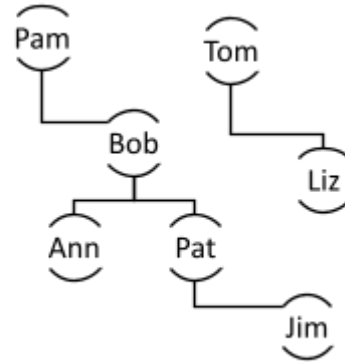


Define following facts as the relation of "Parent"

- 1) Tom is a parent of Bob
- 2) Pam is a parent of Bob
- 3) Tom is a parent of Liz
- 4) Bob is a parent of Ann
- 5) Bob is a parent of Pat
- 6) Pat is a parent of Jim



Define following facts as the relation
male and female

of

Female->Pam, Liz, Pat, Ann

Male->Tom, Bob, Jim

- 7) Define the relation mother using parent and female.
- 8) Define the relation father using parent and male.
- 9) Define the relation sister using parent and female.
- 10) Define the relation brother using parent and male.
- 11) Define the relation grandparent using parent.
- 12) Define the relation grandfather using parent and male.
- 13) Define the relation grandmother using parent and female.
- 14) Define the relation grandchild using parent.
- 15) Define the relation grandson using parent and male.
- 16) Define the relation granddaughter using parent and female.
- 17) Everybody who has a child is happy.
- 18) For all X , if X has a child who has a sister then X has 2 children
- 19) Define the relation aunt(X,Y) in terms of the relations parent and sister.
- 20) Define the relation uncle using the appropriate relations.

*Rules – Rules are extensions of facts that contain conditional clauses.

To satisfy a rule these conditions should be met.

Define corresponding rules

/*symbol (:-) will be pronounced as “If”, or “is implied by”.

Known as neck symbol, the LHS of this symbol is called the Head, and right-hand side is called Body.

*/

Siblings

sibling(X,Y): X and Y have the same parent and X != Y.

CONJOINED GOAL ("AND") => use comma (,)

DISJOINT GOALS ("OR") => semicolon; |

NEGATIVE GOALS (NOT) => \