parent(john, mary).

parent(john, tom).

parent(mary, ann).

parent(mary, fred).

parent(tom, liz).

male(john).

male(tom).

male(fred).

female(mary).

female(ann).

female(liz).

parent(Parent, Child) :-parent(Parent, Child),!.

checkparent(Parent, Child) :-parent(Parent, Child),!.

sibling(Sibling1, Sibling2):-

    parent(X,Sibling1),

    parent(X,Sibling2),

    Sibling1/=Sibling2.

grandparent(Grandparent, Grandchild):-

    parent(X,Grandchild),

    parent(Grandparent, X).

ancestor(Ancestor, Descendant):-

    parent(Ancestor, Descendant);

ancestor(Ancestor, Descendant):-

    parent(X, Descendant),

    ancestor(Ancestor, X).

pet(fido, dog, 3).

pet(spot, dog, 5).

pet(mittens, cat, 2).

pet(tweety, bird, 1).

male(fido).

male(spot).

female(mittens).

pet(Name, Species, Age):-pet(Name, Species, Age),!.

checkpet(Name, Species, Age):-pet(Name, Species, Age),!.

species(Species,Count):-

findall(Nname,pet(Nname,Species,\_),X),

length(X, Count).

age\_range(MinAge, MaxAge, Count) :-

findall(Name,

(pet(Name,\_,Age),Age>=MinAge,Age =<MaxAge),

X),

length(X, Count).

even(0):-!.

odd(N):-N>0,

M is N-1,

even(M).

even(N) :-N>0,

M is N-1,

odd(M ).

sum\_odd\_numbers(List,Sum):-

findall(X,(member(X,List), odd(X)),Result),

sum(Result,Sum).

sum([],0).

sum([X|T],Sum):-

sum\_odd\_numbers(T,Left),

Sum is X+Left.