

`:- style_check(-singleton).`

`:-dynamic answer/1.`

`question1):-`

`write('What is patient temperature? (answer is a number)'),read(Inp),
 (Inp = 'stop',abort,!,Inp>38,assertz(answer([temperature])),!,!).`

`question2):-`

`write('For how many days has the patient been sick? (answer is a number)'),read(Inp),
 (Inp = 'stop',abort,!,Inp>=2,assertz(answer([sick])),!,!).`

`question3):-`

`write('Has patient cough? (answer is yes/no)'),read(Inp),
 (Inp = 'stop',abort,!,Inp = 'yes',assertz(answer([cough])),!,!).`

`questions(Out):- question1(),question2(),question3(),findall(X,answer(X),Out).`

`read_file(X):-`

`seeing(OldStream),see('C:/Users/Sandu/Desktop/input5.txt'),
 read(X),read(end_of_file),
 seen,see(OldStream).`

`negate(n(A), A) :- !.`

`negate(A, n(A)).`

`negate_all([],R,R).`

`negate_all([H|T],R,R1):-negate(H,P),negate_all(T,[P|R],R1).`

`member_all([],R).`

`member_all([H|T],R):-member(H,R),member_all(T,R).`

`backchaining([],_):-write('backchaining: Pacient has pneumonia'),nl,!.
backchaining([H|T],Kb):-`

`member(R,Kb),member(H,R),
 delete(R,H,R1),
 negate_all(R1,[],R2),
 append(R2,T,R3),
 backchaining(R3,Kb).`

`forwardchaining(G,S,Kb):-member(pneumonia,S),write('forwardchaining: Pacient has pneumonia'),nl,!.
forwardchaining(G,S,Kb):-`

`member(R,Kb),member(H,R),
 delete(R,H,R1),
 negate_all(R1,[],R2),
 member_all(R2,S),
 \+member(H,S),
 append([H],S,S1),
 forwardchaining(G,S1,Kb).`

`solve):- read_file(F), questions(A), append(F,A,Kb),flatten(A,S),
 (backchaining([pneumonia],Kb),!,write('backchaining: Pacient DOESNT have pneumonia'),nl),
 (forwardchaining(pneumonia,S,Kb),!,write('forwardchaining: Pacient DOESNT have pneumonia'),nl),nl,`

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retractall(answer(_)),  
solve.
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