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Design of a Tutorial System for the Associate Systems Engineering Professional (ASEP) Exam

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Abstract: Hiring managers have the difficult task of choosing candidates for their company's Systems Engineering positions. Candidates with a professional license such as the Associate Systems Engineering Professional (ASEP) certificate can reduce the risk and therefore will have a higher chance to get hired. To get the ASEP certificate, candidates need to pass a 120-question exam based on the 250-page INCOSE Systems Engineering handbook. Memorizing the concepts in the handbook is the key to pass the exam. The proposed solution is an online tutorial course that minimizes the risk of not passing the exam and reduces the time to study for the exam. The tutorial tracks the progress of each student and provides the opportunity for repetition. The tutorial system is implemented in Google Classroom. Validation testing demonstrates a statistically significant improvement from diagnostic tests to assessment tests for a cohort of System Engineering seniors.

Keywords: ASEP, INCOSE, Systems Engineering Certificate