# ABSTRACT

Medical diagnosis done by a physician and decision about which medicine should be given to the patient should be taken very accurately and carefully because even a little mistake can cause fatal effect and will endanger the patient's life. For particular disease, a specialist is needed to diagnose and examine the patient, so that the therapy given to the patient will be accurate.

The problem now is that the distribution of specialists has not been spread evenly in some regions in Indonesia. This condition makes patients who need special treatment and medication by specialists find it difficult when they need to see a specialist due to the disease he/she suffers from.

In this final project, Medical *Diagnosis—an Expert System using Backward & Forward Chaining & Bayes Theorem* is constructed as an alternative that can help users to diagnose their disease and give then the solution of what therapy should be given to the patient, by using backward and forward chaining inference method to diagnose by using *mental disorder* as the case study, and *Bayes Theorem* is used to decide which medicine is appropriate to be given to a patient, given some evidence and conditions.

**Keywords** :

> *expert system, contraindication, probability, backward chaining, forward chaining, Bayes theorem*