

Assignment 2 Report

Logic and workflow

The class Student has the private members accessing roll number, name, the number of courses, pointer to course codes, pointer to course grades, and a size that allocated 100 sizes to the pointer of course grades and course codes. Similarly, a constructor has been set as parameterized, taking roll number, name, and the number of courses. It also takes an array of grades and courses as an argument. A destructor has been to deallocate course codes and course grades. Setters have been set with checkers to check for roll numbers. The first check is to ensure that the length of the roll number is equal to 8. The second checker is to ensure that the roll number is unique.

The third class is called Database, which has a private member of pointers that points to the Student's class to access the member functions of the class.

The functions update, remove, dump, and operator operate the same way as described in the assignment.

The PQL commands are registered in the main function using a string.h library to read every word before escaping or space character. Each command is stored in the data variable, which is then passed into the if loop, where the variables are stored according to the variable in the data.

Assumptions

- There are 20 courses and grades for each student.
- The commands are in the same order as described in the assignment.
- UPDATE command is followed by only one course and one grade.

Constraints

- The system cannot detect whether the roll number is unique. Therefore the system will accept two same roll numbers.