AD HOC QUESTION PAPER APPLICATION (AQPA) USING FISHER-YATES SHUFFLE ALGORITHM

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ABSTRACT

Examination plays a vital role to measure the capabilities of the students in their learning. Hence, generating an effective question paper is a task of great importance for institution. Currently, preparing exam question papers using traditional method are quite challenging and time consuming. There are guidelines need to be followed and the questions must incorporate with different level of difficulties. There is also issue on cheating during exam. Thus, this research proposed an automated approach of Ad hoc Question Paper Application (AQPA) which is fast, streamlined, randomized and secure. This web-based application makes use of Fisher-Yates Shuffle algorithm as a randomization technique which is a reliable algorithm for randomizing questions. The application development methodology employs adapted Waterfall Model which consists of six phases. In this application, it allows the user to manage questions and generate the questions randomly and automatically. For evaluation process, a testing was conducted on 20 lecturers in UiTM Perlis branch using Technology Acceptance Model (TAM) to evaluate perceive usefulness and perceive ease of use on the prototype. The result shows that most of them agreed that AQPA application could be used for generating exam question papers. This application can be improved by providing scheme answers to the lecturers. In conclusion, this application has the potential to enhance the effectiveness in generating question paper

Keywords: Automated, Question Paper Generation, Randomization, Fisher-Yates Shuffle, Technology Acceptance Model (TAM).