

ABSTRACT

EXPERT SYSTEM FOR EARLY DETECTION OF DENGUE FEVER DISEASE BASED ON WEBSITE USING RULE BASED METHOD

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Dengue Hemorrhagic Fever (DHF) is a disease that can be transmitted to humans caused by the dengue virus through the bite of the Aedes aegypti and Aedes albopictus mosquitoes. DHF is an infectious disease that can interfere with a person's productivity and cause death, usually this is because people are late in detecting symptoms similar to dengue hemorrhagic fever. So, patients need to see a doctor for a consultation. However, a doctor sometimes has time constraints in diagnosing a patient's illness due to the large number of patients being treated. While the patient must be treated immediately to get more intensive treatment. Therefore, an application is made that is able to detect dengue fever early according to the knowledge of an expert. Applications that can work like humans are known as expert systems. The purpose of this research is to design and build an expert system for website-based early detection of dengue hemorrhagic fever. The method used is a rule based method where knowledge is represented by using IF-THEN rules. The performance of the expert system was tested with 3 tests, namely blackbox testing, testing system performance validation by experts and testing using usability using the system usability scale (SUS) method. The results of the blackbox test show that the system is 100% running well, this is indicated by the system running smoothly without any errors in the application. The results of the system performance validation test by experts show that the expert system built using the rule-based method can function properly and in accordance with the identification of experts. While usability testing using the SUS method shows that the user can accept this application well, indicated by the SUS value of 78.36.

Keywords: *Dengue Fever, Expert system, Rule Based, Website*