

DATE OF EXPERIMENT:
10-06-2008

DATE OF SUBMISSION:
10-07-2008

SIGNATURE OF THE COURSE TEACHER:

EXPERIMENT NO: 01

**NAME OF THE EXPERIMENT: A SIMULATED MEDICAL DIAGNOSTIC
SYSTEM FOR CHILDHOOD DISEASES.**

SOURCE CODE:

domains

disease,indication,name=symbol

predicates

hypothesis(name,disease)
symptom(name,indication)

clauses

symptom(charlie,fever).
symptom(charlie,rash).
symptom(charlie,headache).
symptom(charlie,runny_nose).

hypothesis(Patient,measles):-

clearwindow,
symptom(Patient,fever),
symptom(Patient,cough),
symptom(Patient,conjunctivities),
symptom(Patient,runny_nose),
symptom(Patient,rash).

hypothesis(Patient,german_measles):-

symptom(Patient,fever),
symptom(Patient,headache),
symptom(Patient,runny_nose),
symptom(Patient,rash).

hypothesis(Patient,flu):-

symptom(Patient,fever),
symptom(Patient,headache),
symptom(Patient,body_ache),
symptom(Patient,conjunctivities),
symptom(Patient,chills),
symptom(Patient,sore_throat),
symptom(Patient,cough),
symptom(Patient,runny_nose).

hypothesis(Patient,common_cold):-

symptom(Patient,headache),
symptom(Patient,sneezing),
symptom(Patient,sore_throat),
symptom(Patient,chills),
symptom(Patient,runny_nose).

hypothesis(Patient,mumps):-

symptom(Patient,fever),
symptom(Patient,swollen_glands).

hypothesis(Patient,chicken_pox):-

symptom(Patient,fever),
symptom(Patient,rash),
symptom(Patient,body_ache),
symptom(Patient,chills).

hypothesis(Patient,whooping_cough):-

symptom(Patient,cough),
symptom(Patient,sneezing),
symptom(Patient,runny_nose).

OUTPUT IN DIALOG BOX:

Goal: hypothesis(Patient,Disease)
Patient=charlie, Disease=german_measles
1 Solution

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SIGNATURE OF THE COURSE TEACHER:

EXPERIMENT NO: 02

**NAME OF THE EXPERIMENT: THE REVISED MEDICAL DIAGNOSIS
PROBLEM.**

SOURCE CODE:

```
domains
    disease,indication=symbol
    patient=string

predicates
    hypothesis(patient,disease)
    symptom(patient,indication)
    response(char)
    go

clauses
    go:-
        write("What is the patient's name?"),nl,
        readln(Patient),
        hypothesis(Patient,Disease),
        write(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):-
        write("Does ",Patient," have a fever (y/n)?"),
        response(Reply),
        Reply='y'.

    symptom(Patient,rash):-
        write("Does ",Patient," have a rash (y/n)?"),
        response(Reply),
        Reply='y'.
```

```
symptom(Patient,headache):-  
    write("Dose ",Patient," have a headache (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,runny_nose):-  
    write("Dose ",Patient," have a runny nose (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,conjunctivities):-  
    write("Dose ",Patient," have conjunctivities (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,cough):-  
    write("Dose ",Patient," have a cough (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,body_ache):-  
    write("Dose ",Patient," have a body ache (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,chills):-  
    write("Dose ",Patient," have chills (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,sore_throat):-  
    write("Dose ",Patient," have a sore throat (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,sneezing):-  
    write("Is ",Patient," sneezing (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

```
symptom(Patient,swollen_glands):-  
    write("Dose ",Patient," have swollen glands (y/n)?"),  
    response(Reply),  
    Reply='y'.
```

hypothesis(Patient,measles):-
 symptom(Patient,fever),
 symptom(Patient,cough),
 symptom(Patient,conjunctivities),
 symptom(Patient,runny_nose),
 symptom(Patient,rash).

hypothesis(Patient,german_measles):-
 symptom(Patient,fever),
 symptom(Patient,headache),
 symptom(Patient,runny_nose),
 symptom(Patient,rash).

hypothesis(Patient,flu):-
 symptom(Patient,fever),
 symptom(Patient,headache),
 symptom(Patient,body_ache),
 symptom(Patient,conjunctivities),
 symptom(Patient,chills),
 symptom(Patient,sore_throat),
 symptom(Patient,cough),
 symptom(Patient,runny_nose).

hypothesis(Patient,common_cold):-
 symptom(Patient,headache),
 symptom(Patient,sneezing),
 symptom(Patient,sore_throat),
 symptom(Patient,chills),
 symptom(Patient,runny_nose).

hypothesis(Patient,mumps):-
 symptom(Patient,fever),
 symptom(Patient,swollen_glands).

hypothesis(Patient,chicken_pox):-
 symptom(Patient,fever),
 symptom(Patient,rash),
 symptom(Patient,body_ache),
 symptom(Patient,chills).

hypothesis(Patient,whooping_cough):-
 symptom(Patient,cough),
 symptom(Patient,sneezing),

```
symptom(Patient,runny_nose).
```

```
response(Reply):-  
  readchar(Reply),  
  write(Reply),nl.
```

OUTPUT IN DIALOG BOX:

Goal: go

What is the Patient's Name?

Kakoly

Does Kakoly Have a fever (y/n)? y

Does Kakoly Have a cough (y/n)? y

Does Kakoly Have conjunctivities (y/n)? y

Does Kakoly Have a rash (y/n)? y

Does Kakoly Have a runny nose (y/n)? y

Kakoly probably has measles.

yes