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本科毕业设计(论文)

GRADUATION DESIGN (THESIS)

题 目\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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通信专业离散数学动态演示系统的设计与实现

摘要

离散数学(Discrete mathematics)是研究离散量的结构及其相互关系的数学学科，是现代数学的一个重要分支。它在各个学科领域，特别是在计算机科学领域有着广泛的应用。离散数学作为许多计算机相关专业的专业课程，是程序设计语言、 数据结构、操作系统、编译原理、数字电路、人工智能、数据库、算法等必不可少的先修课程。

对于通信工程专业而言，离散数学也有着重要的地位。比如数字电路，数字信号处 理，信息论与编码等都会有所涉及。但是离散数学是一门相对抽象，对逻辑思维要求很高的学科，大部分学生在学习的过程中会感觉比较吃力。

目前，计算机编程技术相对成熟，各种编程语言和开发环境层出不穷。通过广泛查阅各种辅助教学软件的设计思想，构建一个离散数学课程的动态演示系统，帮助学生理解典型的离散数学知识点，直观的掌握离散数学的部分知识。

**关键词：** 通信工程 离散数学 动态演示系统

**Design and implementation of a dynamic demonstration system of discrete mathematics**

**ABSTRACT**

Discrete mathematics is a subject which discusses discrete structures and their relations, and it is an important branch of the modern mathematics. It is widely used in various fields, especially in the field of computer science. Discrete mathematics is a specialized courses of many computer related subjects, which is an Advanced Placement class for programming language, data structure, operating system, compiler theory, digital circuit, artificial intelligence, database, and algorithm, etc.

As for communication engineering, discrete mathematics also plays an important role. Such as digital circuits, digital signal processing, information theory and coding, will be involved. However, discrete mathematics is relatively abstract and needs high logical thinking, the majority of students in the learning process will feel much difficult.

Currently, computer programming technology is mature, a variety of programming languages and development environments are endless. With widely accessible through a series of auxiliary teaching software design, to build a dynamic discrete mathematics presentation system to help students understand the typical discrete mathematics knowledge, and intuitively grasp of part of the knowledge of discrete mathematics.