

ABSTRACT

Diabetes Mellitus is a disease which is a syndrome in the human body where there is chaos metabolism chaos and high level of sugar in blood (hyperglycemia) caused by insulin deficiency. Given Diabetes Mellitus is a common disease in Indonesia, even in the world, while many people do not realize that his disease is a systemic disease like diabetes that is dangerous because the signs appear just like a normal symptom and the disease spread throughout the body, it is necessary to create an expert system as diagnosis tool for Diabetes Mellitus, and to choose any therapies that can be used for the disease. Obtained diagnosis would be adjusted to the patient's condition to be the basis of the use of drugs and therapies that will be given as a medical action.

This final project made a "Web-based Expert System for Diagnosis and Determination of Treatment for the disease Diabetes Mellitus". Expert System is a system of computer programs that seemed to have the ability to properly act like an expert in a particular area of knowledge. This final project builded with the PHP programming language and uses MySQL database. Using the forward chaining inference engine (search forward) which inferencing to the any diagnosis result and choosing any therapy required, the test results proved the accuracy of this system at 100%. Mean test results Opinion Score (MOS) shows the average satisfaction score of 3.09 performance, with an average 'expected' value of 3.25, which indicates that this application has been satisfying the user, although not yet reached the expected level. With these test results, the system is declared to be eligible to apply in the general user, with a note that this application can not be used as a substitute for the medical physician in deciding any medical action.

Key word : Expert system, diagnosis, therapy, *diabetes mellitus*, *forward chaining*.