% Facts: Symptoms of diseases

symptom(flu, fever).

symptom(flu, cough).

symptom(flu, sore\_throat).

symptom(flu, body\_ache).

symptom(cold, sneezing).

symptom(cold, runny\_nose).

symptom(cold, cough).

symptom(covid19, fever).

symptom(covid19, cough).

symptom(covid19, loss\_of\_taste).

symptom(covid19, shortness\_of\_breath).

symptom(malaria, fever).

symptom(malaria, chills).

symptom(malaria, sweating).

symptom(typhoid, fever).

symptom(typhoid, abdominal\_pain).

symptom(typhoid, weakness).

% Rule: Check if all symptoms for a disease match user symptoms

has\_disease(Disease) :-

symptom(Disease, Symptom),

\+ not(has(Symptom)), % Ensure the symptom is present (not marked as absent)

fail.

has\_disease(Disease) :-

forall(symptom(Disease, Symptom), has(Symptom)).

% Sample user symptom facts (simulate input)

% You can uncomment/edit these based on test scenario

% has(fever).

% has(cough).

% has(loss\_of\_taste).

% Main diagnosis rule

diagnose :-

has\_disease(Disease),

format('Diagnosis: You may have ~w.~n', [Disease]),

fail.

diagnose :-

write('Diagnosis complete.').

output

has(fever).

has(cough).

has(loss\_of\_taste).