🕵️ Ahmed Elsifi Impossible Task

The Mission: Build a **"Personalized Life Manager" CLI app** in pure **C (or C++)** that combines *data storage, calculations, conditions, loops, pointers, arrays, structs, enums, unions, and standard libraries*.

Features to Implement

1. **User Registration (Strings, Chars, Enums, Structs)**
    - Ask the user for their full name, age, gender (enum), and height/weight.
    - Store everything in a `struct`.
    - Use an `enum` for gender (`MALE, FEMALE`).
2. **Health & Fitness Tracker (Functions, Math.h, Floats)**
    - Calculate **BMI** and print if underweight, normal, overweight, obese.
    - Store weight/height in both `float` and `double` to revise precision differences.
3. **Time-based Daily Planner (time.h, Loops, Conditions)**
    - Using `time.h`, print current system time.
    - Based on time, suggest:
        - Morning (5–11) → "Time to study C++ 🔥"
        - Afternoon (12–17) → "Go exercise 🏋️"
        - Evening (18–23) → "Relax or revise!"
        - Night (0–4) → "Sleep!! 😴"
4. **Task Manager (Arrays, Strings, Loops, Conditions, Unions)**
    - Store up to `N=10` tasks in an array of strings.
    - Each task can have: `title`, `priority (int)`, `status (enum: PENDING, DONE)`.
    - Use a `union` to store either `priority` (int) or `estimated_time` (float).
5. **Pointer Operations**
    - Print tasks using both **array indexing** and **pointer arithmetic**.
    - Swap two tasks using pointers.
6. **Mini Games (Random + Loops + Conditions)**
    - A simple **guess the number game** (`rand()` from `stdlib.h`).
    - User has 5 tries, print win/lose message.
7. **File Save & Load (BONUS, if you want full power)**
    - Save all user data and tasks to a file.
    - On program start, check if a file exists → load previous data.

What This Tests

☑ Data types: arrays, strings, chars, int, float, double, long long, boolean ☑ Structs, Unions, Enums ☑ Conditions & Loops ☑ Functions (BMI, task manager, guessing game) ☑ Pointers & pointer arithmetic ☑ Libraries: `math.h`, `time.h`, `string.h`, `stdlib.h` ☑ (Bonus) File handling → full revision of C standard I/O
