go :-

write('What is the patient''s name? '),

read(Patient),get\_single\_char(Code),

hypothesis(Patient,Disease),

write\_list([Patient,', probably has ',Disease,'.']),nl.

go :-

write('Sorry, I don''t seem to be able to'),nl,

write('diagnose the disease.'),nl.

symptom(Patient,fever) :-

verify(Patient," have a fever (y/n) ?").

symptom(Patient,rash) :-

verify(Patient," have a rash (y/n) ?").

symptom(Patient,headache) :-

verify(Patient," have a headache (y/n) ?").

symptom(Patient,runny\_nose) :-

verify(Patient," have a runny\_nose (y/n) ?").

symptom(Patient,conjunctivitis) :-

verify(Patient," have a conjunctivitis (y/n) ?").

symptom(Patient,cough) :-

verify(Patient," have a cough (y/n) ?").

symptom(Patient,body\_ache) :-

verify(Patient," have a body\_ache (y/n) ?").

symptom(Patient,chills) :-

verify(Patient," have a chills (y/n) ?").

symptom(Patient,sore\_throat) :-

verify(Patient," have a sore\_throat (y/n) ?").

symptom(Patient,sneezing) :-

verify(Patient," have a sneezing (y/n) ?").

symptom(Patient,swollen\_glands) :-

verify(Patient," have a swollen\_glands (y/n) ?").

ask(Patient,Question) :-

write(Patient),write(', do you'),write(Question),

read(N),

( (N == yes ; N == y)

->

assert(yes(Question)) ;

assert(no(Question)), fail).

:- dynamic yes/1,no/1.

verify(P,S) :-

(yes(S) -> true ;

(no(S) -> fail ;

ask(P,S))).

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

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

undo.

hypothesis(Patient,german\_measles) :-

symptom(Patient,fever),

symptom(Patient,headache),

symptom(Patient,runny\_nose),

symptom(Patient,rash).

hypothesis(Patient,common\_cold) :-

symptom(Patient,headache),

symptom(Patient,sneezing),

symptom(Patient,sore\_throat),

symptom(Patient,runny\_nose),

symptom(Patient,chills).

hypothesis(Patient,measles) :-

symptom(Patient,cough),

symptom(Patient,sneezing),

symptom(Patient,runny\_nose).

hypothesis(Patient,flu) :-

symptom(Patient,fever),

symptom(Patient,headache),

symptom(Patient,body\_ache),

symptom(Patient,conjunctivitis),

symptom(Patient,chills),

symptom(Patient,sore\_throat),

symptom(Patient,runny\_nose),

symptom(Patient,cough).

hypothesis(Patient,mumps) :-

symptom(Patient,fever),

symptom(Patient,swollen\_glands).

hypothesis(Patient,chicken\_pox) :-

symptom(Patient,fever),

symptom(Patient,chills),

symptom(Patient,body\_ache),

symptom(Patient,rash).

write\_list([]).

write\_list([Term| Terms]) :-

write(Term),

write\_list(Terms).

response(Reply) :-

get\_single\_char(Code),

put\_code(Code), nl,

char\_code(Reply, Code).