

## Automatic SQL Excise and Evaluations System for Database-Related Courses

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Abstract:

Database is an important foundation subject in the computer science, and SQL, a widely used and powerful database management language, is a central topic of the database. In order to help cultivate students of the SQL practice techniques, we propose an automatic SQL practice and evaluation system for database-related courses. The system provides two views respectively for students and teachers. For teachers, the system will assist them to maintain the questions banks by automatically generating data and validating the questions, and analyze students' performance by providing related reports. For students, the system can provide a unified environment for SQL practice and can automatically judge the correctness of students' answers for prompt feedback. Moreover, after practicing the system will also show the practice achievement, ranking information, and learning curve analysis, for students to better evaluate their performance. Generally, this proposed system will help students to better acquire SQL skills, develop critical thinking and integrate the SQL skills in database-relevant application development.