

PLANNER

Personal Life Management System

Major Project – Programming in C (CSEG1032)

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Abstract:

This project implements a Personal Life Management System using the C programming language. It includes five independent modules: Expense, Habit, Health, Study, and Reminder. The project uses modular programming, file handling, and date-time-based logging. It demonstrates key concepts from all units of C programming: functions, structures, loops, arrays, and file operations.

Problem Definition:

In daily life, people handle multiple tasks: managing expenses, maintaining habits, monitoring health data, keeping track of study hours, and setting reminders. The problem is that all this information is usually scattered. This project solves that by creating ONE C program that manages all these activities in one place.

System Design:

The system uses a modular architecture: Each module has its own .c and .h files. main.c contains the central menu. Data is stored using text files (e.g., expenses.txt, habits.txt). All modules use reusable functions.

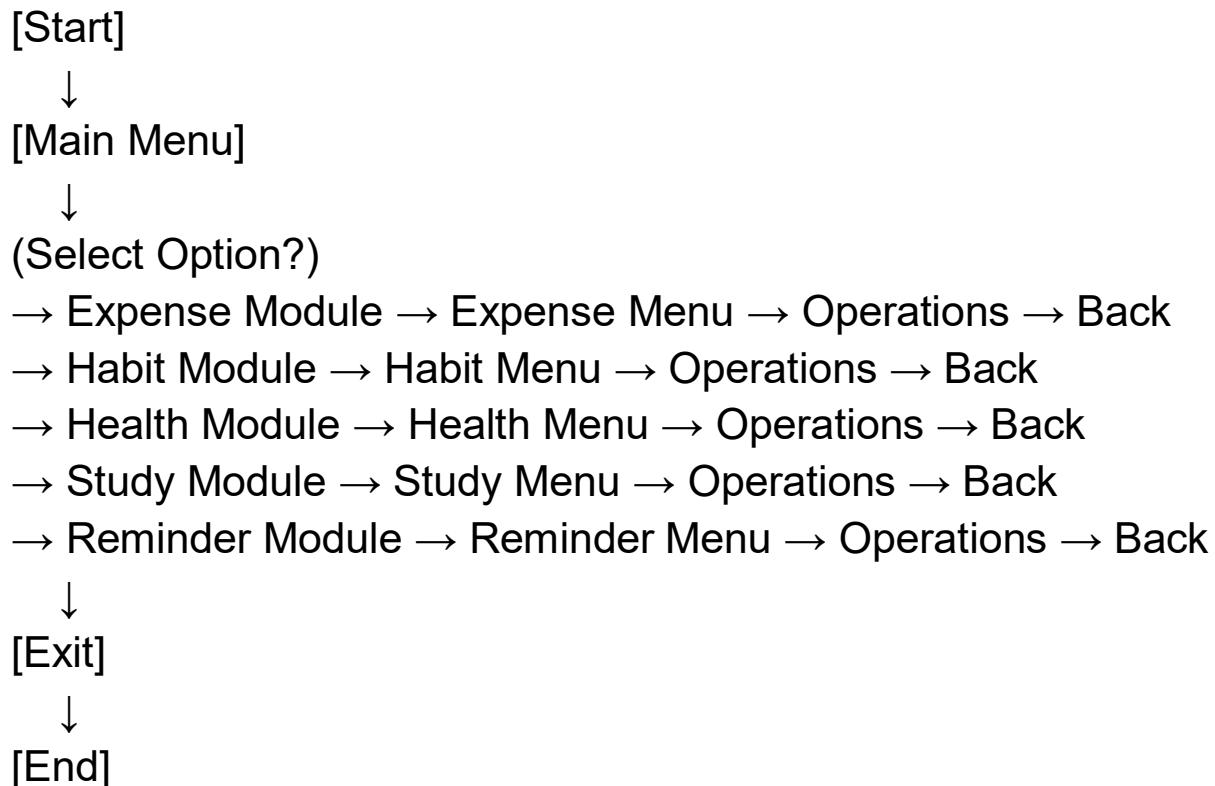
Modules:

- Expense Tracker
- Habit Tracker
- Health Tracker
- Study Tracker
- Reminder System

Algorithm (Overall Program Flow)

- i) Start the program
- ii) Display main menu: Expense Tracker Habit Tracker Health Tracker Study Tracker Reminder System Exit
- iii) Read user choice
- iv) If Expense selected → go to Expense Menu
- v) If Habit selected → go to Habit Menu
- vi) If Health selected → go to Health Menu
- vii) If Study selected → go to Study Menu
- viii) If Reminder selected → go to Reminder Menu
- ix) Each module performs: Add Data View Data Generate Summary
- x) Return to main menu
- xi) If Exit → terminate the program

Flowchart:



Implementation:

All source code is kept inside the /src folder. All header files are kept inside /include.

Every module uses:

- addSomething()
- viewSomething()
- summary()

File handling ensures permanent storage of data. Time/date functions (from <time.h>) store month/day/year automatically.

Testing & Output

The program was tested with multiple inputs: Expense Module: Added expenses Viewed expense list Monthly summary generated correctly Habit Module: Habits added Marked as completed Verified stored status Health Module: Steps & calories logged Full activity log printed Study Module: Study hours added Daily study summary accurate Reminder Module: Reminders created Displayed properly Program compiled using: gcc src/*.c -I include -o main Result: No crashes All menus working File handling stable

Conclusion:

The Personal Life Management System successfully integrates 5 daily-life modules into one C program. The project demonstrates modular programming, file handling, menu-driven logic, and real-time data logging. Future improvements: Convert into GUI Add database (SQL) Add notifications

References:

- “The C Programming Language” – Kernighan & Ritchie
- UPES C Major Project Guidelines
- GCC Compiler Documentation