

## **ABSTRACT**

In finding the information is necessary a comprehension and relatively long time to perform the process of searching by reading the entire contents of the document containing the information sought. To make simplify and improve the process of the search for information contained within the document, So in the final project is implemented in a Question Answering System in Indonesian language documents by using the Pattern-based Approach with dataset sourced from the history books for SMA/MA. The implemitation of Pattern based Approach is done by utilizing the pattern of question and answer in the process of finding the right answer. Question Answering System is a system that accepts input in the form of questions and produces the output is the answer. In this research used seven types of property covers of PEOPLE, TIME, LOCATION, COUNT, OBJECT, ORGANIZATION and OTHER with a question word who, when, where, where, how, what, and how.

The design phase of the system consists of four components of the system architecture is question analyzer to interpret the question using the pattern of the question (Question Patterns) so is produced properties, targets and context of the question, a query generator for generating query as keywords that are necessary in searching for a document, a search engine to search for documents relevant and answer extraction to determine the most appropriate answer from the filter and scoring. Pattern Based Approach algorithm testing is done by measuring the level of system performance. The result of testing is obtained by precision values of 74.4% and a recall of 94.1%.

Keywords : Question Answering System, Pattern Based Approach, Question Patterns, Answer Patterns, Information Retrieval system.