

March 21, 2025

Letter to the Reviewed Team

Dear Lima team,

We hope this message finds you well. After reviewing your project, we have compiled our findings, which we believe will help improve your design and overall functionality. Please find our summary, feedback, and suggestions below:

General Critique of the Design:

Overall, your design showcases several positive aspects, particularly in terms of complexity and coverage of key features. However, there are also areas that could benefit from refinement:

- **Strengths:**
 - **Comprehensive use case coverage:** You've done well to identify and document multiple important use cases, especially related to game features and matchmaking.
 - **Logical organization of actors:** Your identification of actors and their roles (e.g., player, game platform) in most cases is clear and well-thought-out.
- **Weaknesses:**
 - **Lack of clarity in relationships:** In some areas, relationships between use cases and actors are vague, leading to confusion. Specifically, in your **GUI diagrams** and **matchmaking** sections, the flow could be simplified for better clarity.
 - **Inconsistencies in diagram directionality:** Arrows indicating relationships in use case diagrams sometimes point in the wrong direction, which could lead to misunderstandings about the interactions between actors and use cases.

Diagram Corrections/Changes:

Here are a few corrections and suggestions to improve the diagrams:

- **Authentication Use Case:**

- It seems that the **Authentication** use case diagram is either missing or merged with the **GUI** diagram. Please create a separate diagram for **Authentication** to better isolate the flow for logging in, signing up, and password recovery.
- **Database and Actor Relationships:**
 - **Database** should be listed as an actor in your use case diagrams, rather than a use case. It's an external system that supports several actions (e.g., storing player data, retrieving leaderboard information).
- **Extends Arrows:**
 - The **extends** arrows in your diagrams are often pointing the wrong way (e.g., **Sign-up** should extend **Log-in**, not the other way around). Adjust these to follow the proper UML standards, where an extension action happens only after the base use case.
- **Missing Actors:**
 - Several critical actors are missing, including the **Game Host Server** and **Game Logic Server**, which are referenced in your descriptions but not included in the diagrams. These should be added for better clarity and accuracy.

Feature Requests:

Based on our review, we'd recommend considering the following two changes to improve functionality and user experience:

1. Customizable Themes & Accessibility Modes:

- This feature enables users to personalize UI colors and switch between preset themes (e.g., Dark Mode, Light Mode, Colorblind-friendly) to accommodate visual preferences and accessibility needs. By implementing this, users gain a more comfortable, individualized experience that caters to their visual requirements, promotes inclusivity, and reduces eye strain over long play sessions. This enhances platform appeal and supports a broader user base.

2. Session Owner Kick Control:

- This feature allows the lobby creator to remove disruptive or unwanted players before a Whist match begins, with an AI bot replacing any mid-game disconnects. By implementing this feature, session hosts maintain greater control over the match environment, ensuring a fair, disruption-free experience. AI takeover prevents abandoned matches, preserving game flow and player satisfaction.

3. Password Visibility Toggle:

- This feature involves adding a small toggle or icon in the login screen's password field to switch text between hidden and visible. By implementing this feature, login errors would be minimized by letting users verify their input, especially

helpful on mobile or for players with visual impairments. It's a lightweight addition that improves overall usability without major interface changes.

4. **Spectate Mode:**

- This feature would offer a real-time viewing option for ongoing games, with dedicated spectator slots and a separate chat channel. By implementing this feature, community engagement could be increased by letting players watch friends or high-level matches. Spectators can learn strategies, discuss gameplay, and stay active on the platform even when not playing, fostering a social, dynamic environment.

Constructive Feedback:

To enhance the overall quality and readability of the design, we suggest the following improvements:

- **Consistency in Naming:** Ensure consistent naming conventions throughout the diagrams, particularly between classes and actors. For example, "Player" and "Game" should be uniformly referenced in all related components to avoid confusion.
- **Simplification of Complex Use Cases:** Some of your use cases, especially around **Matchmaking** and **Leveling**, are overly complex and could benefit from being broken down into simpler, smaller components. This will improve readability and make it easier for developers to implement and maintain.
- **Clearer Visual Hierarchy:** Improve the visual structure of your diagrams by grouping related elements together and using more distinct separation between different system components. This will help stakeholders quickly grasp the design and its relationships.

Conclusion:

Your project is on the right track, but there are areas that can be refined to improve clarity, consistency, and functionality. We believe these adjustments will help ensure a smoother implementation process and a better user experience. We encourage you to revise the diagrams and consider the feature suggestions to further enhance the system.

Best regards,

Lima review team

Appendix 1: Annotated GUI Diagrams

Figure 1.1: Signup/Login Page

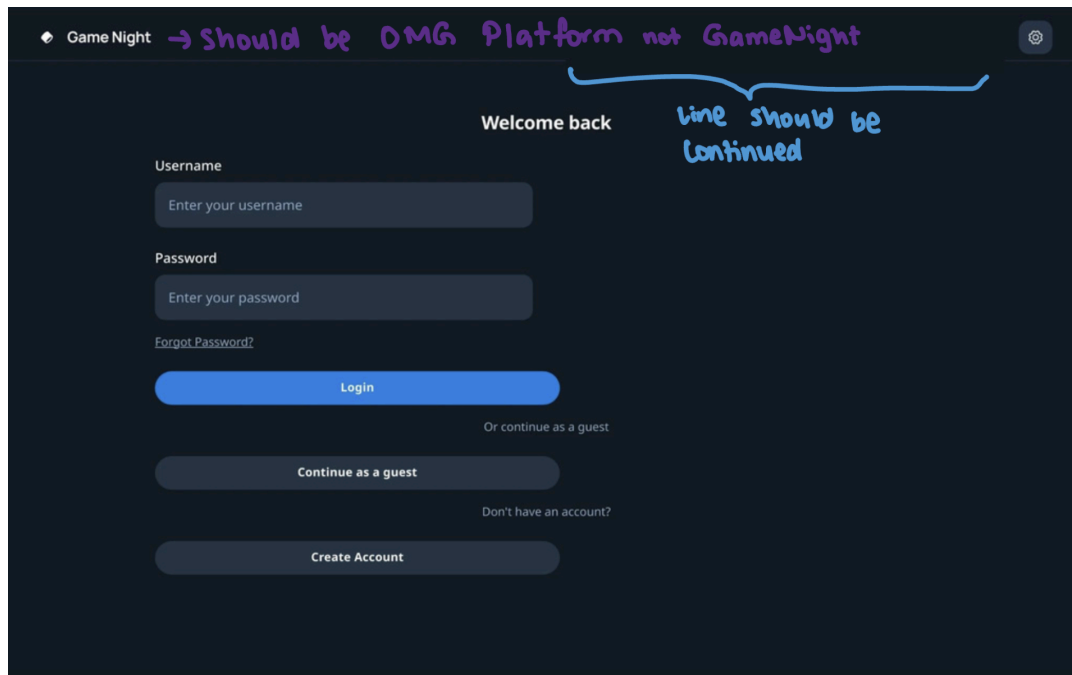


Figure 1.2: Dashboard Page

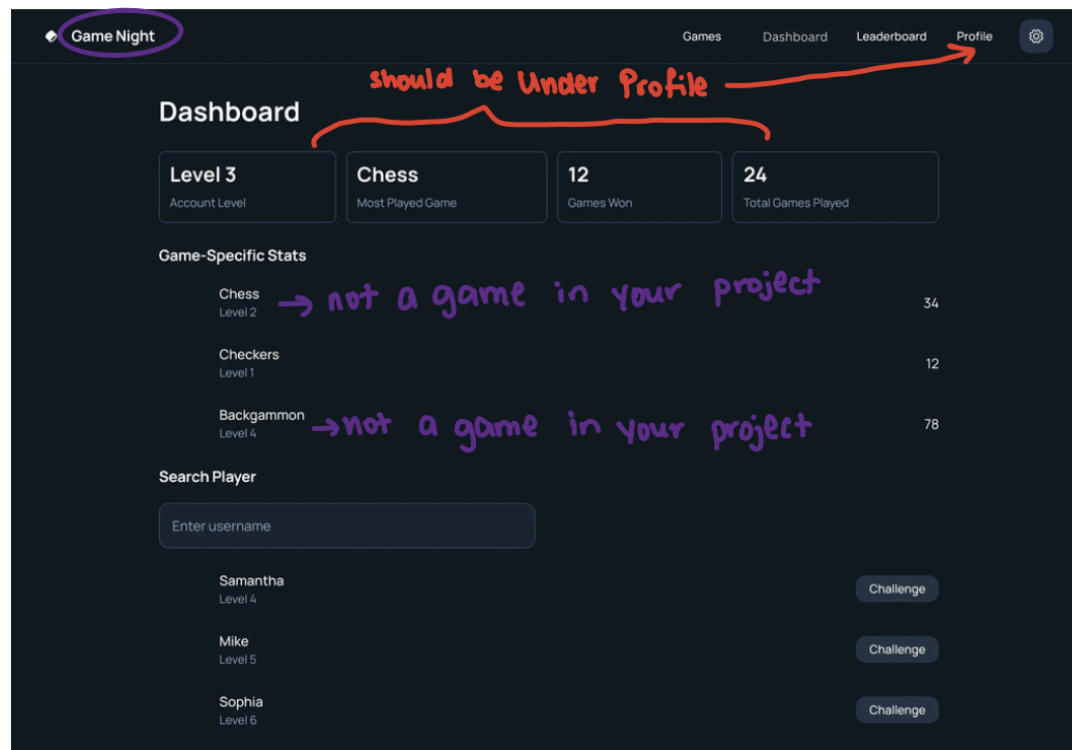


Figure 1.3: Game Library & Matchmaking Page

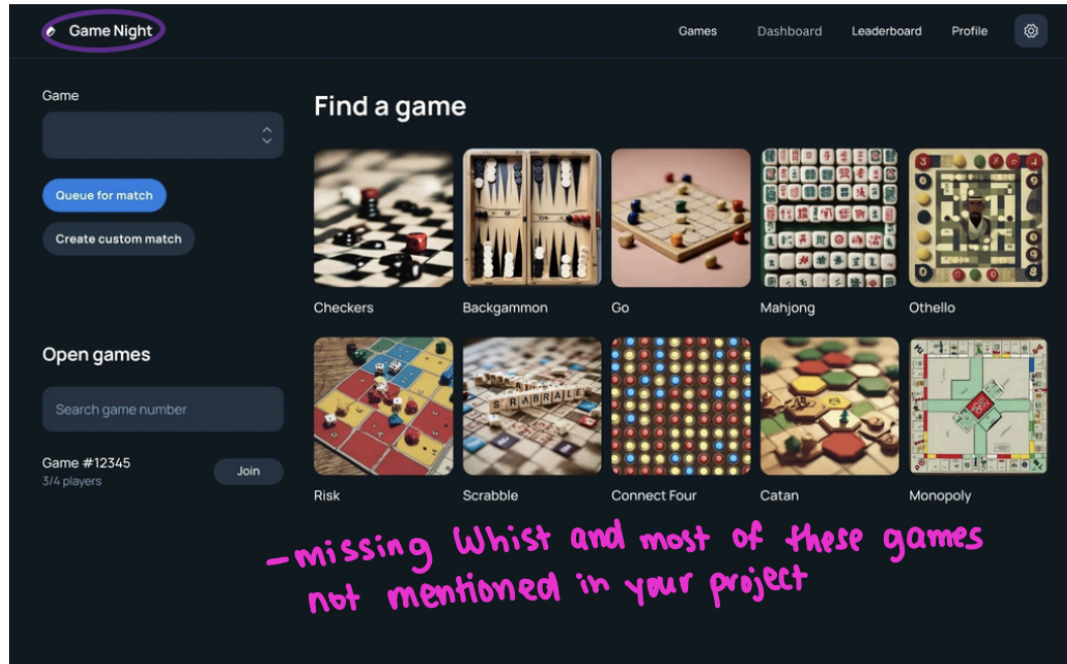


Figure 1.4: Leaderboard Page

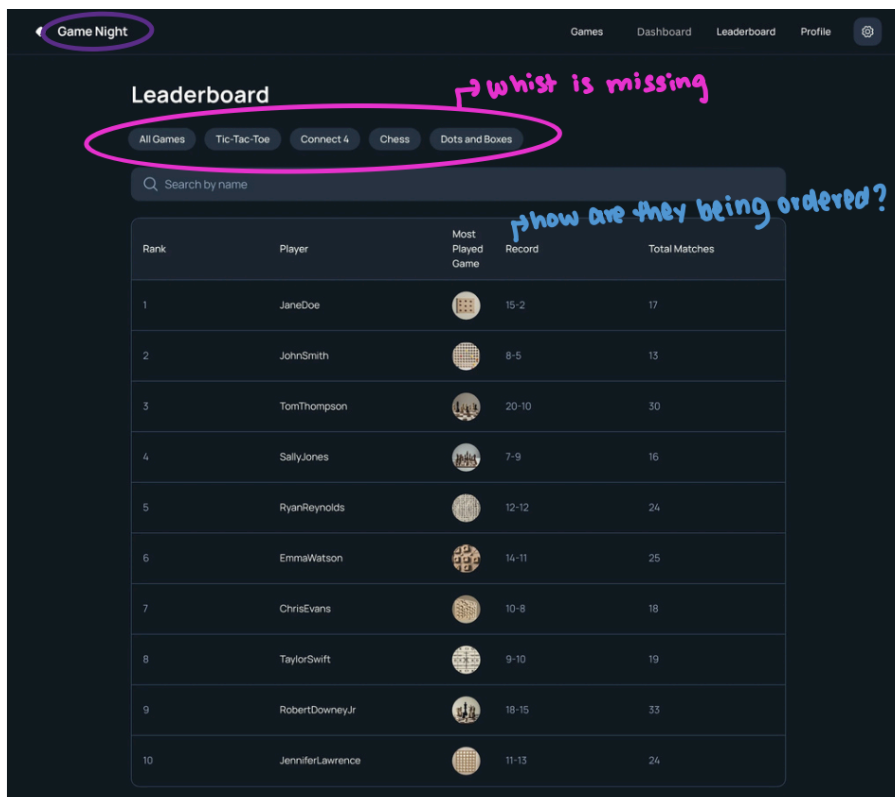


Figure 1.5: Settings Page

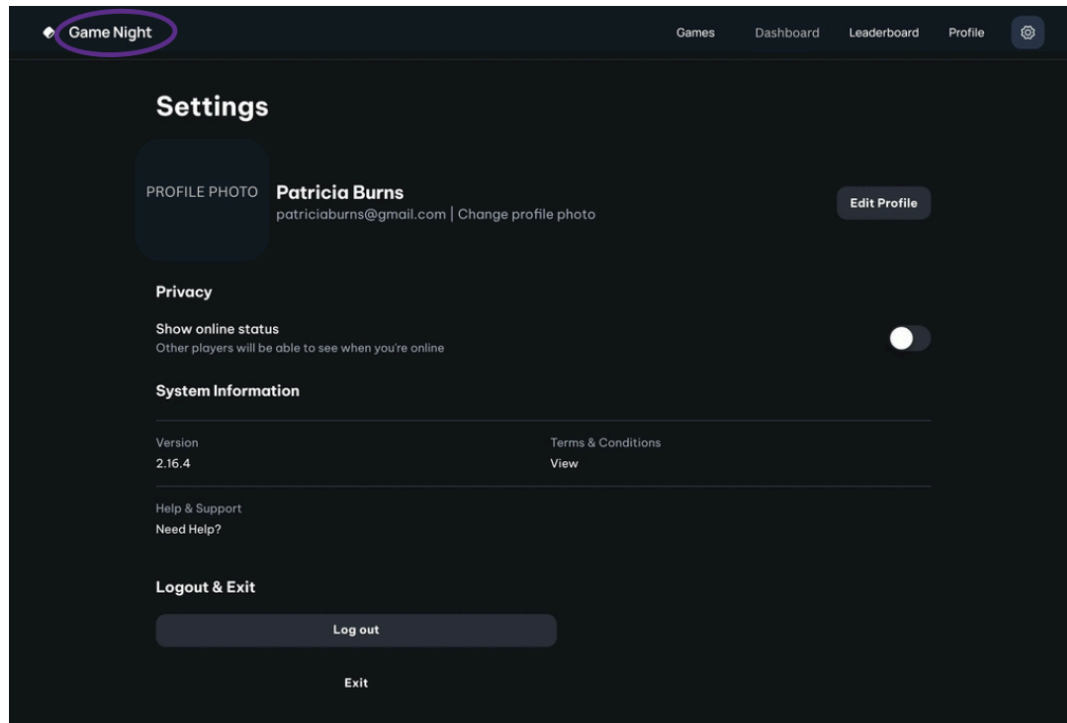
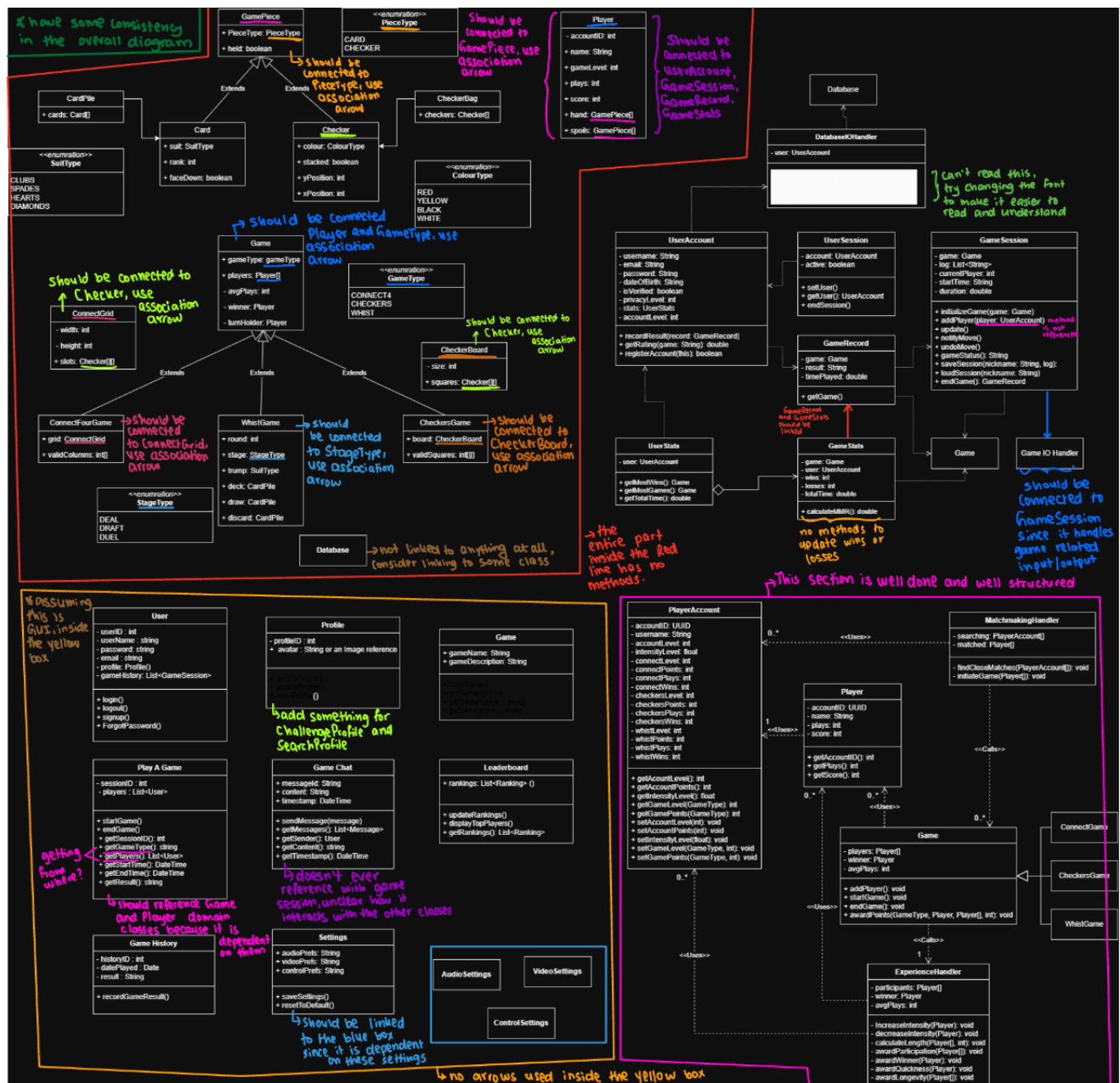


Figure 2.1: Class Structure Diagram



Appendix 3: Annotated Use Case Diagrams

Figure 3.1: Leveling Diagram

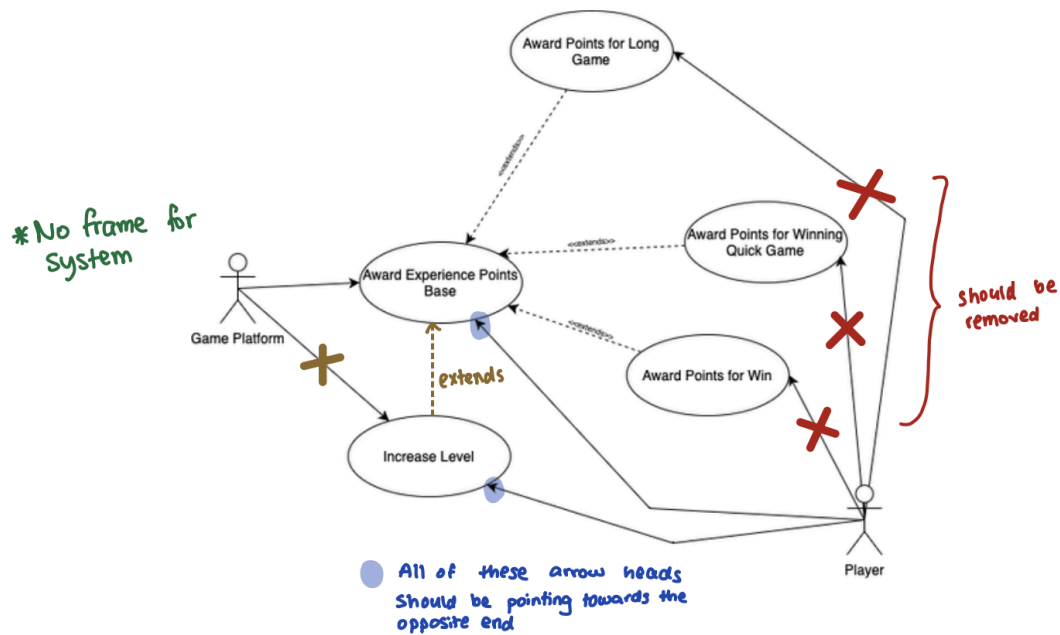


Figure 3.2: Matchmaking Diagram

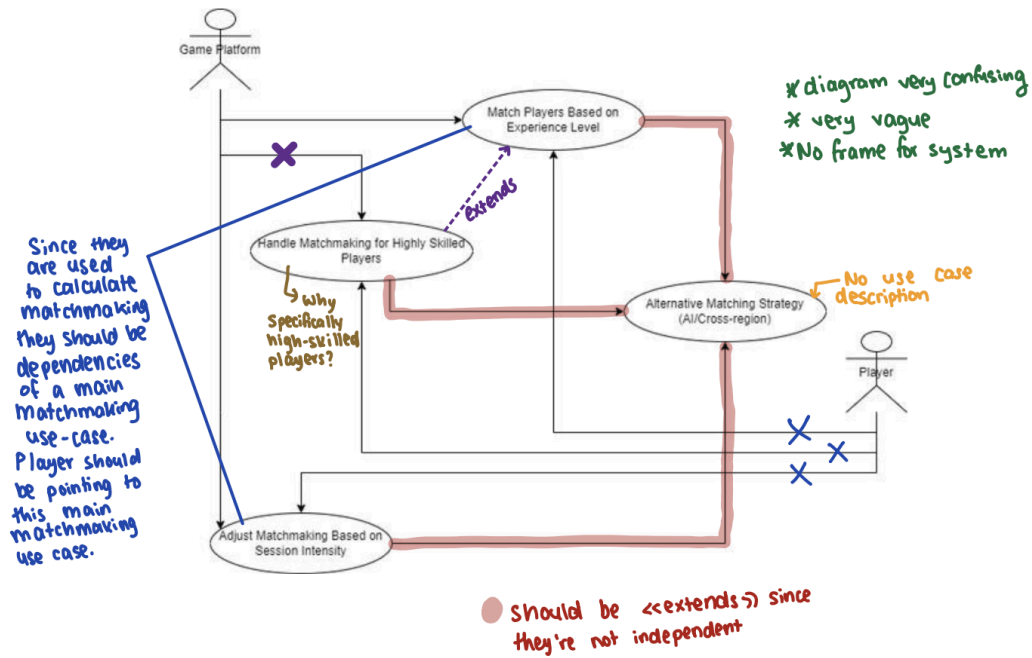


Figure 3.3: Statistics Diagram



Figure 3.4: Game Logic Diagram

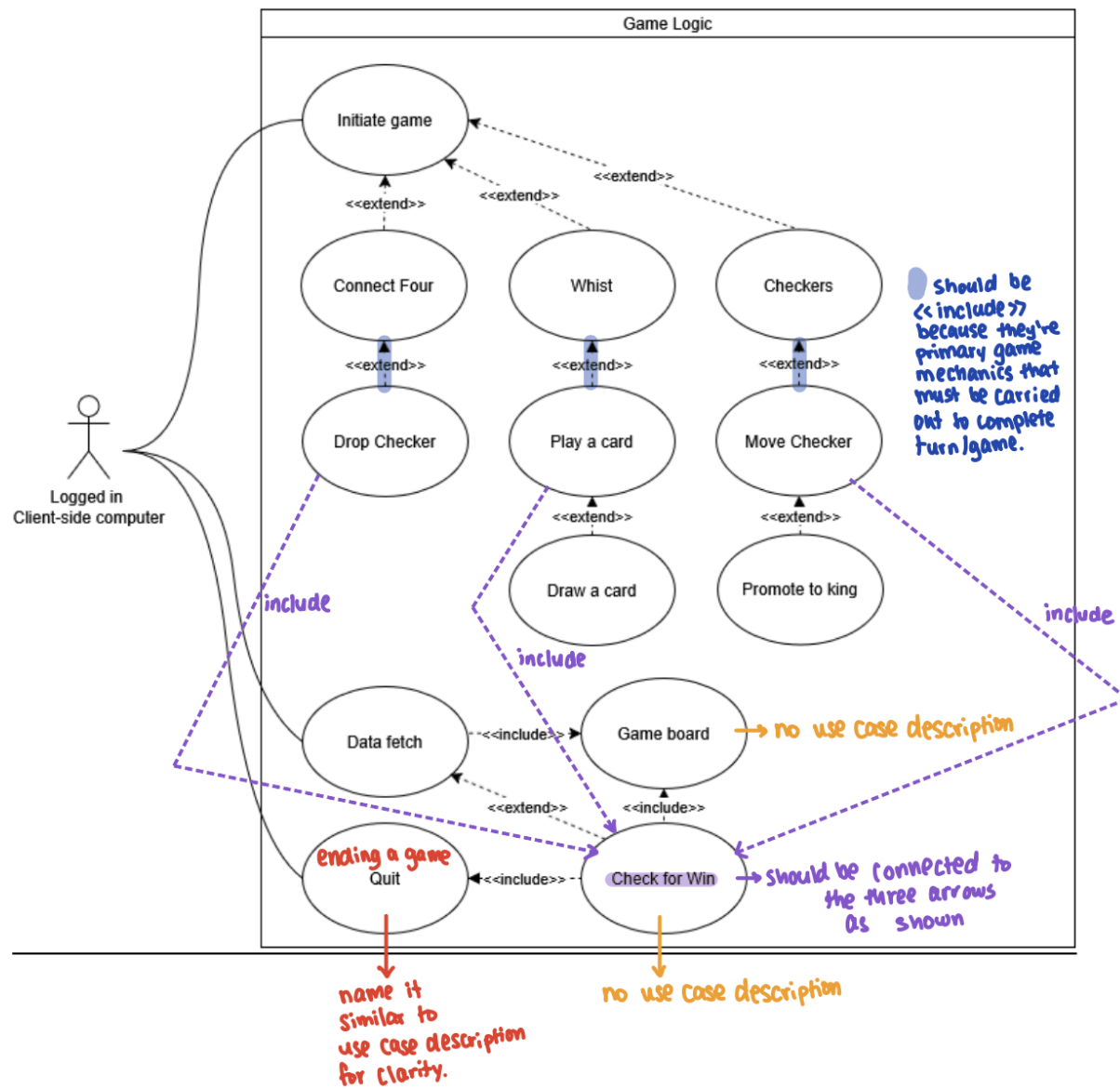
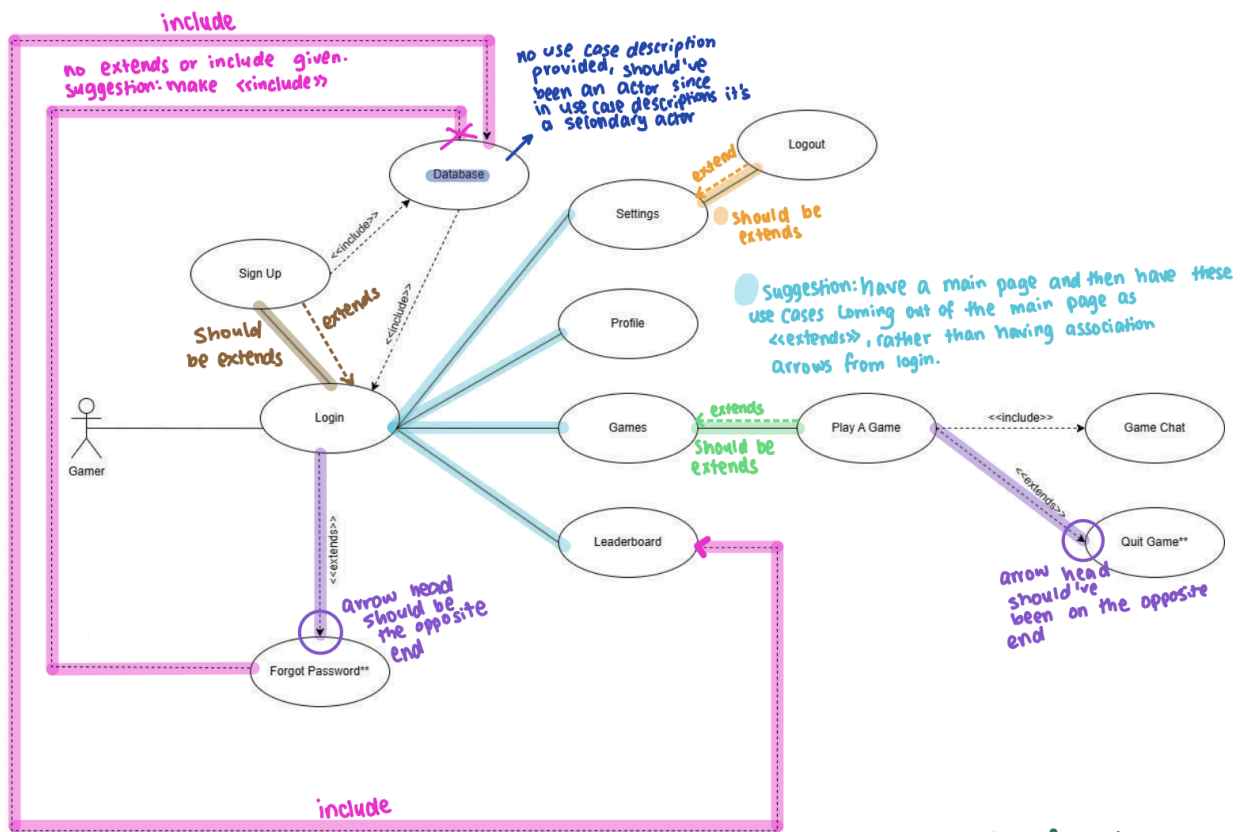


Figure 3.5: GUI Diagram



- *Not very detailed for GUI interaction:
- what happens after a win/loss/tie?
 - what happens after they quit a game?
 - How would the player search a profile, challenge the player?
 - Etc...

*No frame for system