Feature Proposal Document: Descriptions of two requested feature changes that need to include a high-level description of the features, expected impacts on the systems and suggestions for implementation or design.

Team 1: Charlie

Feature Change 1 of View other player's profile function:

High-Level Description:

To address players' privacy preferences and enhance the social experience, this proposal introduces a friends feature and privacy controls, allowing players to manage who can view their profiles. Players will be able to select options to make their profiles visible to everyone, only friends, or completely private. Also, this update provides players with a customized experience, enabling them to control the visibility of specific profile sections, such as game stats, achievements, and play history.

Expected Impacts on the System:

1. Database Adjustments: New tables or fields will be needed to store friendship relationships and profile visibility settings for each player.
2. Increased Data Security Requirements: Since privacy settings are involved, additional data protection and access control checks will be required to enforce these settings accurately.
3. Enhanced Social Interaction: The friends feature could boost engagement, as players can connect with others and selectively share their achievements and stats.
4. Enhanced Data Consistency Requirements: The system must keep profile data consistent across all instances, reflecting privacy and friend status updates immediately. This may need real-time data syncing and updates to data caching strategies.
5. Real-Time Game Data Synchronization: Implement efficient data synchronization mechanisms to broadcast game events to authorized spectators. Consider using WebSockets or similar technologies for real-time data transmission to improve the user experience and reduce latency.

Implementation/Design Suggestions:

1. Privacy Settings Interface: On the profile settings page, add privacy options for each section of the profile, with options like "Visible to Everyone," "Visible to Friends Only," and "Private."
2. Friends Management System: Implement a friends list where players can send, accept, or decline friend requests. Only friends will have access to profiles with restricted visibility settings.

3. Access Control Logic: Modify the profile retrieval function to check each player's privacy settings and determine the visibility of each profile section before displaying it to other players.
4. Friend Request Limits and Cooldowns: Set daily limits and cooldown periods on friend requests to prevent spam and harassment, adding moderation to keep users from being overwhelmed by unwanted requests.
5. Access Control Logic for Spectators: Modify the game session retrieval function to check each player's spectator permissions before allowing a user to view the live game. This will help maintain the privacy and security of each game session.

Feature Change 2: Post-Game Play Again Feature:

High-Level Description:

Implementation of “Play Again” button/screen to employ friendly competition and rivalry, by allowing users to compete in a game once again in the post-game menu, allowing them tally wins against each other and to measure whomever has the natural competitive advantage. This screen could also display the other player’s username. This would contribute to the community building aspect of the application, as recommended by the project document.

Expected Impacts on the System:

1. Enhanced Competition: Two players can now play multiple games in a row against each other without needing to rejoin the game queue. Players have the opportunity to build stronger connections using the in-game chat feature over multiple matches of a game.
2. Increased Community Building: Players can form stronger connections with other players through friendly competition. Additional functionality could include adding players to a friends list or having a search function to search for a player by their username post-game.
3. Improved User Interaction: Having a “play again” screen would make it easier for players to play multiple games in a row. This would improve the usability and encourage users to play more games.

Implementation / Design Suggestions:

1. Viewing Player’s Account: On the post-game menu, the other player’s profile image or username can be displayed with the button to play them again.
2. Play Again Proposal: When a player chooses to play a game again with the same opponent, an offer to play again is sent to the opponent. If the opponent accepts, a new game begins. If they deny, the player is notified and can choose to either exit the game or play again with a random opponent.
3. Notification System: A notification is sent to the other player when an offer to play the game again is made. From there, the other player can either accept or deny. This can be implemented as a popup screen.

4. Reconnecting Back into Match: While playing a match, if a player gets disconnected for any reason, they have a small period of time to reconnect back into the match before the match stops.

Team 2: Delta

Feature Change 1: Enhanced In-Game Chat with Emoji and Moderation

High-Level Description:
This proposal aims to expand the in-game chat feature by adding emoji support and automated moderation to filter inappropriate language. The enhanced chat system will make communication more expressive and safer, improving the social interaction aspect of the game. Players will be able to use emojis to convey emotions and reactions, while the moderation system will ensure a positive environment by automatically filtering out harmful content.

Expected Impacts on the System:

1. **Data Filtering Requirements: The implementation of an automated moderation layer will be necessary to scan for inappropriate content in real-time, ensuring a safe chat environment.**

2. **Resource Usage: Integrating emoji rendering and language filtering may add minimal processing demands but will significantly enhance user satisfaction and engagement.**

3. **Positive Player Experience: A friendly and moderated chat will encourage more interaction between players, fostering a positive community atmosphere.**

4. **Increased Player Retention: By providing a safe and enjoyable chat experience, players are more likely to continue playing and engaging with the community.**

5. **Enhanced Community Building: The ability to use emojis can help players express themselves better, leading to more meaningful interactions and connections among players.**

6. **Custom Emoji Packs: Introduce themed or seasonal emoji packs that players can unlock or purchase, adding a layer of personalization to their chat experience.**

7. **User Reporting System: Implement a user-friendly reporting system that allows players to report inappropriate messages or behavior, further enhancing community safety.**

8. **Chat Moderation Settings: Allow players to customize their chat experience by enabling or disabling certain features, such as emoji usage or chat visibility, based on their preferences.**

9. **Integration with Events: Tie in special emojis or chat features during in-game**

events or promotions, encouraging players to participate and engage with the community during these times.

Implementation/Design Suggestions:

1. **Emoji Library Integration: Integrate a comprehensive emoji library with the chat interface, allowing players to easily access and use emojis in their messages.**

2. **Real-Time Moderation: Utilize a lightweight natural language processing (NLP) tool or keyword filtering system to screen messages for inappropriate content, ensuring a safe chat environment.**

3. **User Settings for Chat: Add options for players to mute or restrict the chat if they prefer not to engage, providing a more tailored experience.**

4. **Feedback Mechanism: Implement a feedback system where players can suggest new emojis or report issues with the chat moderation, allowing for continuous improvement of the feature.**

Feature Change 2: Advanced Analytics Dashboard for Players

High-Level Description:
This proposal introduces an advanced analytics dashboard that provides players with detailed insights into their gameplay performance, statistics, and trends. The dashboard will help players understand their strengths and weaknesses, enabling them to improve their skills and strategies over time.

Expected Impacts on the System:

1. **Enhanced Player Awareness: Players will gain a deeper understanding of their gameplay patterns, leading to more informed decisions about their play style and strategies.**

2. **Increased Engagement: The availability of detailed analytics can motivate players to engage more with the game as they track their progress and set personal goals.**

3. **Resource Requirements for Data Processing: The implementation will require robust data processing capabilities to collect, analyze, and present player statistics effectively.**

4. **Community Sharing of Insights: Players can share their analytics with friends or the community, fostering discussions about strategies and gameplay improvements.**

5. **Potential for Competitive Play: The analytics dashboard can be used to identify top players and create competitive leaderboards, enhancing the competitive aspect of the game.**

6. **Feedback Loop for Game Development: Player analytics can provide valuable insights for developers to understand gameplay trends and make informed decisions about future updates or balance changes.**

7. **Customization Options: Allow players to customize their dashboard view, selecting which statistics and metrics are most relevant to them.**

8. **Integration with Training Mode: Link analytics data to the training mode, enabling players to focus on specific areas for improvement based on their**

performance metrics.

9. **Cross-Platform Compatibility: Ensure that the analytics dashboard is accessible across all platforms, providing a consistent experience for all players.**

Implementation/Design Suggestions:

1. **User-Friendly Dashboard Interface: Develop an intuitive interface that presents player statistics in a clear and visually appealing manner.**

2. **Real-Time Data Updates: Implement real-time data processing to ensure that players have access to the most current statistics and performance metrics.**

3. **Comparative Analysis Tools: Provide tools for players to compare their performance against friends or top players, encouraging healthy competition and improvement.**

4. **Goal Setting Features: Allow players to set personal goals based on their analytics, tracking their progress over time and celebrating achievements.**