Summary of Implemented Features

1. Recover Account Credentials

This feature allows users to securely reset their password or username if forgotten. The process involves:

- Email Verification: Users must enter their registered email, and a one-time verification code (OTP) is generated and "sent" (simulated in development).
- Secure Reset:
    - Passwords must meet strict criteria (8+ characters, at least 1 number, 1 uppercase letter, no spaces).
    - Usernames are checked for uniqueness to prevent duplicates.
- Validation & Security:
    - All password changes are stored as SHA-256 hashes (never plaintext).

This ensures that only legitimate users can reset credentials while maintaining security.

2. User Settings & Data Persistence

To prevent loss of progress, user data is permanently stored in two ways:

- Account Information: Saved in accounts.csv in the format (*username, hashed_password, email*)
    - Passwords are securely hashed before storage.
    - Usernames and emails are preserved for login and recovery.
- Game Statistics: Wins, losses, and performance metrics are stored on a remote server (not shown in code but designed for scalability).
    - Stats are displayed on leaderboards, ensuring persistence across sessions.

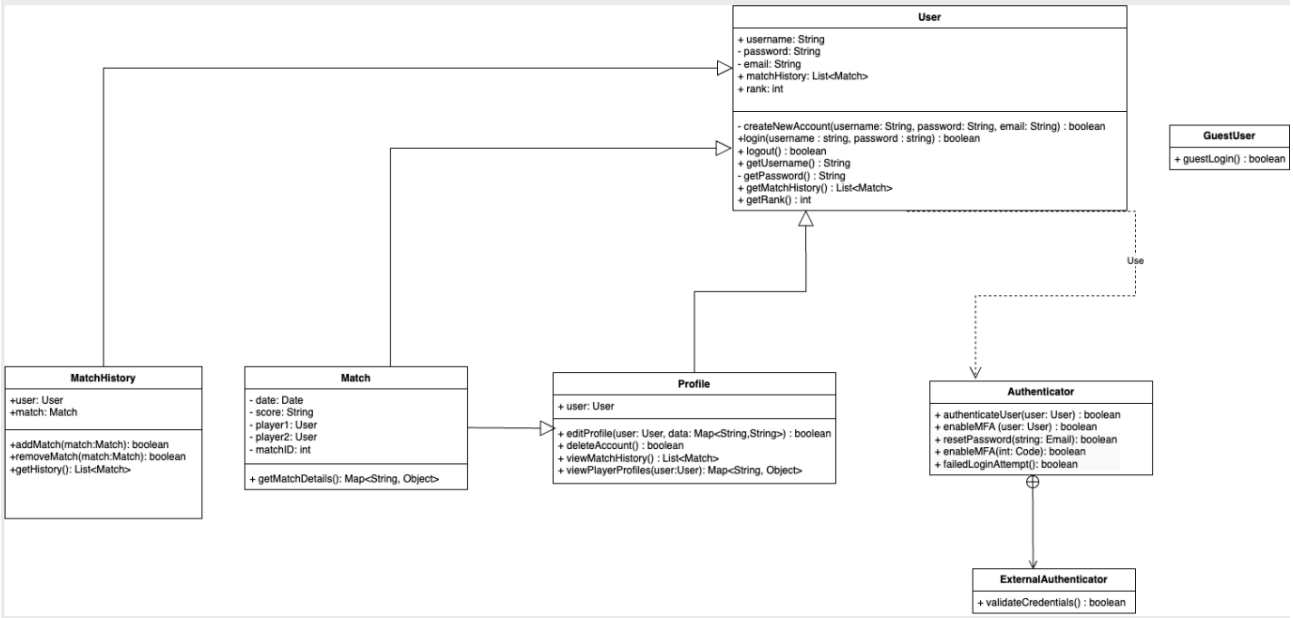
This guarantees that user settings and progress are never lost, even after logging out.

Why These Features Matter

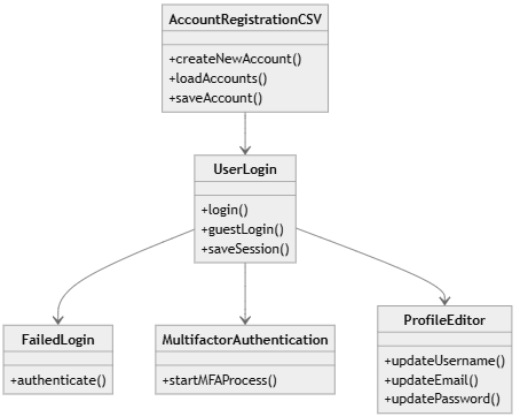
- Recover Account Credentials → Restores access securely without compromising accounts.
- User Settings Saved → Ensures stats and preferences are retained long-term.

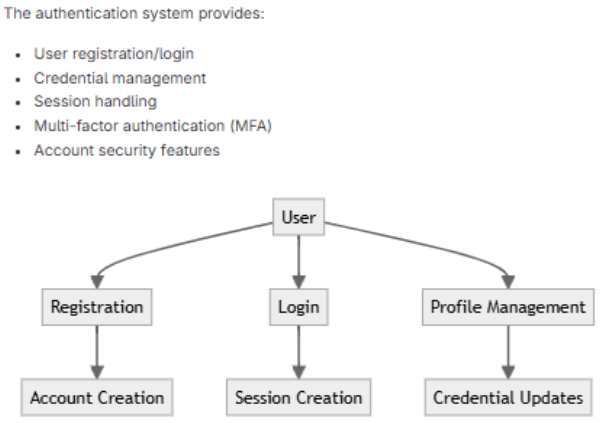
Both features were added in response to the feature proposal, fulfilling core requirements for a reliable user experience.

Before:



Changes Added:





One of the primary criticisms from our reviewers is the lack of account recovery and data backup features, which risks users losing their progress. These two issues are closely related and can be resolved efficiently by storing user data in a standardized format like CSV or JSON. This approach ensures secure data storage and exchange while allowing users to access their information, provided that they have valid account credentials. To further safeguard access, users who need to recover their credentials can request a one-time verification code via their registered email address. This code will enable them to reset their login details and regain account access, minimizing disruption and data loss.