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Class : TY CS D

Roll No: 14

Topic : **Implementation of an EXPERT SYSTEM using PROLOG**

facts.pl

% Facts about symptoms

has\_symptom(john, fever).

has\_symptom(john, cough).

has\_symptom(mary, headache).

has\_symptom(mary, fever).

% Facts about possible diagnoses

possible\_diagnosis(fever, flu).

possible\_diagnosis(cough, cold).

possible\_diagnosis(headache, stress).

rules.pl

% Rule: If a person has a symptom and there is a possible diagnosis for that symptom, then the person may have that diagnosis.

has\_diagnosis(Person, Diagnosis) :-

has\_symptom(Person, Symptom),

possible\_diagnosis(Symptom, Diagnosis).

% Rule: A person may have a serious condition if they have multiple symptoms.

has\_serious\_condition(Person) :-

has\_symptom(Person, Symptom1),

has\_symptom(Person, Symptom2),

Symptom1 \= Symptom2.

% Rule: Suggest lifestyle changes for stress-related diagnoses.

suggest\_lifestyle\_change(Person) :-

has\_diagnosis(Person, Diagnosis),

Diagnosis == stress,

write('Consider reducing stress through lifestyle changes.').

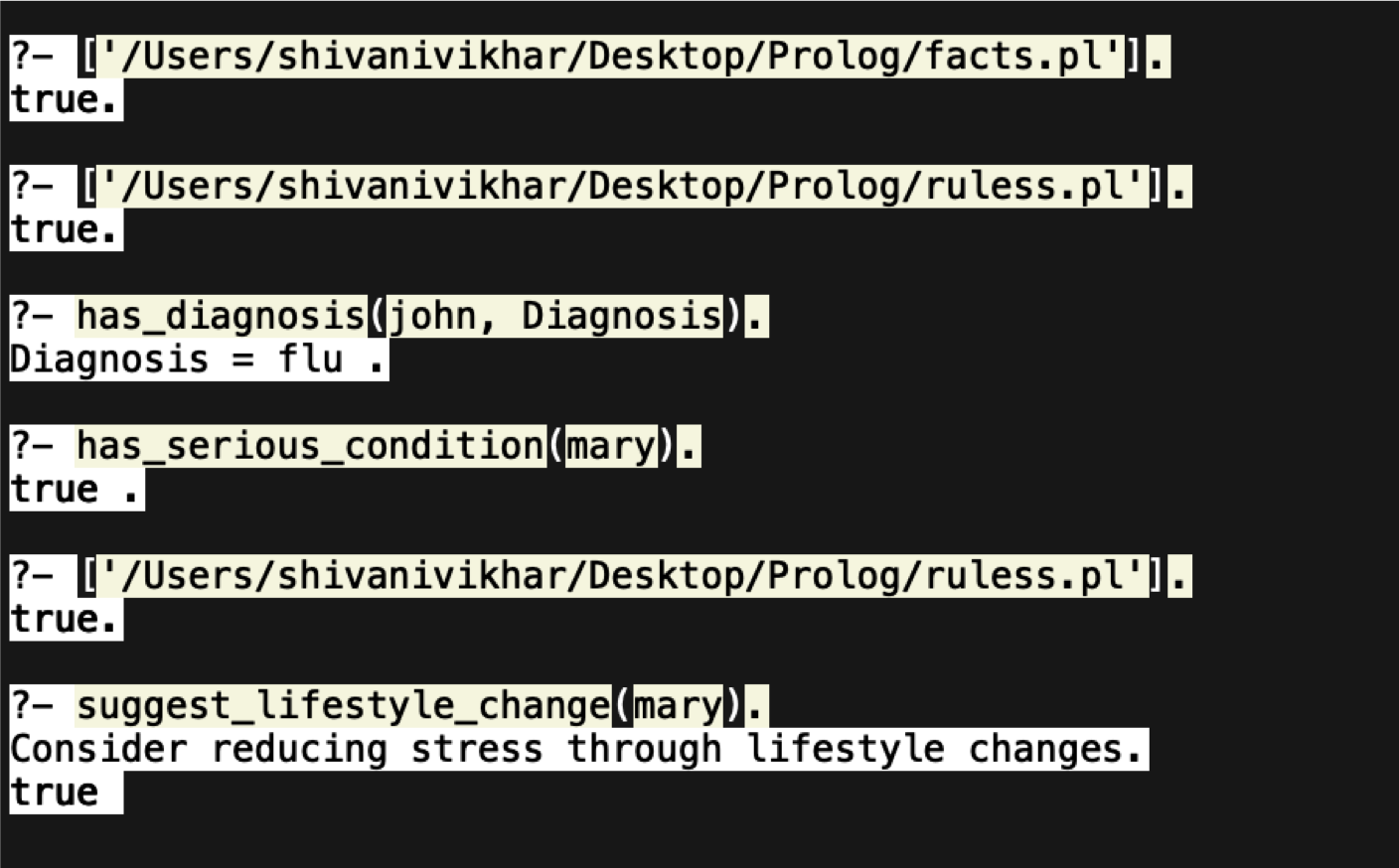
Queries:-

?- has\_diagnosis(john, Diagnosis).

?- has\_serious\_condition(mary).

?- suggest\_lifestyle\_change(john).

Output:-



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