



Volume 1, Issue 1, 2024

Intuitions & Insights

An Interdisciplinary Research Journal



Involvement of Mathematics in Examination Scheduling

Problems and VideoGames

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Abstract : This paper explores the significant role of mathematics in two distinct realms: examination scheduling problems and video games. In the context of examination scheduling problems, the paper delves into the application of graph theory. A case study is presented, where in a university offers various course combinations, and the objective is to minimize the number of examination periods required while ensuring that students can take any combination without conflicts. Graph theory provides a systematic approach to represent the relationships between courses and derive optimal schedules, demonstrating its efficacy in solving real-life scheduling challenges. Shifting focus to video games, mathematics serves as a fundamental tool for designing game mechanics, graphics, and algorithms, contributing to the immersive and interactive gaming experience. The utilization of mathematical models, such as matrices and vectors, is discussed in the creation of realistic animations and simulations within video games. Through these discussions, the paper emphasizes the diverse and impactful applications of mathematics, particularly in the dynamic domains of examination scheduling and video games.

Keywords: vertex colouring, vector, matrix, graphs.

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Received: 02.11.2013; **Accepted:** 30.01.2024; **Published:** 03.04.2024