

VirtuCards

CS 30700 Sprint 1 Planning Document



TEAM 8

June Seo

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Sprint Overview

The goal of this sprint is to implement game functionality and user interfaces in our project. We also plan to improve on existing visual interfaces based on feedback we received during our demo. We will be implementing features such that users can experience what it would be like to be in the game. This would include quality-of-life features like turn timers, deck shuffling, card visuals, etc. Another key feature we aim to complete is the free-play mode.

Scrum Master: Umang Sharma

Meeting Plan: Tuesday @ 3:00pm and Thursday @ 7:00pm

Risks and Challenges: During this sprint, we wish to focus on expanding our current functionalities to make our software more well-rounded. However, we may need to rewrite the implementations of a portion from the previous sprint to make our proposed user stories possible. -----We also anticipate that bugs may arise from integrating various sections together, and plan to devote time towards bug removal in our sprint.

Current Sprint Detail

User Story #1

As a user hosting the game, I would like to have the cards played by the game players on their mobile appear on the shared screen.

#	Description	Estimated Time	Owner
1	Design UI for the host card decks.	4 hours	Umang
2	Design UI for the cards themselves.	3 hours	Umang
3	Create an animation for a user playing a card on the client-side.	3 hours	Shayne
4	Create an animation for cards being drawn on the common-screen	2 hours	Shayne
5	Create an animation for a user playing a card on the host-side.	2 hours	Shayne
6	Design a test case to verify animations work properly.	1 hour	Umang

Acceptance Criteria

- Given that a player has joined a game, when the game begins, they are able to view the UI of each card.
- Given that a player has joined a game, when the game starts, the undealt card deck and dealt card deck are shown neatly on the host screen.
- Given that a player has joined a game, when a user plays a card, an animation of a card being removed from their pile on the host screen and being moved to the played deck is shown.
- Given that a player has joined a game, when a user plays a card, an animation of a card being removed from their hand on their device is shown.

User Story #2

As a user hosting the game, I would like to have the option to play games with rules, like Go Fish.

#	Description	Estimated Time	Owner
1	Create options for more games such as War and Go Fish to be selected	2 hour	Kade
2	Design gameplay scripts for War and Go Fish	8 hours (Cumulative)	Kade and Ryan

3	Modify game screen UI depending on the game that has been selected. For example, Go Fish has no central deck, and War has 2 decks.	3 hours (Cumulative)	Kade and Ryan
4	Ensure that the host is unable to change the game, once the selection has been made.	1 hour	Shayne
5	Create a test for verifying different games work properly.	2 hours	Aryan

Acceptance Criteria

- Given that the host has selected a game from the list of available games, they are able to change the gameplay to match the selected game.
- Given that the host has selected a valid game, there is a gameplay script available that models the game.
- Given that the host has selected a valid game, there are corresponding UI modifications that complement the gameplay of that game.
- Given that the host has selected a valid game, they are not allowed to change to another game with different rules after beginning their game.

User Story #3

As a user hosting the game, I would like to have the option to play games whose rules aren't in the library of VirtuCards.

#	Description	Estimated Time	Owner
1	Add Freeplay as an option for the host to select	1 hour	Ryan
2	Add an extra number of settings to the settings UI designed for Freeplay	2 hours	Ryan
3	Add custom card rules in this interface (i.e. picking a standard 52 card deck or remove specific ranks). Allow the host to check and uncheck individual settings for their freeplay game such as certain cards allowed, and other game features.	3 hours	Ryan
4	Update the freeplay settings according to the settings chosen	3 hours	Ryan
5	Create a test case to verify that a host can create a free play game.	1 hours	Ryan

Acceptance Criteria

- Given that a host has signed in, when they choose to select a game, there is an option for freeplay.
- Given that a host has chosen freeplay, when they create the room, it displays FreePlay rather than a specific game.
- Given that a host has chosen freeplay, when they open the game settings, there are additional options to configure the game.
- Given that a host has chosen freeplay, when they open the game settings, they can choose the cards they would like to use (i.e. a standard 52 card deck or remove specific ranks).
- Given that the host has chosen freeplay, when they open the game settings, they can choose to have the last played card displayed face-up on the common screen.

User Story #4

As a user hosting the game, I would like to declare a winner for games whose rules aren't in the library of VirtuCards.

#	Description	Estimated Time	Owner
1	Add a declare winner button to the host side	1 hour	Ryan
2	After the declare winner button is clicked show a list of players in the lobby and allow the host to choose one to win.	3 hours	Ryan
3	Add an end game button to the host side, which ends the game with no winners.	2 hour	Ryan
4	When a winner is chosen, create a message that displays the name of the winner on the common screen.	1 hour	Ryan
5	When a player has won the game update their statistics in Firebase.	3 hours	Aryan
6	Create a test case to verify that a host can end a game with a winner or without a winner, depending on the button they click in Freeplay.	1 hours	Ryan

Acceptance Criteria

- Given that the freeplay mode is selected, the host is able to decide which player is chosen as the winner.
- Given that the host has begun the game, there is a button to *Declare Winner*.
- Given that the host has begun the game, they are able to choose the winner from the list of players.

- Given that the host decides that the game has ended, the host is able to do so at any time during the game by clicking the *End Game* button.
- Given that the host has chosen the winner, they are notified on their individual device that they have won the game.
- Given that the host has chosen the winner, all players in the game are able to view the winning player on the common screen.
- Given that a player has been chosen as the winner, their game statistics are updated on Firebase.

User Story #5

As a user hosting the game, I would like to be able to choose my preferred game easily.

#	Description	Estimated Time	Owner
1	Create a dropdown to select the available games in the host.	2 hours	Kade
2	Implement UI such that the Host's Waiting Screen reflects the selected game.	2 hours	Shayne
3	Implement UI such that the Client's Waiting Screen reflects the selected game.	2 hours	Ryan
4	Design a test case to verify that the waiting screens reflect the game information properly.	2 hours	Shayne

Acceptance Criteria:

- Given that the host has logged in to their account, they can select a game of their choice to be played from a drop down.
- Given that the host has selected a game of their choice, when they click create game, the selected game is displayed correctly.
- Given that the client joins the game, when they reach the waiting room, they can see the selected game.
- Given that the host has selected a game, when a user joins, the client's waiting screen displays important game information.

User Story #6

As a user hosting the game, I would like to be able to mute the chat if needed.

#	Description	Estimated Time	Owner
1	Repurpose the disable chat toggle in the host waiting screen into a dropdown to include muting chat.	2 hour	June
2	Repurpose the disable chat feature on the host game screen into a dropdown to include muting chat.	1 hour	June
3	When the host disables the chat, the chat window is hidden on all the clients.	4 hours	June
4	Create a test case for verifying that the chat can be muted and disabled.	1 hours	June

Acceptance Criteria:

- Given that a host has hosted a game, when they start it, they can toggle the chat between disabled and enabled, which is reflected on the client side as well.
- Given that a host is setting up a game, when they open game settings, they can choose to have chat disabled or muted.
- Given that a host has started a game, when they disable chat, users cannot see it on the host screen or on their individual screens.
- Given that a host has started a game, when they mute chat, users cannot see it on the host screen but can see it on their individual screens.

User Story #7

As a user hosting the game, I would like to be able to set a timer for each player to play their move.

#	Description	Estimated Time	Owner
1	Implement a timer into the game settings scripts	4 hours	Kade
2	Create an interface for setting the timer	3 hours	Kade
3	Create a timer UI component that can easily be reused	1 hour	Kade
5	Pass the turn to the next player if a player does not make a move in the given time.	2 hours	Kade

	Penalise if the game rules specify.		
6	Implement a test that verifies the timer works properly.	1 hour	Kade

Acceptance Criteria

- Given that it is a player's turn, they are able to view a timer that indicates the amount of time they have left to make a move.
- Given that there is a timer for players to make their move, the timer is also visible to all other players on the common screen.
- Given that the host would like to set this time limit, they are able to do so via the game settings before beginning the game.
- Given that the players would like to remove this timer during a game, the host is able to do so from their game settings menu.
- Given that the time is running in the game, when it is a player's turn, they are shown a warning when they have 30 seconds left.
- Given that the player has not completed their move in the expected time, the turn is passed to the next player.

User Story #8

As a user hosting the game, I would like to be able to shuffle the deck of cards easily.

#	Description	Estimated Time	Owner
1	Create a method in the game logic to shuffle the played deck of cards into the draw pile.	2 hour	Umang
2	Create a shuffle button on the host side.	1 hour	Umang
3	Create the animation for shuffling.	3 hours	Umang
4	Prevent players from performing actions while shuffle animation is playing.	2 hours	Umang
5	Create a test case that verifies the host can shuffle and players can draw from those shuffled cards.	1 hours	Umang

Acceptance Criteria

- Given that the host decides that they would like to shuffle the deck of played cards back into the draw pile, they are able to do so by clicking the *Shuffle* button.

- Given that the host has pressed the *Shuffle* button, there is an animation on the common screen that indicates that the cards are being shuffled.
- Given that the host has shuffled the cards, the global deck is shuffled as well.
- Given that the global game deck has been shuffled, the players are able to draw cards from the new shuffled game deck.

User Story #9

As a user, I would like to be able to change my username.

#	Description	Estimated Time	Owner
1	Display details of the user on the Profile Screen with an edit button.	3 hours	Shayne
2	Allow the username and name fields to be changed upon clicking the edit button.	2 hours	Shayne
3	If the current user is signed in anonymously, they should see an error message when they click the edit button.	1 hour	Shayne
4	If the user changes either field, when they click the edit button once again, their changes should be validated and saved.	2 hours	Shayne
5	If the username already exists, or either field is blank, an appropriate error message should be shown.	2 hour	Shayne
6	Create a unit test that verifies a username can be changed.	1 hours	Shayne

Acceptance Criteria

- Given that the user has logged in, when they click the Profile button, they are taken to the Profile page displaying the username, email and other information.
- Given that the user has logged in and reached the profile page, when they click the edit button, they can change their username.
- Given that the user successfully changed their username, when they next view their profile, their new information should be displayed.
- Given that the user attempts to change their username, when they input a username that is already used, there should be an error message saying that the current name is already taken.

- Given that the user has logged in with Google or Facebook, the described flow for changing the username should be no different.
- Given that the user has selected to play anonymously, when they click the profile icon, they should be able to view their profile, but get an error message upon clicking the edit button.

User Story #10

As a user, I would like to view the cards that I have been dealt at the beginning of the round from my mobile device.

#	Description	Estimated Time	Owner
1	Add a loading panel for when players first enter the game screen	3 hours	Aryan
2	Depending on the game selected, give every player a certain amount of cards to start with from the global deck.	2 hour	Aryan
3	Update every player's UI to show the cards the same as if they were to draw them	2 hour	Aryan
4	Add a unit test to check that depending on the game selected the client gets the correct amount of starting cards.	1 hours	Aryan
5	Construct a test case that verifies the presence of the loading screen	1 hours	Aryan

Acceptance Criteria

- Given that a user has joined a game, when the host starts it, they are dealt an initial number of cards.
- Given that a user has joined a game, when the host starts it, a loading panel is briefly shown on the client-side to allow for cards to be added.
- Given that a user has joined a game, when they receive their initial cards, they are displayed on a carousel.
- Given that a user is given cards on game initialization, they are displayed in a card carousel in the same manner drawn cards are displayed.

User Story #11

As a user, I would like for the cards held by each player to be visible on the shared screen, hidden face down.

#	Description	Estimated Time	Owner
1	Keep track of the cards present with each user on the host.	2 hours	Kade
2	Display a face-down card for each user with a number indicating their hand size, on the host.	2 hours	Ryan
3	Set up the Scene to handle any range of players, from 1 up to 10 players.	3 hours	Ryan
4	When cards are played or drawn by the user, the view on the host should reflect those changes.	2 hours	Kade
5	Create a test case that verifies if facedown card piles associated with each player are shown on the host screen.	1 hour	Kade

Acceptance Criteria:

- Given that the players cards are present on the shared screen, they are only visible face down.
- Given that a card is placed face down on the shared screen, this change does not affect the visibility of the card on the player's device.
- Given that cards need to be placed face down at times, the game script accommodates this setting easily and effectively on the host screen.

User Story #12

As a user, I would like to be able to send and receive private messages to others in the same game lobby.

#	Description	Estimated Time	Owner
1	Add a dropdown list with the list of available players in the chat interface and a "Public" option.	4 hours	June
2	Allow selecting a player to send a private message to.	2 hours	June
3	Select the player in Photon, and send messages specifically to the player.	2 hours	June
4	Add an indicator for private messages	2 hours	June
5	Retain the selection of the specific	2 hours	June

	player even if they hide the chat window temporarily		
6	Write test cases to ensure messages are sent only to the intended recipient.	1 hours	June

Acceptance Criteria

- Given that a player has joined a game, when they want to send a message, there is a dropdown containing the list of player names in the lobby along with an option for public chat.
- Given that a player has joined a game, when they select a specific username to send a message to, only that user will receive the message.
- Given that a player receives a private message, when they view it, it will have an indicator that shows if it was sent privately.
- Given that a player is sending a message, when they send it to a specific username, their dropdown for chat is not automatically changed back to public.

User Story #13

As a user, I would like to use a default messaging system to say something very fast.

#	Description	Estimated Time	Owner
1	Create a dropdown list of default chat messages in the chat UI.	2 hours	Aryan
2	Add default messages in the dropdown list.	1 hour	Aryan
3	Create a method that sends a message when a message has been clicked from the list.	2 hour	Aryan
4	Write a test case to verify that the default messages are being sent when pressed.	1 hour	Aryan

Acceptance Criteria

- Given that the user has joined a game, and the host has started the game, when the client opens the chat, they should have bubbles on top of the chat box to send default messages.
- Given that the user clicks one of the chat bubbles and is currently using the public chat, the text shown in the chat bubble should be sent to everyone.
- Given that the user clicks one of the chat bubbles and is currently using the private chat, the text shown in the chat bubble should be sent specifically to the person they are messaging.

User Story #14

As a user, I would like to have an indication of a winner, allowing us to end a game.

#	Description	Estimated Time	Owner
1	Add a win condition that is checked after every card is played in all game modes besides Freeplay.	2 hours	Kade
2	When a player has won, update their screen to show that they have won the game.	2 hours	June
3	When a player has won, show their name on the common screen.	1 hour	June
4	Once a player has won, allow users to leave easily and connect to the Photon LeaveRoom method.	2 hours	Umang
5	Once the game is over, update all player's statistics.	3 hours	Umang
6	Create a test case that verifies a winner can be declared.	1 hour	Umang

Acceptance Criteria

- Given that a game is not in freeplay mode, the game script decides the winner based on the rules of the selected game.
- Given that a player has won the game according to the game rules, they are notified that they have won on their individual device.
- Given that a player has won the game according to the game rules, the winning player is displayed on the shared screen at the end of the game.
- Given that a player has won the game, the players are able to leave the game smoothly.
- Given that the game has ended, the winning player's game statistics are updated on Firebase.

User Story #15

As a user, I would like to have the games I play have the rules related to the game enforced, ensuring only legal moves are allowed.

#	Description	Estimated Time	Owner
1	Implement game rules correctly	2 hours	June

	depending on which game the user picks.		
2	Ensure that the game progresses if the player plays a legal move	1 hour	June
4	Create an <i>Invalid Move</i> error screen.	1 hour	June
5	Implement functionality to check for invalid moves and display the <i>Invalid Move</i> screen.	1 hour	June
6	Create a unit test that verifies that the game handles legal and illegal moves properly	1 hour	June

Acceptance Criteria

- Given that a game has been selected from the list of available games, the gameplay incorporates the set of rules for that game via the corresponding script.
- Given that a user makes a move, the move is validated by the script.
- Given that the user has made a valid move, the card moves from their hand to the pile on the common screen.
- Given that an invalid move is attempted by a user, they are shown an error message indicating that they have tried to make an illegal move according to the game rules.
- Given that a game has been selected, the players are able to see some visual distinction between valid and invalid cards for their next move.

User Story #16

As a user, I would like to be able to hide my cards on my mobile device if I need to set my device in view of other players if time allows.

#	Description	Estimated Time	Owner
1	Add a cover cards button	1 hour	Shayne
2	Create a method that updates UI to show the backs of the players cards when the button is clicked	2 hours	Shayne
3	Create a visual effect that indicates which card is selected in the hand.	2 hours	Shayne
4	Create a unit test that verifies that the cards are properly covered when the	2 hours	Shayne

	button is pressed		
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Acceptance Criteria

- Given that a user has joined a game, there is a button that hides all their cards.
- Given that a user has joined a game, when they hide their cards, all their cards are replaced with a card back image that does not show any card information.
- Given that a user has joined a game, when they wish to unhide their cards, the user can re-press the same button that initially hid them to uncover the cards.

User Story #17

As a user, I would like to be able to change game settings easily.

#	Description	Estimated Time	Owner
1	Create a settings page on the client-side game screen.	4 hours	Umang
2	Create toggle functionality for adjusting the visibility of the chat and timer.	3 hours	Umang
3	Implement a test that verifies the settings functionality works.	1 hour	Umang

Acceptance Criteria

- Given that a player is currently in an active game, when they access the settings page, they are able to hide their cards at will.
- Given that a player is currently in an active game, when they access the settings page, they are able to remove the chat completely.
- Given that a player has joined a game, they are able to toggle whether the timer is visible to them.
- Given that a player has joined a game, when they click the settings button, they can access the settings page.

User Story #18

As a user, I would like to be able to exit a game without disrupting the flow of play.

#	Description	Estimated Time	Owner
1	In the settings window in the game scene, add a button to leave the game.	1 hour	Aryan
2	Upon clicking the button, disconnect	2 hours	Aryan

	the player from the room and redirect them to the join game page.		
3	On the host, retrieve the cards from the user when they disconnect and add them to the draw pile, with reshuffling.	2 hours	Aryan
4	Remove the disconnected user from the game screen.	2 hours	Aryan
5	If there are no players left in the game, return to the waiting screen.	2 hours	Aryan
6	Send a message in the chat, if enabled, that a user has disconnected.	1 hour	Aryan
7	Write test cases to ensure the game correctly handles each situation.	1 hour	Aryan

Acceptance Criteria

- Given that the user is currently in a game, when they exit the game by clicking the exit game button in the settings menu, they should be disconnected from the game room.
- Given that the user is in a game, when the user disconnects, the host should retrieve the disconnected user's cards and add them to the undealt pile, and send a message in the chat box stating that the user has left the game.
- Given that all the users in the game have disconnected, the host should go back to the waiting room.
- Given that the user is currently in a game, when they exit the game by closing the app, the host should proceed with the same process as if they exited the game through the settings menu

User Story #19 (Unfinished tasks from Sprint 1)

As a developer, I would like to test the functionality implemented into both the VirtuCards client and host.

#	Description	Estimated Time	Owner
1	Implement unit tests to debug creating Photon rooms with the unique code.	1 hours	Umang
2	Create unit tests for clients joining a game room.	1 hours	Shayne
3	Discard name upon exiting the game	1 hour	Aryan

	if the user is signed in anonymously.		
4	Add unit tests that check if a player can play as a guest, receive a random username and ensure name is unique	1 hours	Shayne
5	Create unit tests to ensure a person can join as a player from their mobile device if they have already created a lobby from their laptop or desktop computer	1 hours	Aryan
6	Design unit tests that evaluate the propagation delay between user actions and the appropriate response from the server	1 hours	June
7	Create unit tests that check that a player can draw cards successfully	1 hours	Kade
8	Create unit tests that verify that a player can play valid cards during a game	1 hours	Ryan
9	Implement unit tests that check a player can skip their turn	1 hours	Kade
10	Create unit tests that verify messages can be sent from a player to all other players	1 hours	June
11	Design unit tests to verify that the public messages are displayed	1 hour	Kade

Acceptance Criteria

- Ensure all testing is implemented.
- Given that a user is a guest, when they have finished playing a game, their profile is destroyed upon exiting the application.
- Given that all tests do not have compile errors, when they are run, they accurately report the functionality of their respective features.

Remaining Backlog

Functional Requirements

1. Game Host

As a user hosting the game,

~~I would like to be able to create a game lobby on my laptop/desktop as a common external screen, acting as a table.~~

~~I would like to create a game lobby easily.~~

~~I would like to be able to allow my friends to join my game using a generated join code.~~

~~I would also like the option to invite my friends to join my game.~~

~~I would like to have the cards played by the game players on their mobile appear on the shared screen.~~

~~I would like to have the option to play another game with the same players at the end of a game.~~

~~I would like to have the option to play games with rules, like Go Fish.~~

~~I would like to have the option to play games whose rules aren't in the library of VirtuCards.~~

~~I would like to declare a winner for games whose rules aren't in the library of VirtuCards.~~

~~I would like to be able to choose my preferred game easily.~~

~~I would like to be able to kick players from the game, when necessary.~~

~~I would like to be able to mute the chat if needed.~~

~~I would like to have songs being played from a queue from the common external screen if time allows.~~

~~I would like to be able to remove songs from the queue played by the shared screen if time allows.~~

~~I would like to be able to shuffle the songs currently in the queue if time allows.~~

~~I would like to be able to set a timer for each player to play their move.~~

~~I would like to choose custom backgrounds for the table.~~

~~I would like to be able to join the game lobby through my phone as a game player.~~

~~I would like to be able to shuffle the deck of cards easily.~~

2. Account Management

As a user,

~~I would like to be able to register for an account for VirtuCards.~~

~~I would like to be able to login into my account for VirtuCards.~~

~~I would like to reset my password, in the event I forget.~~

~~I would like to login with my Google account.~~

~~I would like to login with my Facebook account if time allows.~~

~~I would like the option to play as a guest, not having to make an account.~~

~~I would like to select an avatar from a given list to represent me~~

~~I would like to upload a custom photo as my avatar~~

I would like to have my avatar and other details linked to my account, allowing me to sign in to different devices with the same account

~~I would like to be able to change my username.~~

I would like to search for my friends on VirtuCards with their usernames.

3. Gameplay

As a user,

~~I would like to join the game host's common screen on my mobile device through the join code the host provides.~~

~~I would like to view the actions of other players in real-time and without any delay.~~

I would like to be able to accept invites from a game host to join their game.

~~I would like to view the cards that I have been dealt at the beginning of the round from my mobile device.~~

~~I would like to play the cards I have been dealt with on the table, from my mobile device.~~

~~I would like to draw cards from the table using my mobile device.~~

~~I would like to be able to pass my turn.~~

I would like to be able to fold my hand.

I would like to be able to see the number of games I have won and lost if time allows.

~~I would like for the cards held by each player to be visible on the shared screen, hidden face down.~~

4. Messaging

As a user,

~~I would like to be able to send and receive private messages to others in the same game lobby.~~

~~I would like to be able to send public messages to the game lobby.~~

~~I would like to be able to view public messages on the common screen shared between players.~~

~~I would like to use a default messaging system to say something very fast.~~

I would like to have the option of censoring profanity in the chat

I would like to have default animated reactions I can use, like "Boiler Up!", if time allows.

~~I would like to be able to disable the chat option, if it may be detrimental to the game experience~~

5. Social Interactions

As a user,

~~I would like to have an indication of a winner, allowing us to end a game.~~

~~I would like to have the games I play have the rules related to the game enforced, ensuring only legal moves are allowed.~~

I would like to be able to see where I stand compared to my peers if time allows.

I would like to choose a custom card sleeve for my group or myself.

I would like to listen to the lobby's song playlist if time allows.

I would like to add songs to the queue played by the shared screen if time allows.

~~I would like to be able to hide my cards on my mobile device if I need to set my device in view of other players if time allows.~~

6. Miscellaneous

As a user,

As a game player on Android, I would like to have achievements unlocked on Google Play Games for certain milestones if time allows.

As a game player on iOS, I would like to have achievements unlocked on Game Center for certain milestones if time allows.

~~I would like to be able to change game settings easily.~~

~~I would like to be able to exit a game without disrupting the flow of play.~~

I would like sound effects when an action happens on the screen if time allows.

I would like haptic feedback when it is my turn to play or I make an illegal move.

Non-Functional Requirements

- **Security:**

As a developer,

- I would like to set up a secure Google Firebase authentication system to allow users to register and sign in using their email and password.
- I would like to set up alternative ways of signing in without passwords, such as Google, Facebook, and Apple accounts.
- I would like to ensure the only identification players can see regarding other players is their username and avatar.

- **Response Time**

As a user,

- I would like to be able to cycle through my cards with no visible lag.
- I would like my actions on my client game to appear on the host's screen in less than 500 ms.
- I would like the game to take less than 5 seconds to start on my mobile device.

- **Usability**

As a user,

- I would like the game to be easy to navigate.
- I would like the acts of playing and drawing cards to be simple.
- I would like all the options that I can perform visible in an uncluttered manner

- **Hosting/Development**

As a developer,

- I would like to use Unity to develop both the client-side and server-side.

- I would like to have the client-side and server-side developed as independently as possible to reduce dependency conflicts.
- I would like the game to be deployed to both Android and iOS if time allows.
- I would like to use Firebase's Realtime Database to store related information for each user such as their username, account avatar, list of friends, games played, games won and games lost, and a unique ID for that player.