STUDENT MANAGEMENT SYSTEM IN C

A systematic way to manage and oversee student details

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ABSTRACT

The Student Management System project in C programming is a software solution that automates administrative processes and organizes student information in educational institutions. It provides a user-friendly interface for administrators, teachers, and staff, facilitating tasks like student enrollment, record maintenance, and result processing.

Key features :-include a secure database, an user friendly interface, functions for attendance, grades, and personal details. The project offers a reliable and efficient solution for managing student information, benefiting both administrators and students.It improves communication between educational institutions, students, and their parents, resulting in a better learning experience overall.

INTRODUCTION:-

Student management project using C is for maintaining smooth academic operations. By systematically organising student data, we ensure a well-structured and easily accessible repository of information. The system's significance lies in its ability to track and monitor student progress, academic history, and personal details. It improves communication between educational institutions, students, and their parents, resulting in a better learning experience overall.

OBJECTIVES

Objectives:

- Efficient **Data Management**: Provide a reliable mechanism for administrators to efficiently manage student records without manual errors.
- **User-Friendly Interface**: Develop an intuitive interface that allows users to navigate through functionalities effortlessly, ensuring ease of use.
- **Data Persistence**: Implement file handling techniques to ensure the secure storage and retrieval of student data for long-term access.
- **Functional Extensibility**: Design the system in a modular manner to allow for easy expansion and inclusion of additional features in the future.
- **Accuracy and Reliability**: Ensure that the system accurately stores and retrieves student information, maintaining data integrity at all times.

ARCHITECTURE

Front End/User Interface

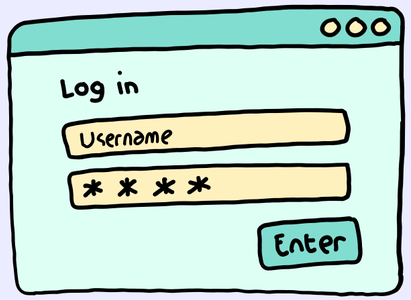
- USER AUTHENTICATION(LOGIN PAGE)
- MENU DRIVEN INTERFACE
- INPUT/OUTPUT INTERACTION

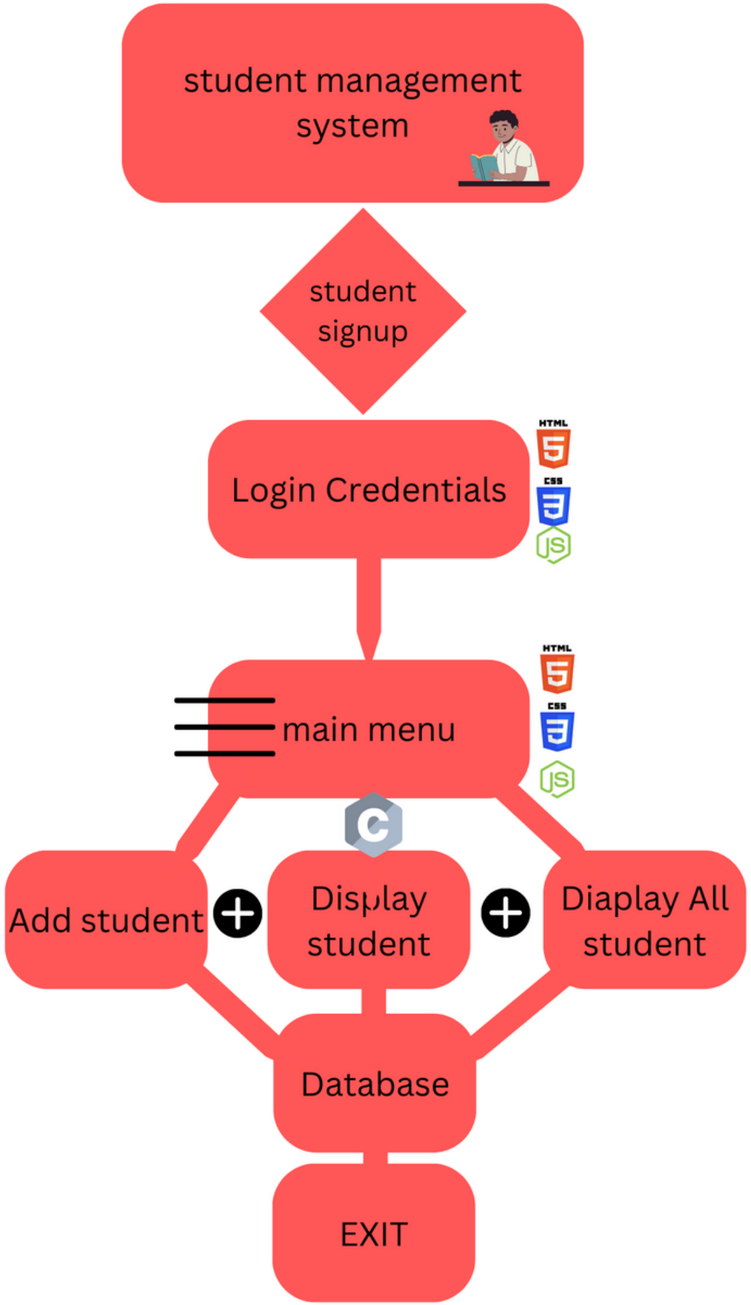
Back End

- PROGRAM LOGIC, FUNCTIONALITIES
- DATA HANDLINGAND MANIPULATIONS
- FILE INPUT AND OUTPUT FOR DATA PERSISTANCE

Database/File

- FILE HANDLING
- DBMS
- DATA STORAGE AND RETRIEVING




student management system
student signup
Login Credentials
main menu
Add student
Display student
Diaplay All student
Database
EXIT

Terminal output using c

```
Student Database Management System
1. Login
2. Sign Up
3. Exit
Enter your choice:
```

```
Student Database Management System
1. Add Student
2. Display Student
3. Display All Students
4. Exit
Enter your choice:
```

```
Student Database Management System
1. Login
2. Sign Up
3. Exit
Enter your choice: 1
Enter username: devika
Enter password: 12345
Login failed. Please try again.


Student Database Management System
1. Login
2. Sign Up
3. Exit
Enter your choice:
```

```
C:\Users\aishw\Desktop\c prc
Enter details for Course 1:
Enter course ID: 159874
Enter course name: cprogramming
Enter assignment marks for Course 1 (-1 if not applicable): 25
Enter internal marks for Course 1 (-1 if not applicable): 24
Enter external marks for Course 1 (-1 if not applicable): 45

Student Management Menu
1. Add Student
2. Display Student
3. Display All Students
4. Logout
Enter your choice: 2
Enter student ID to display: 001


Student Profile:
ID: 1
Name: akshay
Contact: 9784561230
Email: akshay@gmail.com
Number of Courses: 1

Courses:
Course 1:
ID: 159874
Name: cprogramming
Assignment Marks: 25.00
Internal Marks: 24.00
External Marks: 45.00
GPA: 4.00

CGPA: 4.00

Student Management Menu
1. Add Student
2. Display Student
3. Display All Students
4. Logout
Enter your choice:
```

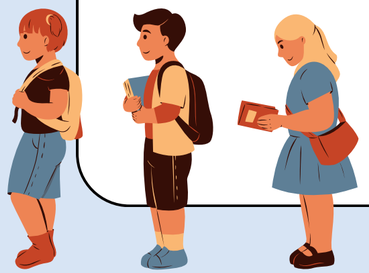
```
Student Database Management System
1. Login
2. Sign Up
3. Exit
Enter your choice: 2
Enter a new username: devikavarma
Enter a new password: 12345
Sign up successful! You can now login.


Student Database Management System
1. Login
2. Sign Up
3. Exit
Enter your choice: 1
Enter username: devikavarma
Enter password: 12345
Login successful!

Student Management Menu
1. Add Student
2. Display Student
3. Display All Students
4. Logout
Enter your choice:
```

```
Name: cprogramming
Assignment Marks: 25.00
Internal Marks: 24.00
External Marks: 45.00
GPA: 4.00

CGPA: 4.00

Student 2:
ID: 2
Name: devika
Contact: 9945158468
Email: devika@gmail.com
Number of Courses: 1

Courses:
Course 1:
ID: 4568
Name: datastrutures
Assignment Marks: 25.00
Internal Marks: 23.00
External Marks: 49.00
GPA: 4.00
```

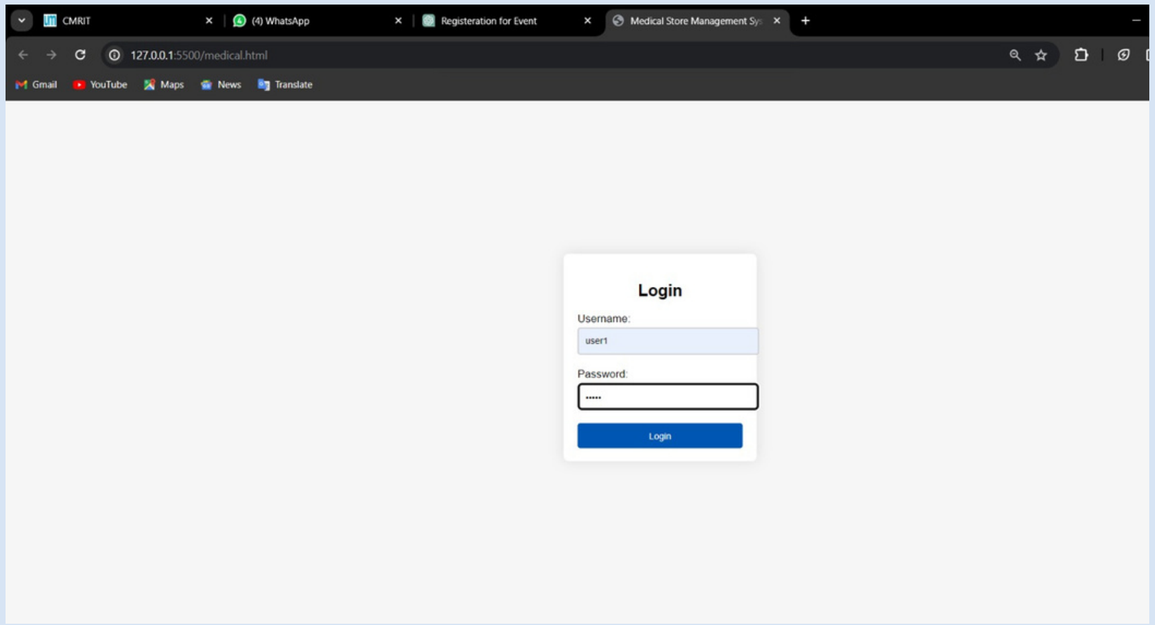
```
CGPA: 4.00

Student Management Menu
1. Add Student
2. Display Student
3. Display All Students
4. Logout
Enter your choice: 4
Logging out...


Student Database Management System
1. Login
2. Sign Up
3. Exit
Enter your choice:
```

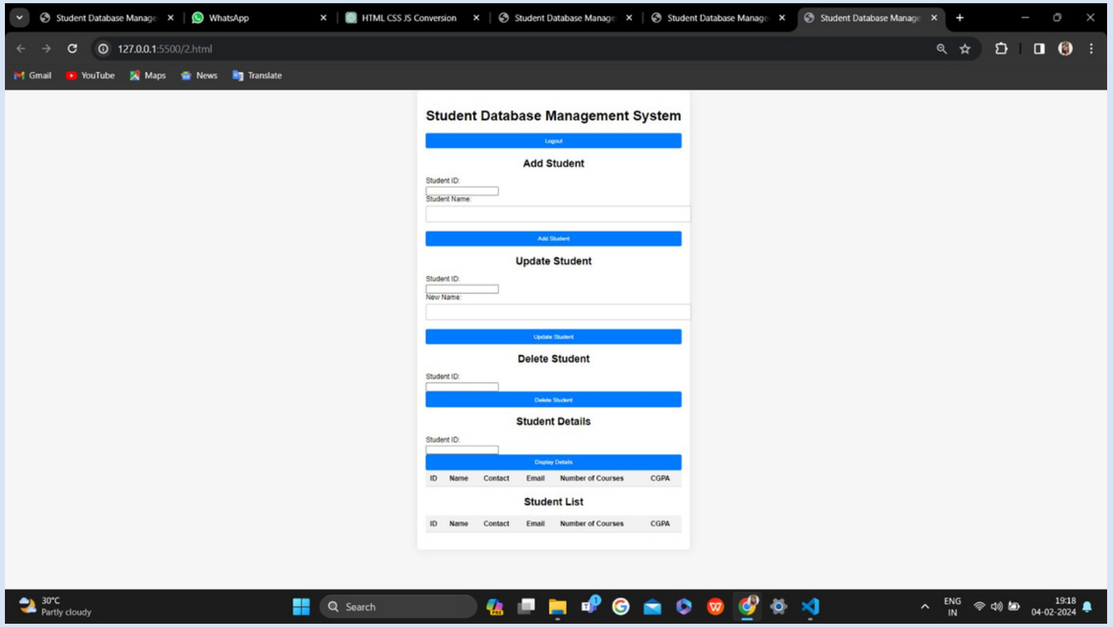
CODE EXPLAINATION

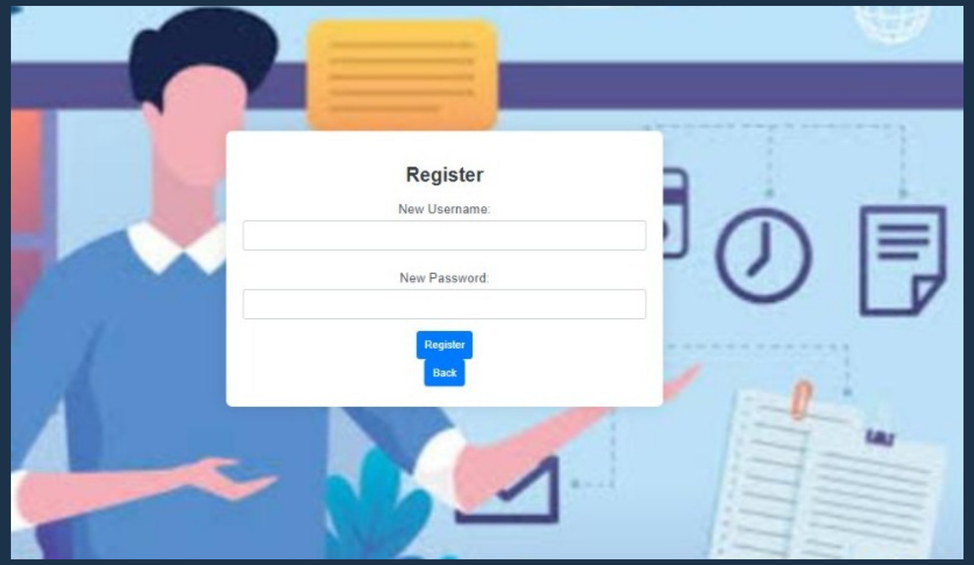
This is a simple Student Management System in C. The main function of this project is to store student information. The system offers functionalities such as adding, displaying, searching, and deleting student records through a user-friendly menu interface. The use of a struct enables th encapsulation of student details, including roll number, name, year, branch, and percentage.The program also includes functions to save and read data to/from a file. it improves communication between educational institutions, students, and their parents, resulting in a better learning experience overall.

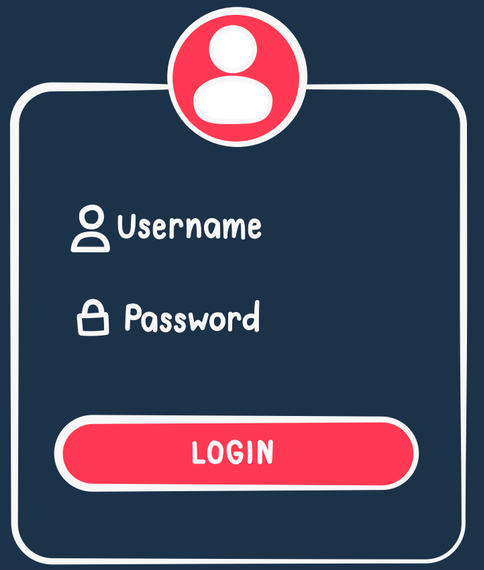


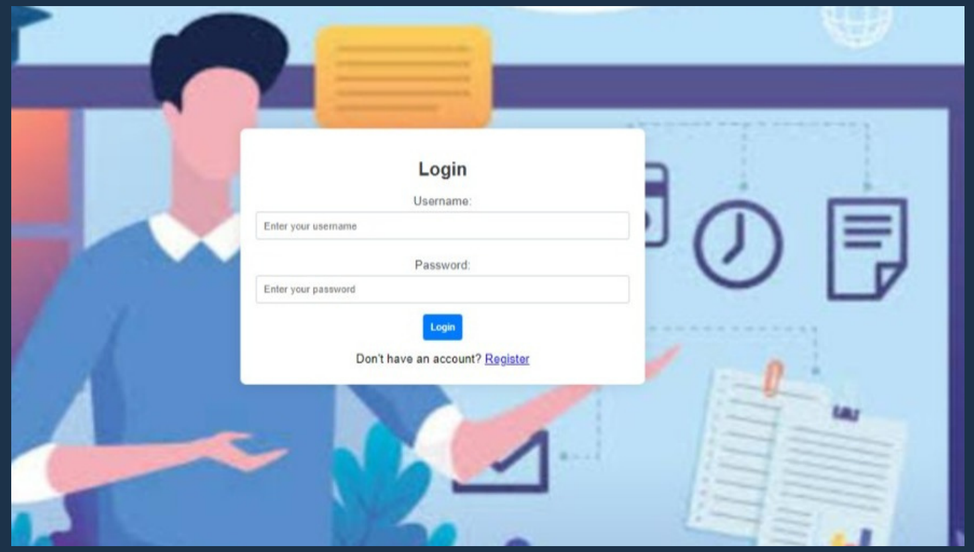
Front end


CMRIT
(4) WhatsApp
Registeration for Event
Medical Store Management Sy
127.0.0.1:5500/medical.html
Gmail
YouTube
Maps
News
Translate
Login
Username:
user1
Password:
Login


Student Database Manage
WhatsApp
HTML CSS JS Conversion
127.0.0.1:5500/2.html
Gmail
YouTube
Maps
News
Translate
Student Database Management System
Logout
Add Student
Student ID:
Student Name:
Add Student
Update Student
Student ID:
New Name:
Update Student
Delete Student
Student ID:
Delete Student
Student Details
Student ID:
Display Details
ID Name Contact Email Number of Courses CGPA
Student List
ID Name Contact Email Number of Courses CGPA
30°C
Partly cloudy
Search
ENG
IN
19:18
04-02-2024


Register
New Username:
New Password:
Register
Back


Username
Password
LOGIN


Login
Username:
Enter your username
Password:
Enter your password
Login
Don't have an account? Register

Conclusion

The implementation of the Student Database Management System represents a significant advancement in streamlining administrative processes and enhancing data management within educational institutions. By transitioning from manual record-keeping to a digital database system, the institution stands to benefit from improved efficiency, accuracy, and accessibility of student information. Through modular architecture and user-friendly design, the system facilitates seamless interaction for users, enabling them to efficiently add, update, and retrieve student and course data. The implementation adheres to best practices in data validation, authentication, and error handling, ensuring the integrity and security of stored information. Moreover, the scalability and extensibility of the system allow for future growth and adaptation to evolving needs and requirements. As the institution expands and technology evolves, the Student Database Management System can accommodate additional features and functionalities, further enhancing its utility and value. In conclusion, the implementation of the Student Database Management System marks a significant step towards modernizing administrative processes and improving data management practices within educational institutions. By harnessing the power of technology, the system empowers administrators to make informed decisions, enhances communication and collaboration, and ultimately contributes to the overall efficiency and effectiveness of the educational institution

THANKYOU