UNIVERSITI TEKNOLOGI MARA

EXAM QUESTION CONSTRUCTION FROM DATA SOURCE BASED ON BLOOM'S TAXONOMY USING INFORMATION RETRIEVAL AND KNOWLEDGE EXTRACTION

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STUDENT'S DECLARATION

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

Exam Question Construction System (EQC-SYS) is a system that is able to create and manage examination questions that are stored in the database. The system is able to create exam questions automatically according to the topic and other options available. This sources of information required to create the exam questions are all obtained from the data sources such as slide notes that has been cleaned prior according to the template and format to assist the next process. This is done by applying Information Retrieval (IR) and Knowledge Extraction (KE). IR is the task of obtaining information resources such as documents that is related to the information needed from a collection of information resources using searching method that can be based on metadata or full-text indexing. KE is the creation of knowledge either from structured or unstructured sources. An example of structured sources is relational databases while an example of unstructured sources is documents. The system is able to generate sets of exam paper together with its respective answers from the questions stored in the database. The system is developed to reduce the problem of using a lot of time just to create exam questions for an exam, the problem of maintaining the quality of questions created by referring to the cognitive level of Bloom's Taxonomy and also the problem of balancing the questions according to the TST created by the resource person (RP). The system is developed according to the revised waterfall methodology and it will only cover one course only, which is Fundamentals of Information Systems (ITS410). The type of questions that are being stored in the database is short answer questions. The developed system is able to minimize the problem, assist the managing and creation of exam questions process and also reduce the time for the previous tasks.

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