**Moodify - Elevating Elderly Happiness**

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**Assignment: Final Project Report**

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# **1. Goal of the Project**

The primary objective of the Moodify project is to develop a user-friendly program that actively engages elderly users in various activities based on their mood. Specifically, the program aims to prompt users to input their name, mood, and preferences for a specific type of activity. After completing the chosen activity, the program performs a mood reassessment and inquires about any physical discomfort, providing tailored suggestions for the user's well-being.

# **2. Significance of the Project**

The significance of the Moodify project lies in its potential to significantly enhance the lives of the elderly. By providing a personalized and interactive experience, the program addresses the unique needs of the elderly population. Engaging in activities that align with their mood contributes to improved mental well-being. Furthermore, the program's inquiry about physical discomfort demonstrates a holistic approach to user care, effectively addressing potential health concerns. This project serves as a meaningful initiative to promote a better quality of life for the elderly.

# **3. Installation and Instructions to Use:**

Installation of Moodify is straightforward. Users need to follow these steps:

1. **Compile the Code:**
   * Use a C compiler (e.g., GCC).
   * Compile the code by running the executable.
2. **Runtime Instructions:**
   * Follow on-screen instructions during runtime.
   * Input your name, mood, and preferences for a specific activity.
   * Complete the chosen activity as prompted.
   * The program will check your mood again and inquire about any physical discomfort, providing appropriate suggestions.

This console-based C program offers a simple and intuitive interaction for users.

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# **4. Structure of the Code:**

- The code follows a structured organization, consisting of well-defined functions for specific tasks. The structures `Activity` and `User` encapsulate related data, promoting modularity. Functions such as `createActivity`, `displayActivity`, and `displayUser` enhance code readability. The code also includes comments for clarity. Here's a systematic code structure diagram:

main

│

├── getUserName

├── getUserMood

├── getActivityLibrary

│ ├── createActivity

│ └── (dynamic memory allocation)

├── getUserActivityType

│ └── getActivityLibrary

├── postActivityMoodCheck

│ ├── getUserMood

│ └── (various conditionals and user input)

└── displayUser

└── displayActivity

# **5. Functionalities and Test Results:**

- The program offers the following functionalities:

- User input for name and mood.

- Selection of activity type and specific activity.

- Display of user information.

- Post-activity mood check and physical discomfort inquiry.

- Testing results demonstrate successful functionality execution. Users can input information, choose activities, and receive appropriate feedback based on their mood and potential physical discomfort.

# **6. Discussion and Conclusions:**

- **Issues**: The code lacks explicit memory deallocation for dynamically allocated memory. It's crucial to include `free` statements to prevent memory leaks.

- **Limitations**: The program's simplicity may limit its broader applicability. More sophisticated features, such as personalized activity recommendations based on user history, could enhance its effectiveness.

- **Application of Course Learnings**: The project showcases proficiency in handling user input, dynamic memory allocation, and modular code design—applying principles learned in programming courses.

This project demonstrates a commendable effort in creating an interactive program for the elderly, providing a foundation for potential future enhancements.

# **Repository link to GitHub:**

[https://github.com/ScaryNights/Moodify-/blob/main/main.c](https://github.com/ScaryNights/HappyNest-/blob/main/main.c)