/* Practice Codes and Exercises for AI LAB-1*/

Sample Program-1

```
domains
        disease, indication=symbol
predicates
        symptom (disease, indication)
clauses
    symptom(chicken_pox,high_fever).
        symptom(chicken_pox,chills).
        symptom(flu,chills).
        symptom(cold,mild_body_ache).
        symptom(flu,severe_body_ache).
        symptom(cold,runny_nose).
        symptom(flu,runny_nose).
        symptom(flu,moderate_cough).
```

I/P:

```
        Goal: symptom(cold,runny_nose)
```

O/P: Turbo prolog respond with True and prompt for another goal:

```
        True
        Goal:
```

Change the Goal for sample program-1

I/P:

Goal: symptom(Disease,runny_nose)

O/P: Turbo prolog will respond

Disease=cold

Disease=flu

2 Solutions

Goal:

Change the Goal for sample program-1

I/P:

Goal:symptom(_,chills)

O/P:

True

Goal:

Change the Goal for sample program-1

I/P:Goal:symptom(Disease,mild_body_ache)and

symptom(Disease,runny_nose)

O/P: Disease = cold

1 solution

Goal:

Add following clause in existing database of sample program-1

symptom(flu,mild_body_ache)

Change the Goal for sample program-1

I/P:Goal:symptom(Disease,mild_body_ache)and

symptom(Disease,runny_nose)

O/P: Disease = cold

Disease = flu

2 solutions

Goal:

####Exercises for Practice####

Write a prolog program for the following facts.

i. Colour of b1 is red

ii. Colour of b2 is blue

iii. Colour of b3 is yellow

iv. Shape of b1 is square

v. Shape of b2 is circle

vi. Shape of b3 is square

vii. Size of b1 is small

viii. Size of b2 is small

ix. Size of b3 is large

What will be the outcome of each of the following queries?

i. What is the shape of b3?

ii. Which component is having large size and yellow colour?

Here are some simple clauses.

likes(mary,food).

likes(mary,wine).

likes(john,wine).

likes(john,mary).

The following queries yield the specified answers (Verify it, PLEASE!!!@).

| ?- likes(mary,food).

yes.

| ?- likes(john,wine).

yes.

| ?- likes(john,food).

no.

How can you answer following questions?

1. John likes anything that Mary likes

2. John likes anyone who likes wine

Here are some simple clauses.

has(jack,apples).

has(ann,plums).

has(dan,money).

fruit(apples).

fruit(plums).

How can you answer following questions?

1. what Jack has?

2. Does Jack have something?

3. Who has apples and Who has plums?

4. Does someone have apples and plums?

5. Has Dan fruits?

DO YOUR BEST
