Abstract

Heart disease is one of the dangerous disease that can cause death. The causes of heart disease can vary depending on the course. Such as heart failure, which is one of the health problems today, can be caused by alcohol consumption, accumulation of fat in the vein, or due to consumption of certain drugs. Various types of heart disease can cause specific symptoms that can be different for each type.

Based on a wide range of symptoms caused by these diseases can be diagnosed by a doctor. But usually people who have heart disease check their health to the doctor when the disease is severe enough.

The purpose of this final project is to create an expert system that can determine the type of heart disease based on symptoms known. So people who feel the symptoms will develop a disease, can use this expert system to determine the disease early and can perform recovery steps immediately.

This expert system is a system built using Ripple-down Rule (RDR), where the system can not only determine the type of the disease based on symptoms which included but also can update or correct diagnosis capabilities.

In this final project, expert systems built using the Java programming language with the Extensible Mark-up Language (XML) as a database to accommodate the stored knowledge base of the expert system. The diagnosis from the expert system that uses RDR method is very accurate, but still depends on the training system. So as to maximize the functionality of this expert system would have required considerable training system with data that is also accurate.

Keywords: heart disease, *ripple-down rule*, expert system, disease diagnosis, XML, java programming.