

Screen Sketches

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Cards With Friends

Actors

1. **Players:** Have the privilege to:
 - a. Play any game
 - b. Chat in open chat rooms
 - c. Bet money in specific games (Blackjack)
 - d. Change user info
2. **Moderators:** Have all the privileges **Players** have in addition to:
 - a. Delete user chats and remove them from chat rooms
3. **Administrators:** Have all the privileges **Moderators** have in addition to:
 - a. Change **any** user's stats
 - b. Change **any** user's user info

Non-Functional Requirements

- The application must respond to requests and button clicks within a second
- The application must be built to easily allow for more games to be added
- The application must not allow a user to be in two different lobbies
- The application must create join codes that do not already exist

Tables and Fields

- app_user:
 - id - **Primary Key**
 - age - User age
 - email - User email
 - first_name - User first name
 - last_name - User last name
 - password - User password
 - username - User custom username
 - account_type - Type of account (eg. “player”, “moderator”, “administrator”)
 - lobby_id - **Foreign Key** to lobby table
 - user_stats_id - **Foreign Key** to user_stats table
- game_stats:
 - game_type - Which game the stats refer to (enum)
 - id - **Primary Key**
 - games_played - number of games played
 - bets_won - number of bets won
 - money_won - amount of money won
 - times_doubled_down - number of times doubled down
 - times_hit - number of times hit
 - times_split - number of times split
 - games_won - number of games won
 - sweeps_won - number of sweeps won
 - times_gone_alone - number of times gone alone
 - times_picked_up - number of times picked up
 - tricks_taken - number of tricks taken
 - books_collected - number of books collected
 - questions_asked - number of questions asked
 - times_went_fishing - number of times went fishing
 - user_stats_id - **Foreign Key** to user_stats table
 - game_name - String version of game name
- lobby:
 - lobbyid - **Primary Key**
 - game_type - Which game the lobby refers to (enum)
 - join_code - Code used to join the game
- user_stats:
 - id - **Primary Key**

Screen Flow Diagram

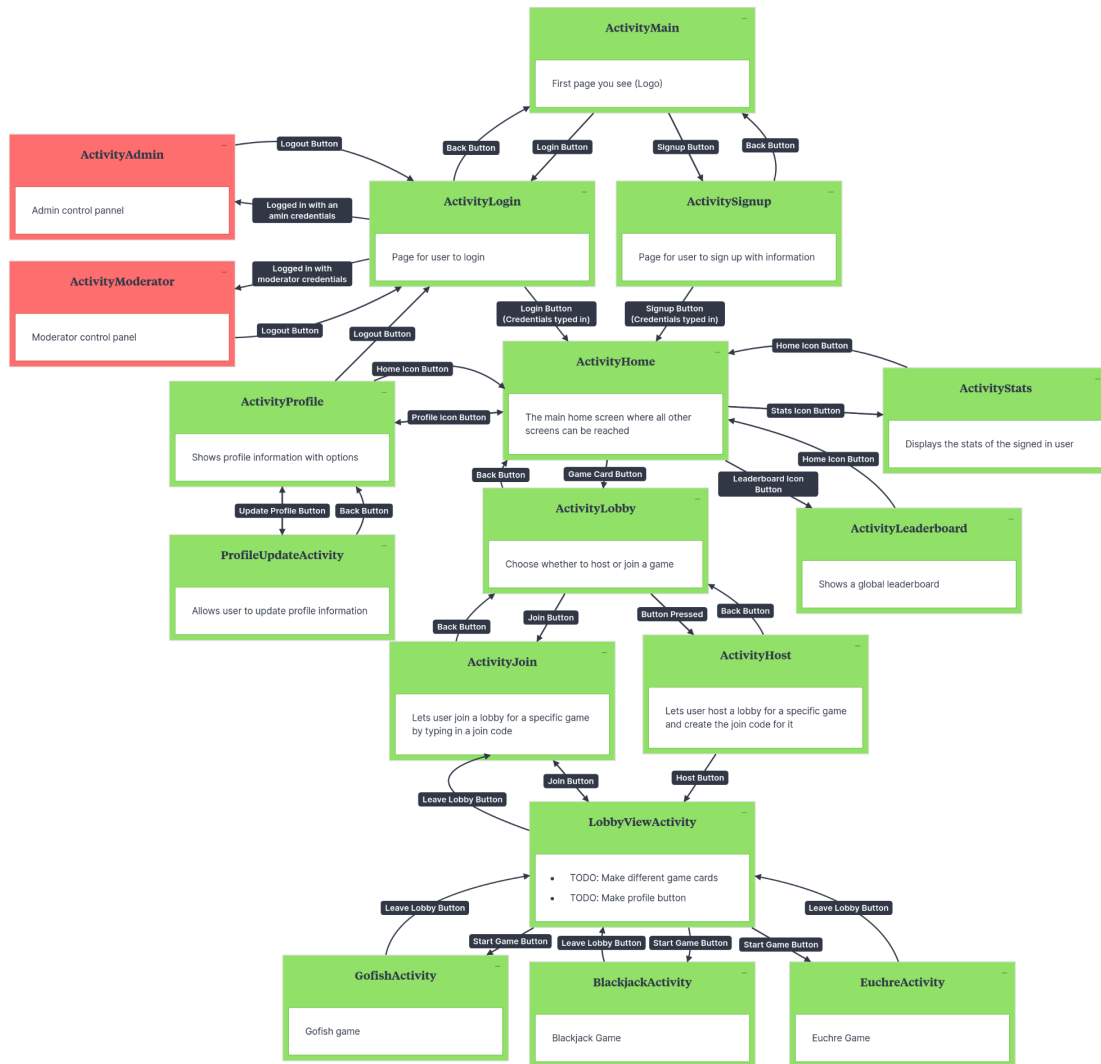




Figure 1: BlackjackActivity

This screen is what the user sees after joining and starting a blackjack lobby. This is the main screen where the game is displayed to the user. The bottom navigation bar is made up of three components. (1) allows the user to leave the game lobby and return back to the lobby join page. (2) Allows the user to open the chat, allowing them to send messages to other players in the lobby. (3) Lets the user enter a settings popup for blackjack, allowing them to change the design of the cards, the background, etc. The navigation bar is located at the bottom so it is the closest to your thumbs when holding a phone.

Just above the navigation bar, (4) displays the current player's balance as both visual chips as well as a text field denoting how much those chips combined are worth. (5) shows the current player's options in response to their cards (Hit, stand, split, double etc.). (6) shows the current player's cards that they have been dealt so far into the game. (7) shows the balance that has been bet on the current player's hand both in chips and in a text field. (8) is a numeric text field representing the current player's hand value in blackjack. Components (4) through (8) will shift depending on who is up to act (only shows the cards of the player whose turn it is), so all player's cards are not shown at once, helping to leave the screen uncrowded.

(9) shows the dealer's cards, allowing the player to make a more informed decision. (10) shows both the discarded cards (cards that have already been dealt) as well as the deck (cards that have yet to be dealt).

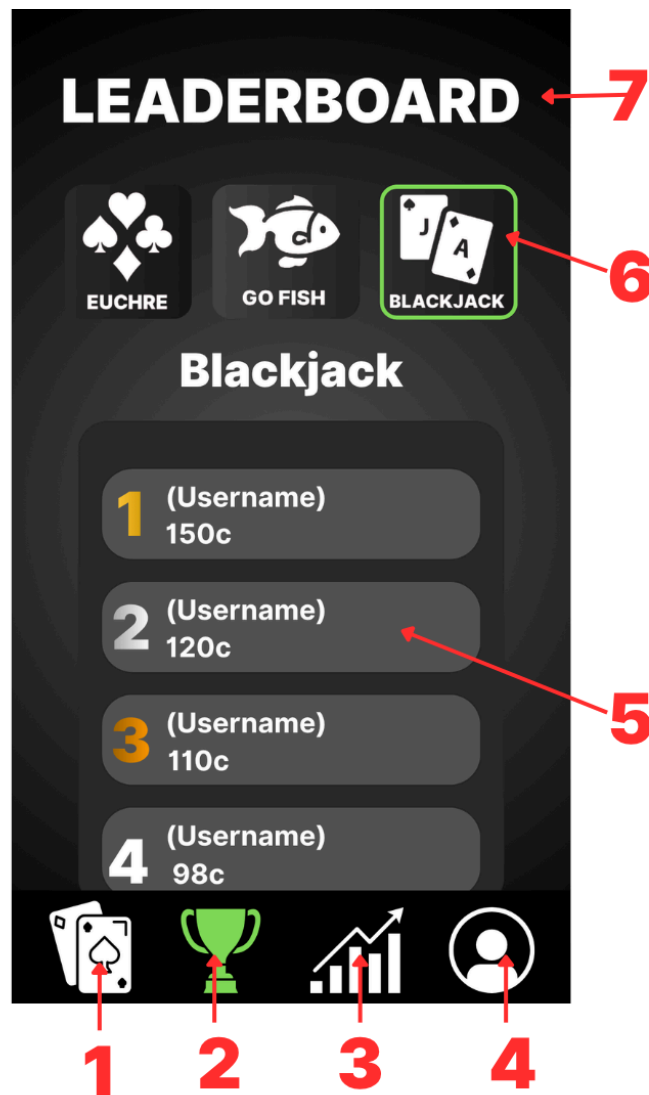


Figure 2: LeaderboardActivity

This screen shows the global leaderboard of all players for each specific card game and is based on player stats. The bottom navigation bar is shared with many other activities (1) is a button that takes the user to the HomeActivity (screen that lets them select what card game they want to play). (2) Is the button that brought the user to the leaderboard and is highlighted green because it is the currently active screen. (3) is the button that allows players to view their own stats for each game (StatsActivity). (4) is the button that allows players to view and update their profile information (ProfileActivity).

Just above the navigation bar is (5) the list of the top players in the selected game which can be selected using the buttons at (6). (5) shows the usernames of the players, the rank that user is within that game as well as the statistic that drives this ranking. In this case blackjack is

selected and the player's current balance is displayed because this is what sets their rankings (This will change depending on what game is selected). (7) is the screen title so it is more obvious what the page does and is common on all other screens.

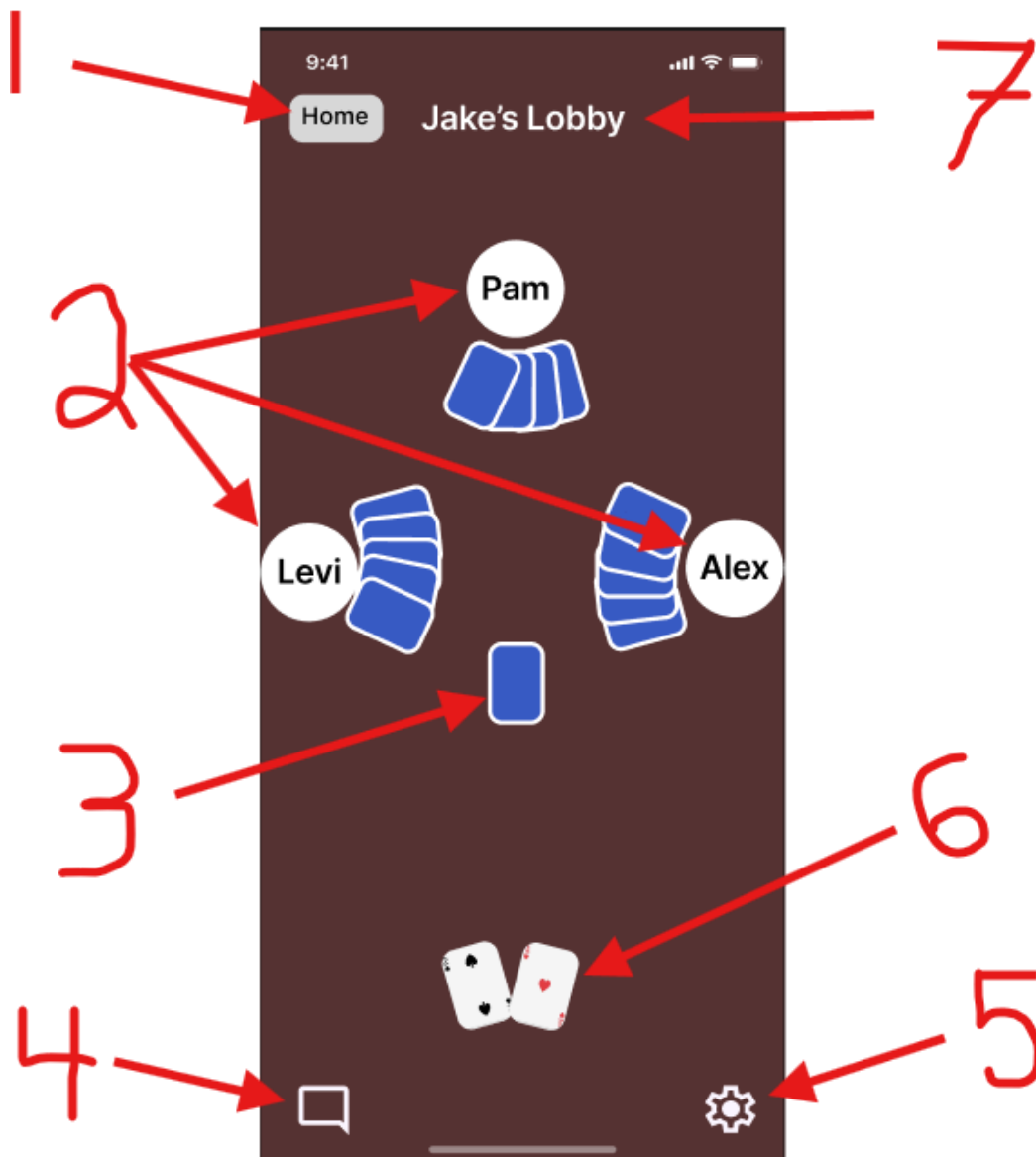


Figure 3: Go Fish Activity

This screen shows what a game of Go Fish will look like. Along the bottom bar we have two buttons. The first one will open up the game chat (4). The second button will open up the game settings (5). Along the top of the screen we have a button that will make you leave the lobby and go back to the home screen (1). We also have a header that will change depending on who created the lobby. For playing the game we have the people you are playing against (2) and your own hand (6). The (2)'s serve as buttons and allow you to choose who you are asking the question and your cards (6) serve as the choices for values you can ask them. We also have a decorative deck in the middle for going fishing (3). It will disappear when the deck has run out.

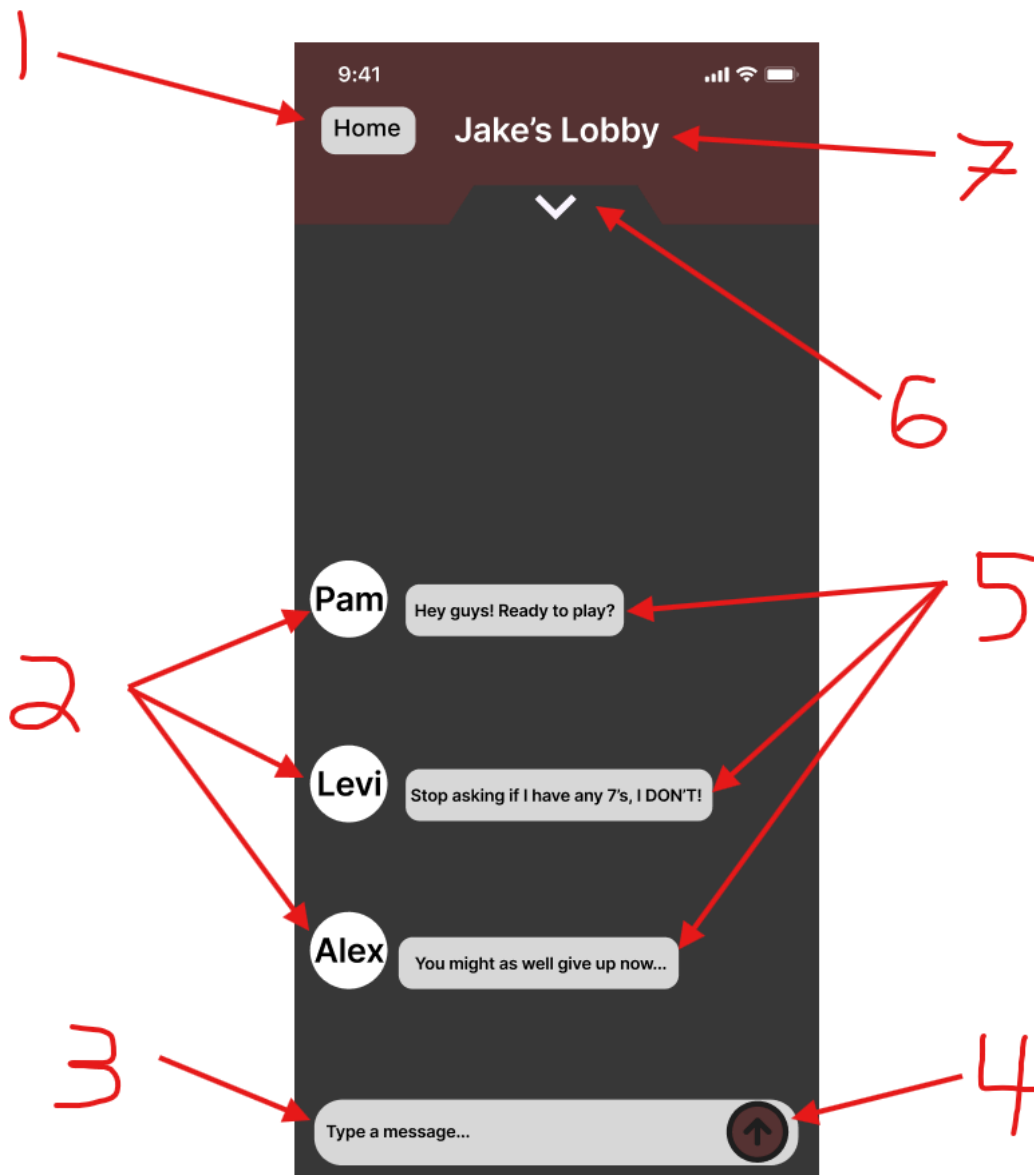


Figure 4: In Game Chat

This screen will show up when you press the message button found in any game lobby. Along the top you have an option to go back to the home screen by pressing button (1). You also see who's lobby you are in (7). You can see who is sending the messages to the chat and what they are saying by looking at (2) and (5) respectively. In order to type a message yourself, you can use the text box (3) along the bottom of the screen and send a message by pressing the send button (4). You can close the chat by pressing the down arrow at the top of the screen (6).

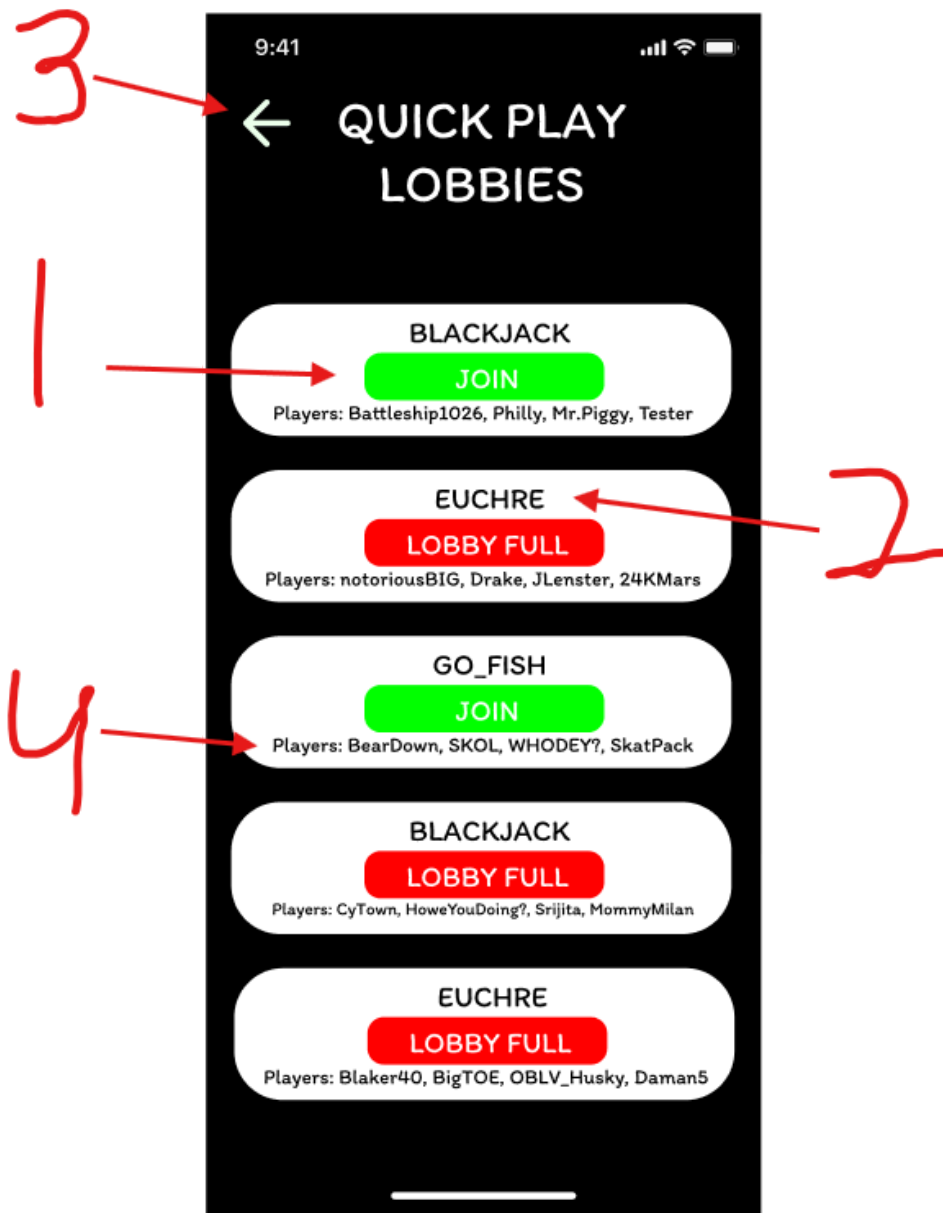


Figure 5: ActivityLobby

This screen shows what the browse lobby activity looks like. (1) These buttons will allow you to see if a lobby is full as well as join a lobby if clicked and the lobby is not full. (2) At the top of each lobby class will be displayed the game type allowing the user to decide what lobby/game they would like to join. (3) This arrow will take you back to the activity where you can decide to browse, host, or join a lobby with the join code. (4) This will display the usernames of the app users currently in a lobby.

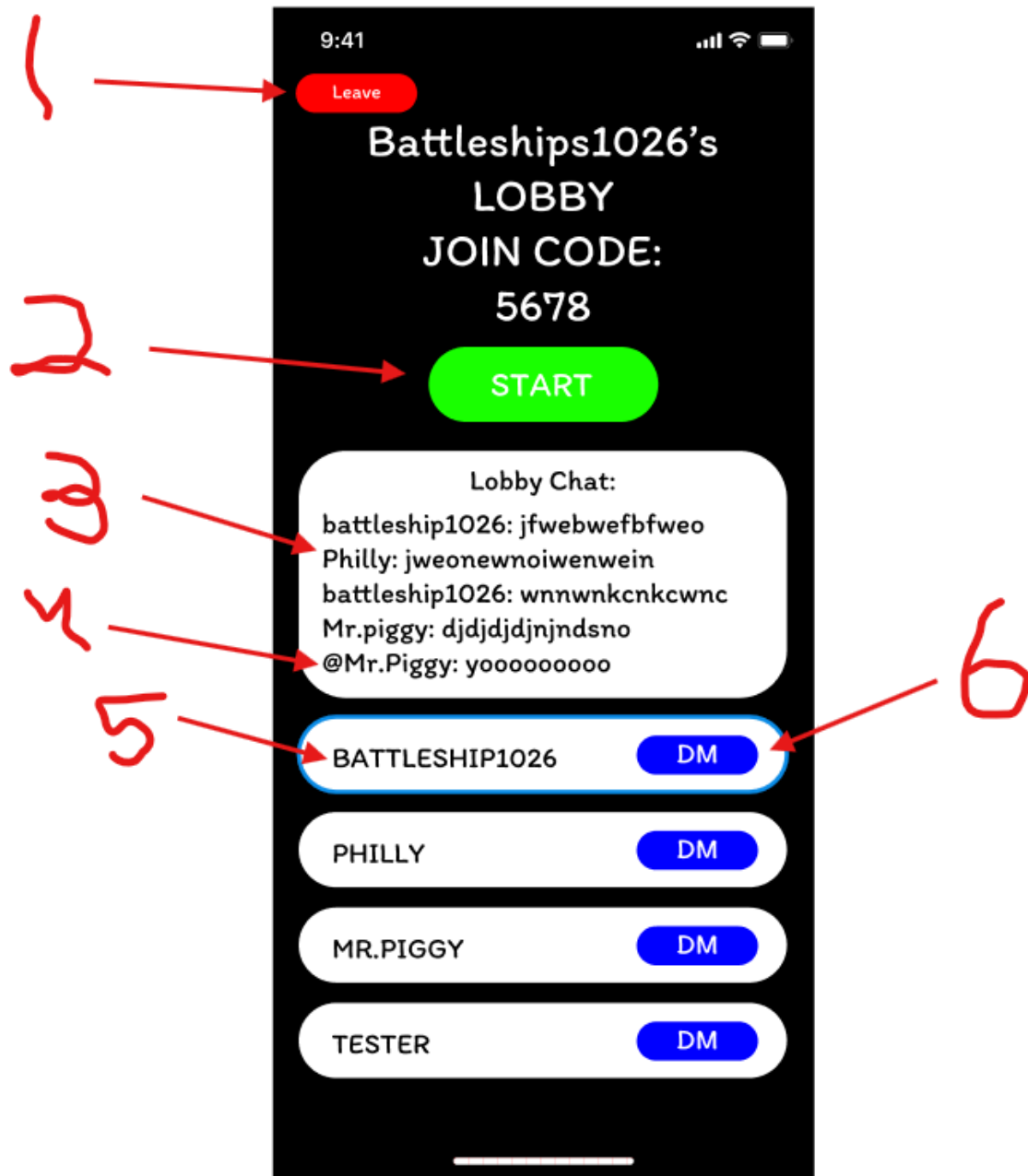


Figure 6: LobbyViewActivity

This screen shows what a lobby waiting room will look like. (1) this button will make you leave the current lobby you are in as well as the webSocket. This will update the username list for everyone in the lobby. (2) this button will start the game activity such as go_fish or blackjack. (3) This text box will allow a user to use the built in phone UI to type a message to the lobby chat. (4) direct messages will be displayed via a @ symbol followed by the sender and the contents of the message. (5) This is a list of all the players in a lobby. (6) this button will allow you to send a direct message to a user that can only be seen by a chosen receiver.

1 BACK

2 Update

3 First Name 4 Last Name

5 Email 6 Age

7 Username

8 Password 9 Confirm Password

10 UPDATE INFORMATION

Figure 7: UpdateActivity

This screen shows how the update user information will look like. If the user decides that they don't want to change anything they can press the back button (1). The user can then change various bits of information (3-9). If the user decides to change their password both password fields will have to be the same in order to confirm that they would like to change their password. After the user has changed all of the information that they would like to, the user then has to press the update information button (10). Once they press this button all of their information in the backend will change, and those changes will be reflected in the frontend.

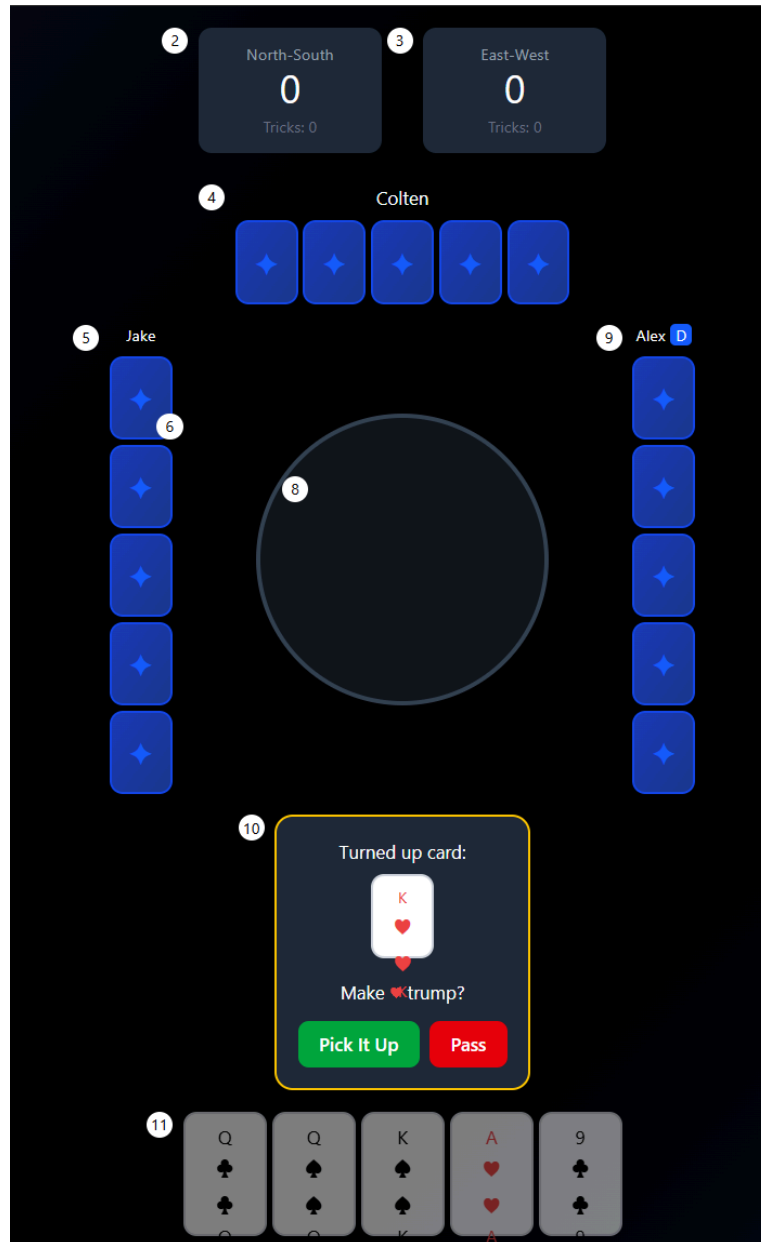


Figure 8: EuchreActivity

This is what the screen will look like when a user is playing euchre. At the top of the screen the current score is displayed (2-3). You can also see the other players hands, although to keep the integrity of the game alive you cannot actually see what cards they have (4,5,9). The names of the other players are also visible (4,5,9). You can see your own hand (11), and if it is your turn to pick up a card and set the suit, you will see the information shown at (10). When the game is being played and cards are being laid down they will be seen on the table (8).