of(subhash,nishant).  parent\_of(subhash,shrijal).  parent\_of(shashikant, manish).  parent\_of(nivedita, manish).  parent\_of(narayan,nivedita).  parent\_of(madhuri, nivedita).  parent\_of(mandakini, shashikant).  parent\_of(mahadev, shashikant).  parent\_of(narayan, subhash).  parent\_of(narayan, nivedita).  parent\_of(madhuri, nivedita).  parent\_of(madhuri, subhash).  relation(shashikant, nivedita).  relation(narayan,madhuri).  relation(mahadev,mandakini).  /\* Rules \*/  husband\_of(X,Y):-  female(Y),male(X),relation(X,Y).  wife\_of(X,Y):-  male(Y),female(X),relation(Y,X).  father\_of(X,Y):- male(X),  parent\_of(X,Y).  mother\_of(X,Y):- female(X),  parent\_of(X,Y).  grandfather\_of(X,Y):- male(X),  parent\_of(X,Z),  parent\_of(Z,Y).  grandmother\_of(X,Y):- female(X),  parent\_of(X,Z),  parent\_of(Z,Y).  sister\_of(X,Y):- %(X,Y or Y,X)%  female(X),  father\_of(F, Y), father\_of(F,X),X \= Y.  sister\_of(X,Y):- female(X),  mother\_of(M, Y), mother\_of(M,X),X \= Y.  aunt\_of(X,Y):- female(X),  parent\_of(Z,Y), sister\_of(Z,X),!.  brother\_of(X,Y):- %(X,Y or Y,X)%  male(X),  father\_of(F, Y), father\_of(F,X),X \= Y.  brother\_of(X,Y):- male(X),  mother\_of(M, Y), mother\_of(M,X),X \= Y.  uncle\_of(X,Y):-  parent\_of(Z,Y), brother\_of(Z,X).  ancestor\_of(X,Y):- parent\_of(X,Y).  ancestor\_of(X,Y):- parent\_of(X,Z),  ancestor\_of(Z,Y). |
| **Output:** |  |
| **Output:** |  |
| **CONCLUSION:** | Hence by completing this experiment I came to know about implement an intelligent system, incorporating the matching algorithm and  the rule language. (family tree & knowledge generation) using Swish Prolog. |