

ARTIFICIAL INTELLIGENCE LAB – CSE714

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An Expert System to Assess Heart Disease under
Uncertainty

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Introduction

- This expert system helps to diagnose the heart diseases in simple way.
- It will be done by some question-answering process.
- The performance of an expert system is based on the experts knowledge stored in its knowledge base.
- Using the reasoning and inference rules, extracting knowledge from its knowledge base according to the user queries.

Problem Statement

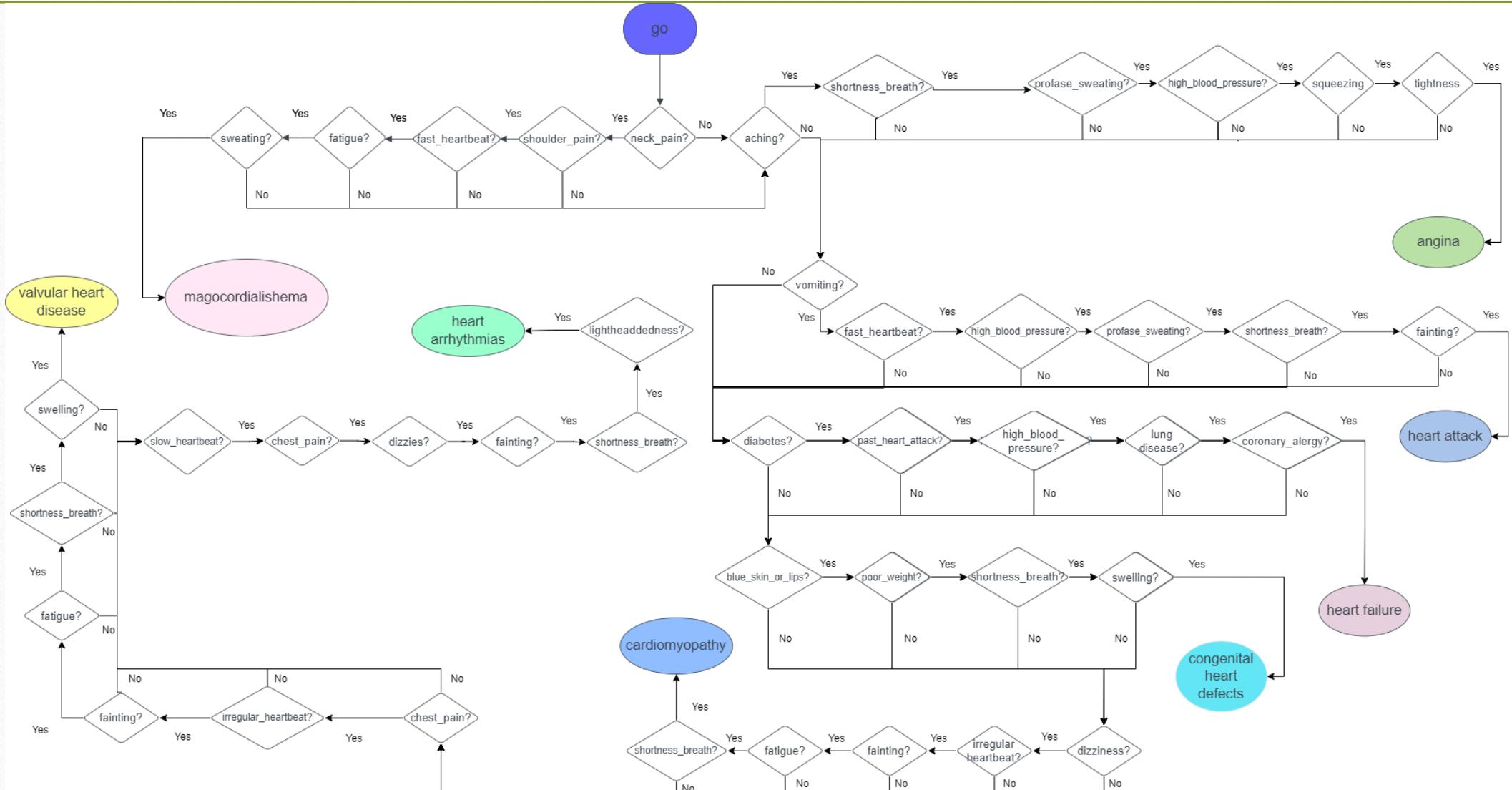
- Many symptoms exist that the affected person cannot anticipate that he is suffering from Heart Disease due to lack of awareness and knowledge
- Medical Tests are costly
- Unawareness of Health/Heart importance
- Carelessness of food intake

Aim and Objectives

- Helping the users know whether they have heart disease or not, staying at home
- whether the users have any similar kind of disease or not
- Creating awareness about Heart Disease
- Making a user-friendly heart disease diagnosis system based on different types of symptoms

System Design

Events of the Program



Snapshot

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...

Files Edit Run Compile Options Setup

Editor Dialog

Line 202 Col 37 C:\TANJIM.PRO Indent Insert

```
hypothesis(Patient,valvular_heart_disease):-  
    symptom(Patient,chest_pain),  
    symptom(Patient,irregular_heartbeat),  
    symptom(Patient,fainting),  
    symptom(Patient,fatigue),  
    symptom(Patient,shortness_breath),  
    symptom(Patient,swelling).  
  
hypothesis(Patient,heart_arrhythmias):-  
    symptom(Patient,slow_heartbeat),  
    symptom(Patient,chest_pain),  
    symptom(Patient,dizziness),  
    symptom(Patient,fainting),
```

Message Trace

```
hypothesis  
symptom  
response  
go
```

F2-Save F3-Load F5-Zoom F6-Next F8-Previous goal Shift-F10-Resize F10-End

DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: ...

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Conclusion & Future Work

- This expert system helps to diagnose heart diseases in a simple way i.e. Helping the users know whether they have heart disease or not, staying at home.
- Including suggestions on foods and medicines
- Setup a robust and cohesive database employing all of the knowledge base

THE END