go:- animal(Catagories),

write('this animal grouped in: '),

write(Catagories),

nl,

undo.

%animal that should be tested

animal(fish):- fish, !.

animal(mammal):- mammal, !.

animal(amphibians):- amphibians, !.

animal(birds):- birds, !.

animal(insects):-insects,!.

animal(reptiles):-reptiles,!.

animal(unknown). /\* no diagnosis\*/

%animal Identification Rules

fish :-

characterstics(live\_in\_water),

characterstics(they\_are\_vertebrates),

characterstics(breathe\_using\_gills),

characterstics(cold-blooded).

mammal:-

characterstics(have\_hair\_on\_their\_bodies),

characterstics(they\_are\_vertebrates),

characterstics(produce\_milk\_to\_feed\_their\_babies),

characterstics(warm-blooded).

amphibians:-

characterstics(go\_through\_metamorphosis),

characterstics(they\_are\_vertebrates),

characterstics(breathe\_using\_skin),

characterstics(cold-blooded).

birds :-

characterstics(lay\_eggs\_with\_hard\_and\_waterproof\_shells),

characterstics(they\_are\_vertebrates),

characterstics(have\_feathers),

characterstics(warm-blooded).

insects :-

characterstics(have\_two\_antennae\_and\_six\_legs),

characterstics(they\_are\_invertebrates),

characterstics(hatch\_from\_eggs),

characterstics(have\_a\_body\_divided\_into\_three\_parts).

reptiles:-

characterstics(they\_are\_vertebrates),

characterstics(breathe\_using\_lungs),

characterstics(cold-blooded).

/\* how to ask questions \*/

ask(Question) :-

write('Does the animals have the following characterstics: '),

write(Question),

write('? '),

read(Response),

nl,

( (Response == yes ; Response == y)

->

assert(yes(Question)) ;

assert(no(Question)), fail).

:- dynamic yes/1,no/1.

/\* How to verify something \*/

characterstics(S) :- (yes(S) -> true ;

(no(S) -> fail ;

ask(S))).

/\* undo all yes/no assertions \*/

undo :- retract(yes(\_)),fail.

undo :- retract(no(\_)),fail.

undo.