DIGITAL DIARY

Register candidates :

- 24KB1A05V1
- 24KB1A05DG
- 24KB1A05CG
- 24KB1AO5T4

- Add/edit/delete/daily notes
- Secure with password
- Use date-wise fie handling

Introduction:

The Digital Diary is a personal application that allows users to create, edit, and delete daily notes securely. It ensures privacy by password-protecting access and organizes entries based on the date, using file handling techniques. This project combines C programming with fundamental Data Structures and Algorithms (DSA) to manage data effectively.

Objective:

Develop a simple, efficient, and secure diary management system.

~Implement CRUD operations (Create, Read, Update, Delete) for daily entries.

Practice and apply file handling in C.

Protect diary entries with password authentication.

Strengthen algorithmic thinking by applying DSA concepts.

Why C and DSA?

C provides direct control over memory and efficient file handling, making it ideal for system-level applications like a Digital Diary.

DSA concepts ensure that data management (like searching and updating entries) is optimized.

It improves understanding of basic operations like file pointers, string handling, searching algorithms, and data storage formats.

Algorithm1:

1. Startup:

Prompt for password verification.

If wrong password, exit the program.

2. Main Menu:

- Add New Entry
- Edit Existing Entry
- Delete Entry
- View Entries
- Exit

3. Add New Entry:

- Ask for the date (or auto-capture current date).
- Create/open a file with the date as the filename.
- Save the diary note inside.

4. Edit Entry:

- Ask for the date.
- Open the respective file.
- Allow editing and save changes.

5. Delete Entry:

- Ask for the date.
- Remove the corresponding file from storage.

6. View Entries:

- List all files (dates).
- Allow user to open and read any diary file.

7. Secure Handling:

- Mask the password input while typing.
- Encrypt/decrypt notes (optional advanced feature).

Lesson Learnt:

- Practical application of file handling (fopen , fclose , fread , fwrite , remove, rename).

- String manipulation and dynamic memory allocation.

- Structuring a program with modular design (separate functions for each feature).
- Implementing basic searching algorithms for file lookup.

Security practices like password masking and basic encryption.

Error handling and user-friendly prompts.

Images:

- Login screen asking for the password
- Main menu interface
- Adding a new note
- Viewing/editing/deleting a note

Output:

- A console-based Digital Diary application in C.

Features:

- Add/Edit/Delete diary notes .
- Password-protected access .
- Daily entries saved in date-wise files (e.g., 2025-04-27.txt).
- Simple, user-friendly menu.

Conclusion:-

The Digital Dairy Project has successfully demonstrated the potential of technology in transforming traditional dairy farming practices. By integrating digital tools for milk production tracking, animal health monitoring, feed management, and data analysis, the project has enhanced productivity, improved animal welfare, and ensured better quality control. Farmers now have access to real-time insights, enabling smarter decisions and reducing operational inefficiencies. Overall, the project supports sustainable dairy farming and paves the way for a more modern and efficient dairy industry.

Thanking you