**COURSE MANAGEMENT SYSTEM**

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**Abstract**

The provided C programming code constitutes a comprehensive course registration and management system. Users can register and log in, with unique user IDs generated upon registration. Personal details such as name, father's name, date of birth, and graduating year are recorded, along with password protection. The system allows users to enroll in courses across eight semesters, selecting from predefined course arrays. The menu-driven interface offers options for course registration, viewing user data, and clearing data. Additional features include an "About Us" section detailing project contributors and functions to view and clear user data. The program is structured with separate directories for storing user data and passwords. Noteworthy is the age calculation based on birth year and current date. While the code demonstrates core functionality, potential improvements involve implementing error handling for user inputs and enhancing password security measures. The abstract encapsulates the program's essence, emphasizing its user-centric design and functionality while suggesting areas for refinement.

1. Registration and Login System:

Registration (`signup` function):

- The program starts by reading the current user count from "totalid.txt."

- Prompts the user to enter personal information like name, father's name, date of birth, and graduating year.

- Uses the current date and user-provided birth year to calculate the age.

- Generates a unique user ID based on the count obtained from "totalid.txt."

- Creates a file for the user using the generated ID in the "studentdata" directory.

- Asks the user to set a password and saves it in a separate "studentpassword" directory.

- Updates the user count in "totalid.txt."

Login (`login` function):

- Prompts the user for their ID and password.

- Checks the entered password against the stored password in the "studentpassword" directory.

- Upon successful login, displays a success message and calls the `menu` function.

2. Menu System (`menu` function):

- Presents a menu with options to:

- Register for courses (`courseregister` function)

- View user data (`viewdata` function)

- Clear user data (`cleardata` function)

- Exit the program

3. Course Registration (`courseregister` function):

- Takes the semester number as input.

- Depending on the semester, displays available courses from predefined arrays.

- Allows the user to enroll in up to six courses per semester.

- Checks for duplicate course registrations to avoid repetition.

4. Course Enrollment (`courseenroll` function):

- Displays available courses for a given semester.

- Takes the user's choice of courses.

5. Course Selection (`courseselector` function):

- Records the selected course in the user's data file.

6. Additional Features:

About Us (`aboutus` function):

- Displays information about the project and its contributors.

View Data (`viewdata` function):

- Reads and displays the content of the user's data file.

Clear Data (`cleardata` function):

- Clears the content of the user's data file.

8. Potential Improvements:

- Implement error handling for invalid inputs.

- Enhance security measures, such as hashing passwords.

-Friendly Interface.

-Should have asked confirmation before clearing all data.

-Should had an option to drop course.