

COMEX:COMPETITIVE ONLINE EXAMINATION APPLICATION

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ABSTRACT

Examination is one of the important assessments in education institution to evaluate the student performance based on their subject they had learnt. Conventional examination might bring difficulties for lecturers. High cost required to print exam paper, if there were large amount of students. The time needed to mark answer sheets also take much longer. With rapid development of technology nowadays, most of the educational institutions replace their paper-based examination with the web-based examination system that can reduce the cost of examinations and reduce work of organization for preparing examination. This paper aims to develop a web-based application for online examination using Fisher-Yates shuffle algorithm. Fisher-Yates manages to randomize multiple choice questions for each exam session. Literature review has been conducted to study on managing examination, randomization techniques and application testing method. A web based online examination has been constructed based on syllabus in UiTM, Perlis. There are five phases in developing Competitive Online Examination application adapted from waterfall model. This application has been tested by thirty respondents in the university. Technology Acceptance Model (TAM) used to evaluate the system based on Perceived Usefulness and Perceived Ease of Use. To improve the prototype, data filtration in pages and repetition avoidance must be implemented. As a conclusion, Fisher-Yates can be implemented in online exam to manage randomization techniques for examination. Thus, it helps university to increase productivity among the lecturers and students.

Keywords: Online Examination, Fisher-Yates Shuffle Algorithm, Randomization, Multiple Choice Questions.