Student Management System

This program is a basic student management system written in C. It allows you to add, find, update, and delete student records. The system uses a menu-driven approach to interact with the user.

Features

1. \*\*Add Student\*\*: You can add a student's details, including their first name, last name, roll number, CGPA, and course IDs.

2. \*\*Find Student by Roll Number\*\*: This feature allows you to retrieve a student's details using their roll number.

3. \*\*Find Student by First Name\*\*: You can find and display a student's details using their first name.

4. \*\*Find Students by Course ID\*\*: This function lets you find all students enrolled in a particular course using the course ID.

5. \*\*Total Number of Students\*\*: Displays the total number of students currently stored in the system.

6. \*\*Delete Student\*\*: You can delete a student's details using their roll number.

7. \*\*Update Student\*\*: This feature allows you to update a student's details using their roll number.

8. \*\*Exit\*\*: Exits the program.

### Code Explanation

#### Structures and Variables

- \*\*Structure `sinfo`\*\*: Stores student information such as first name, last name, roll number, CGPA, and course IDs.

- \*\*Array `st`\*\*: An array to hold up to 55 student records.

- \*\*Integer `i`\*\*: A variable to keep track of the number of students added to the system.

Functions

`add\_student()`

This function prompts the user to input the student's first name, last name, roll number, CGPA, and course IDs, and then stores this information in the array. The counter variable `i` is then incremented to keep track of the number of students.

`find\_rl()`

This function allows the user to find and display a student's details using their roll number. It prompts the user to enter the roll number and searches through the array for a match. If a match is found, the student's details are displayed. If no match is found, an appropriate message is displayed.

`find\_fn()`

This function allows the user to find and display a student's details using their first name. It prompts the user to enter the first name and searches through the array for a match. If a match is found, the student's details are displayed. If no match is found, an appropriate message is displayed.

`find\_c()`

This function allows the user to find and display all students enrolled in a particular course using the course ID. It prompts the user to enter the course ID and searches through the array for matches. If matches are found, the details of all students enrolled in the course are displayed. If no matches are found, an appropriate message is displayed.

`tot\_s()`

This function displays the total number of students currently stored in the system and provides information on how many more students can be added.

`del\_s()`

This function allows the user to delete a student's details using their roll number. It prompts the user to enter the roll number and searches through the array for a match. If a match is found, the student's record is removed, and the array is adjusted accordingly. The counter variable `i` is then decremented. If no match is found, an appropriate message is displayed.

`up\_s()`

This function allows the user to update a student's details using their roll number. It prompts the user to enter the roll number and searches through the array for a match. If a match is found, the user is given options to update the first name, last name, roll number, CGPA, or course IDs. The appropriate detail is then updated based on the user's choice. If no match is found, an appropriate message is displayed.

Main Loop

The main loop presents the user with a menu of options to perform various tasks related to student management. The user can choose to add, find, update, delete student records, display the total number of students, or exit the program. The loop continues to run until the user chooses to exit.

This program is a simple yet effective way to manage student information using a basic C structure and menu-driven interface.