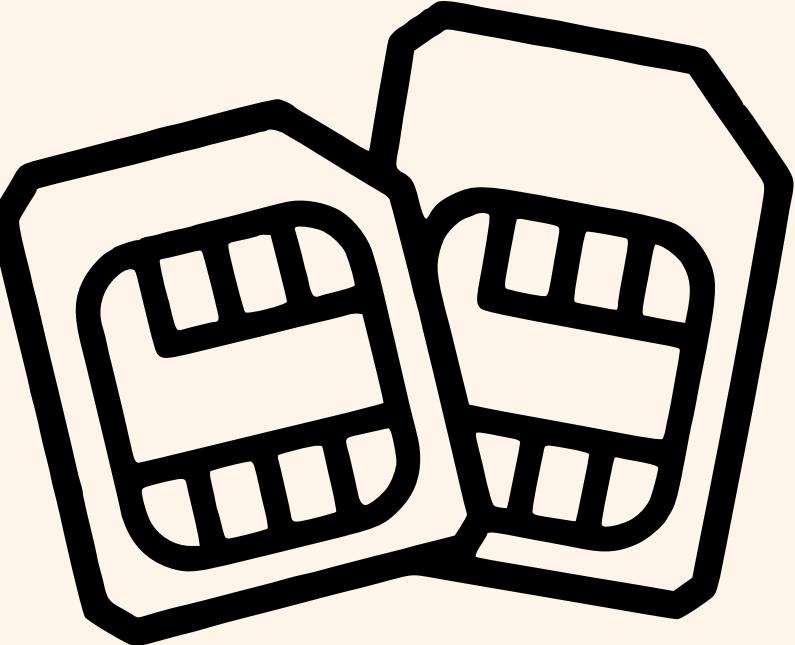


# **SIM RECHARGE PORTAL**



**Under guidance**

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# OUR TEAM



Aaron Loeb

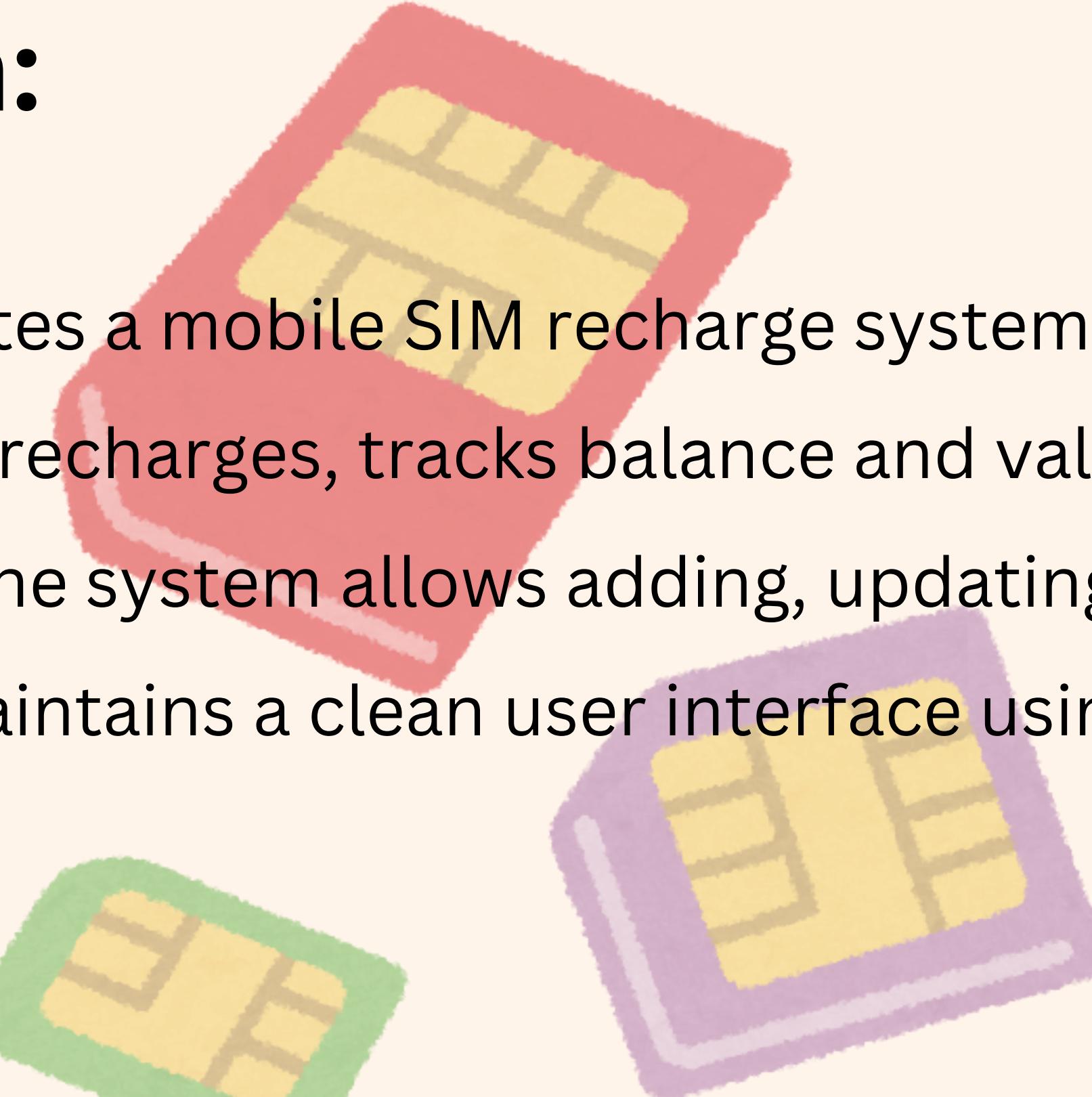
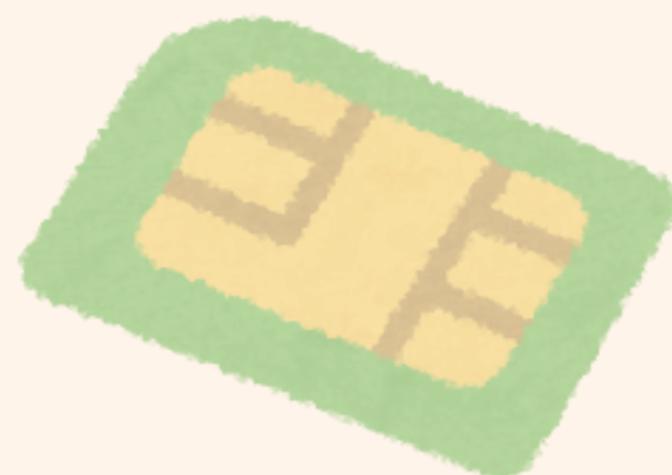




**WELCOME TO  
OUR PROJECT**

# Description:

This project simulates a mobile SIM recharge system. It manages user profiles, performs recharges, tracks balance and validity, and stores recharge history. The system allows adding, updating, deleting users, and maintains a clean user interface using C.



# Project Goals:

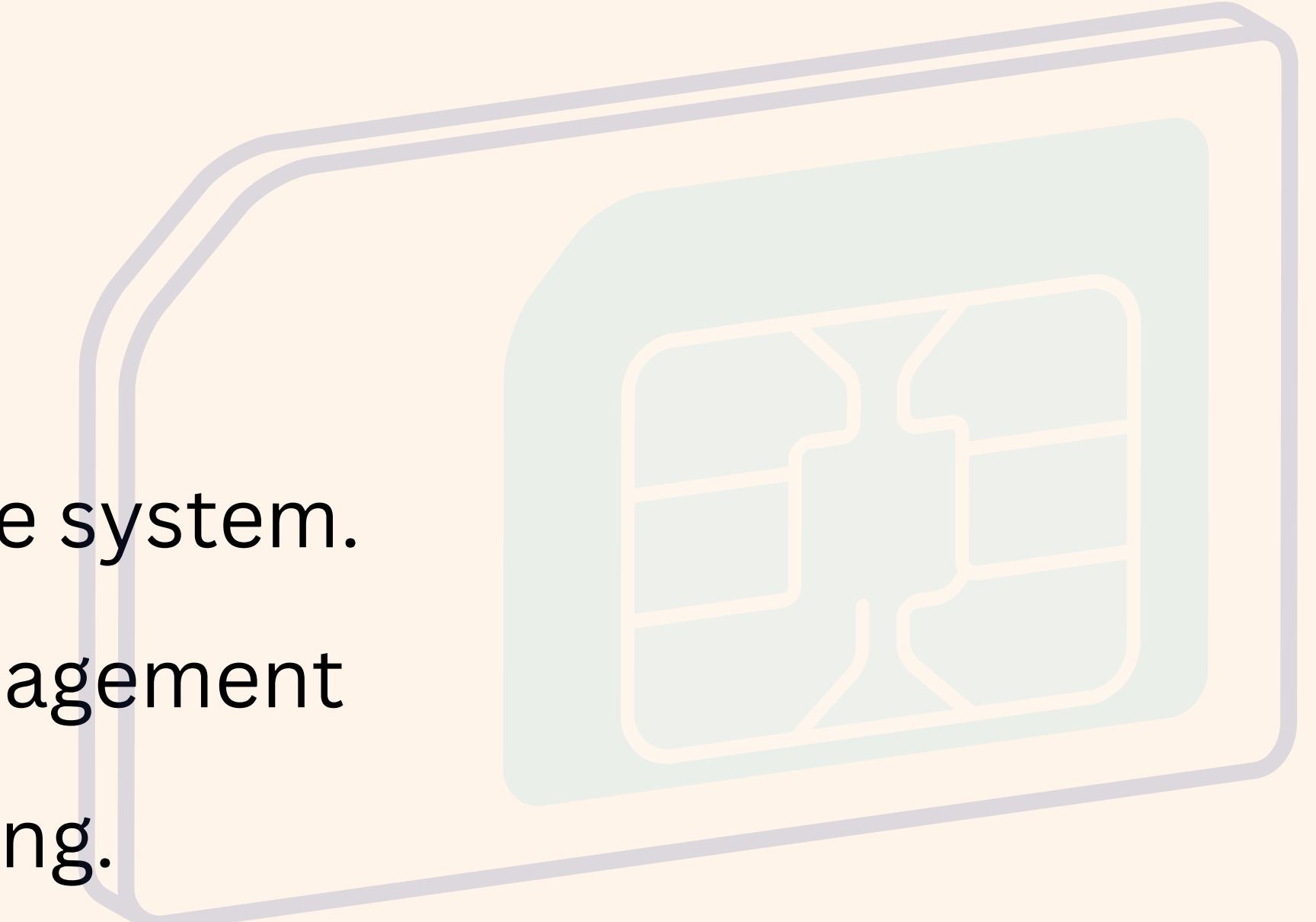
Simulate a real-world SIM recharge system.

Enable multiple user account management

Implement recharge history tracking.

Learn to use data structures like arrays and linked lists.

Create a menu-driven system with proper user input handling.



# Problem Statement:

**Create a C program that:**

1. Supports multiple SIM users with details like name, number, email, and operator.
2. Allows recharge with date tracking, balance and validity updates.
3. Keeps a history of past recharges using linked lists.
4. Allows checking balance, updating info, and deleting users.

# Tools & Languages Used:

**Language:** C

**Compiler:** GCC or any standard C compiler

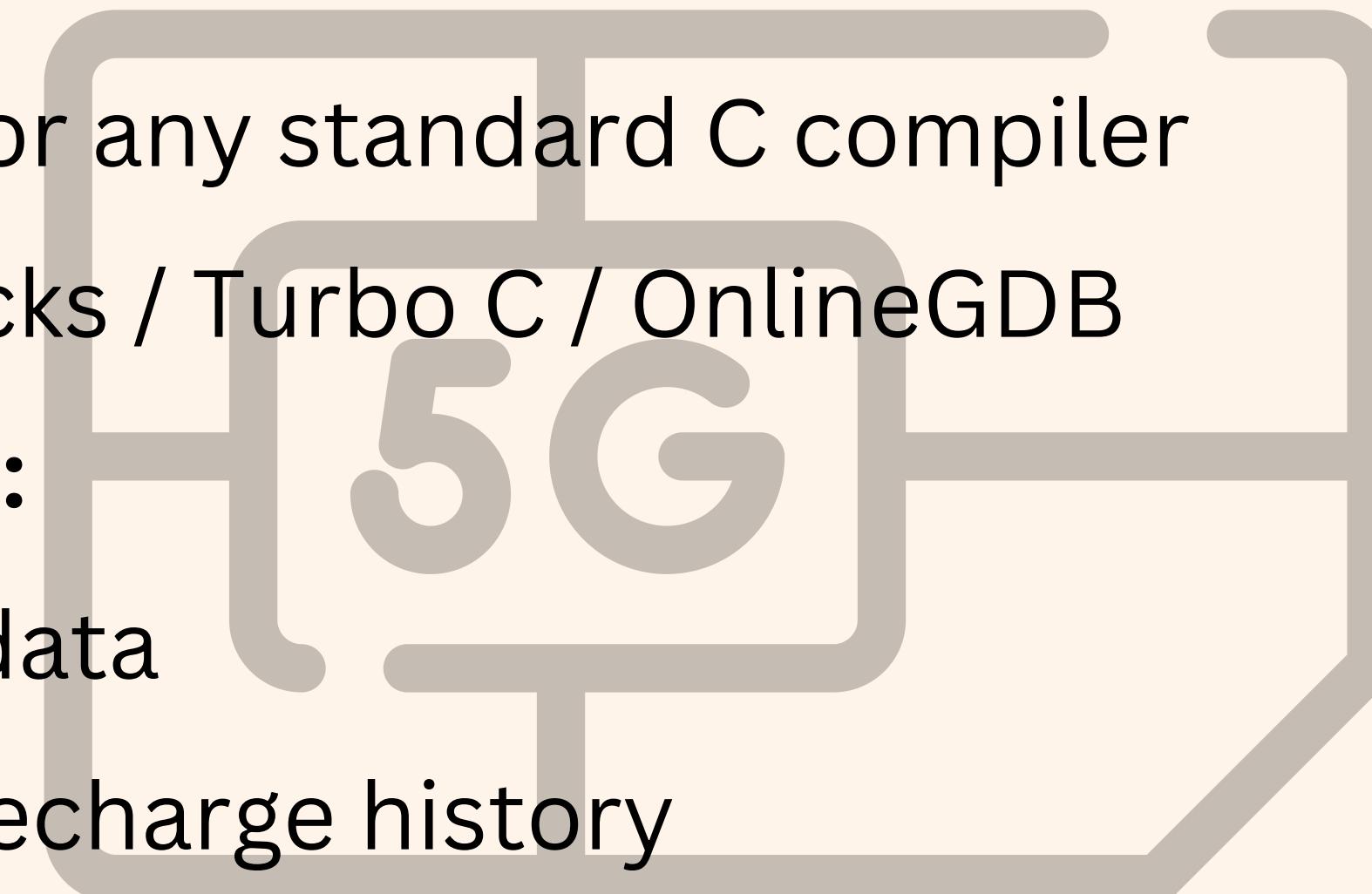
**Tool:** Code::Blocks / Turbo C / OnlineGDB

**Data Structures:**

Struct for user data

Linked List for recharge history

Array for user storage



# Source code Explanations:

## Part 1: Structures & Global Setup

**Lines:** 1–35

Defines the RechargeNode (linked list) and User structure.

users[] is an array to store all users.

userCount tracks the number of users.

**Purpose:** Setup memory structure for all future user and recharge operations.



## Part 2: Core Operations

Lines: 36–125

### Functions to:

`addUser()` – Add new user with validation.

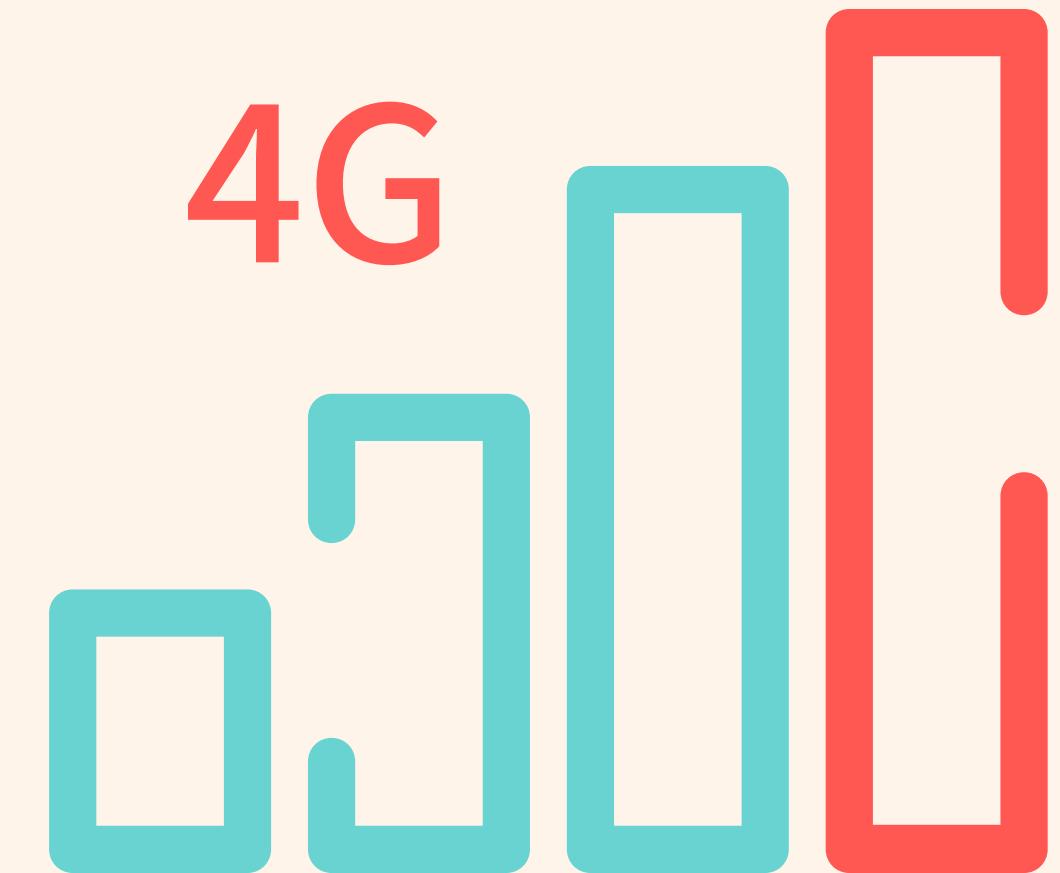
`findUser()` – Search user by phone.

`recharge()` – Recharge and update balance, validity, and history.

`displayBalance()` – Show user details.

`addRechargeHistory()` – Adds a new recharge entry to history (linked list).

Purpose: Main functional logic for managing and updating users.



## Part 3: Utilities & History

**Lines:** 126–160

`showRechargeHistory()` – Displays past recharges.

`updateUser()` – Modify name/email/operator.

`deleteUser()` – Removes a user and frees their history memory.

`displayAllUsers()` – Prints all current user profiles.

Purpose: Extend system functionality with utilities for viewing and editing.



## Part 4: Main Menu & User Interface

**Lines:** 161–end

Menu system inside a loop for:

Adding, recharging, checking balance, showing history, updating and deleting.

Uses switch-case to perform actions.

Purpose: Interface that lets the user interact with the system using numbered options.



# Feature Enhancements:

1. Added data validation for phone, email, and dates
2. Recharge history linked list for each user
3. 28-day validity auto-update on each recharge
4. Prevention of duplicate users by phone number
5. Support for user update and delete functions
  - Displays all users with current balance and validity
  - Recharge history maintained per user with date and amount
  - Simple menu-driven interface for easy use

**Source code:**

<https://onlinegdb.com/WHOMU9QX6>

# Output

```
gram 개선 x + star
chatgpt.com/c/6813bf7f-d618-8011-ba21-6a0472b3b9d8 Explain

==== SIM Recharge Portal ====
1. Add New User
2. Recharge
3. Check Balance
4. Show Recharge History
5. Update User Info
6. Delete User
7. Display All Users
8. Exit

Enter your choice: 1
Enter name: John Doe
Enter phone number: 9876543210
Enter email: john@example.com
Enter operator: Airtel
Enter validity (days): 30
User added successfully!
```

```
ram 개선 x +  
chatgpt.com/c/6813bf7f-d618-8011-ba21-6a0472b3b9d8 ☆    
==== SIM Recharge Portal ====  
1. Add New User  
2. Recharge  
3. Check Balance  
4. Show Recharge History  
5. Update User Info  
6. Delete User  
7. Display All Users  
8. Exit  
Enter your choice: 2  
Enter phone number: 9876543210  
Enter amount to recharge: 199  
Enter date (DD-MM-YYYY): 01-05-2025  
Recharge successful! New balance for 9876543210: 199.00  
--- SIM Recharge Portal ---  
Ask anything
```

```
ChatGPT 채팅창  
chatgpt.com/c/6813bf7f-d618-8011-ba21-6a0472b3b9d8  
Copy Edit  
==== SIM Recharge Portal ====  
1. Add New User  
2. Recharge  
3. Check Balance  
4. Show Recharge History  
5. Update User Info  
6. Delete User  
7. Display All Users  
8. Exit  
Enter your choice: 3  
Enter phone number: 9876543210  
User: John Doe  
Phone: 9876543210  
Balance: 199.00  
Validity: 58 days  
Ask anything
```

```
ChatGPT 채팅창  
chatgpt.com/c/6813bf7f-d618-8011-ba21-6a0472b3b9d8  
Copy Explain Edit  
==== SIM Recharge Portal ====  
1. Add New User  
2. Recharge  
3. Check Balance  
4. Show Recharge History  
5. Update User Info  
6. Delete User  
7. Display All Users  
8. Exit  
Enter your choice: 1  
Enter name: John Doe  
Enter phone number: 9876543210  
Enter email: john@example.com  
Enter operator: Airtel  
Enter validity (days): 30  
User added successfully!  
Ask anything
```

# Conclusion:

The SIM Recharge Portal project demonstrates the practical application of C programming in handling real-world user data. It uses structures for organized storage and linked lists for flexible recharge tracking. The project emphasizes modular design and efficient memory usage, helping understand both logic and data management.

A black and white photograph of a mountain range. In the center, the words "THANK YOU" are written in large, bold, black letters. The background shows several mountain peaks, with one prominent peak on the left and another on the right. The sky is clear and light.

THANK  
YOU