**Project Title:** 我们的SQL

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**Suits students who like:** Data Structures, databases, programming

Relational databases are the most common way to store data, and SQL is the standard language to interact with them. Creating a relational database management system (RDBMS) requires efficient data structures and optimised programming. 关系数据库是最常用的数据存储方式，而SQL是与之交互的标准语言。创建关系数据库管理系统(RDBMS)需要高效的数据结构和优化的编程。

This project will create a basic RDBMS called 我们的SQL, which will be able to store data in appropriate files. It will also allow users to interact with the data using a subset of the SQL language (similar to the MySQL command line) and through a programming language (e.g. Java). It will not be necessary to implement every feature of SQL, but the most important features should be addressed. 这个项目将创建一个基本的RDBMS叫我们的SQL,这将能够在相应的文件中存储数据。它还允许用户使用SQL语言的子集(类似于MySQL命令行)和通过编程语言(例如Java)与数据交互。不一定要实现SQL的每个特性，但是应该解决最重要的特性。

The primary focus of the project is that data is stored correctly, and SQL commands (SELECT, INSERT, UPDATE, DELETE) have the correct results. A secondary focus is on the efficiency of the system, including the choice of efficient data structures for the tables and also for the indexes that can be used to quickly select and manipulate data. 项目的主要关注点是数据的正确存储，SQL命令(SELECT、INSERT、UPDATE、DELETE)有正确的结果。第二个重点是系统的效率，包括为表和索引选择有效的数据结构，以便快速地选择和操作数据。