

## Member Names:

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## Project Proposal

RoyalPoker

Requirements and Specification Document

20/10/2017, version 1 (Colour code: black), 06/11/2017, version 2 (Colour code: light blue),  
20/11/2017, version 3 (Colour code: dark red), 04/12/2017, version 4 (Colour code: purple)

RoyalPoker Git link: <https://csil-git1.cs.surrey.sfu.ca/group13/RoyalPoker>

Node.js helper app: <https://csil-git1.cs.surrey.sfu.ca/mcw19/RoyalPoker-Server>

## Project Abstract

RoyalPoker is an online multiplayer poker game. Game will be made up of six main EPICS; they include the multiplayer Texas Hold'em game, a searching system, a private and public gameroom system, an account system, and a chat room. In the game, players will sign up for a new account or login to their existing account and create new or join existing game rooms. Players will be able to create public, password-protected games, or private games each with custom settings. After a game is created, new players can join games that others have created. Other features include an unique experience system, easy searching systems, and a in-game chatroom. A facebook share dialog is used for easy custom sharing straight from any page. Socket.IO's server API is used to provide the basis for the in-game chat room and multiplayer connections. In addition, the HTML5 Deck of Cards API is used as the basis for the poker game, providing the card animation and images.

## Customer

RoyalPoker can be used as a poker training application with real people. People suffering from a gaming addiction can benefit from the money-free nature of RoyalPoker. Other potential customers would be those looking to socialize. Card games have been a great way for friends to come together for a night and play a game. Our simple game rooms will make it easy for friends to come together and play. This removes the need for face-to-face meetings with friends.

## Competitive Analysis

Poker is a widely implemented game, but what sets us apart from other online poker games is our gambling currency – player levels are derived from the current amount of money they have. A player can gain or lose their level based how they play. If they lose enough chips, they may be demoted to lower tiers.

## User Stories

### Velocity Measurement: Story Count per Member

Group Member	Stories	Sum Per Group Member
Sukhdeep Parmar	<ul style="list-style-type: none"><li>• Story 6 (2 points)</li><li>• Story 8 (3 points)</li><li>• Story 9 (3 points)</li><li>• Story 15 (2 points)</li><li>• Story 16 (5 points)</li></ul>	Iteration 1: 0.5 story (1.5 points)  Iteration 2: 1.5 stories (4.5 points)  Iteration 3: 3 stories (9 points)  Overall: 5 stories (15 points)
Maxim Puchkov	<ul style="list-style-type: none"><li>• Story 1 (2 points)</li><li>• Story 2 (2 points)</li><li>• Story 3 (1 points)</li><li>• Story 4 (2 points)</li><li>• Story 5 (1 points)</li><li>• Story 10 (2 points)</li><li>• Story 11 (2 points)</li><li>• Story 12 (1 point)</li><li>• Story 13 (1 point)</li><li>• Story 14 (2 points)</li><li>• Story 16 (5 points)</li></ul>	Iteration 1: 2.5 stories (4 points)  Iteration 2: 6.5 stories (10 points)  Iteration 3: 2 stories (7 points)  Overall: 11 stories (21 points)
Alan Ou	<ul style="list-style-type: none"><li>• Story 1 (2 points)</li><li>• Story 6 (2 points)</li><li>• Story 7 (2 points)</li><li>• Story 10 (2 point)</li><li>• Story 11 (2 point)</li></ul>	Iteration 1: 1 story (2 points)  Iteration 2: 2 stories (4 points)  Iteration 3: 2 stories (4 points)  Overall: 5 stories (10 points)
Kevin Chen	<ul style="list-style-type: none"><li>• Story 16 (5 points)</li><li>• Story 17 (5 points)</li></ul>	Iteration 1: 0.5 story (2.5 points)

		Iteration 2: 0.5 story (2.5 points)  Iteration 3: 1 story (5 points)  Overall: 2 stories (10 points)
Michael Wong	<ul style="list-style-type: none"> <li>• Story 6 (2 points)</li> <li>• Story 16 (5 points)</li> <li>• Story 18 (5 points)</li> <li>• Story 19 (4 points)</li> </ul>	Iteration 1: 1 story (4 points)  Iteration 2: 1 story (5 points)  Iteration 3: 2 stories (7 points)  Overall: 4 stories (16 points)

#### Actors:

- Player
  - This actor represents the customer. A player is a logged in user seeking to play Texas Hold'em.
- Developer
  - An account for app developers to access real-time debugging features unavailable to regular players, such as having access to a table with the usernames and passwords of all users; but developers will not have complete privileges that admins do. A default developer is given by the username "developer" and password "Developer002".
- Admin
  - An actor with the highest level of authority for the app. This actor will have full access to features not available to both regular users and developers, such as deleting player accounts and removing game rooms. A default admin is given by the username "admin" and password "Admin001".
- User
  - An actor that can be either an admin, developer, or player.
- Visitor
  - An actor that is not a registered user on the RoyalPoker database.

## EPIC I: Account System

As a user, I want to have an account so that I can keep track of my progress and have all the privileges associated with my account on the RoyalPoker app.

User Story	Test Case	Pre/post Conditions
<p><b>Story 1</b></p> <p>As a user, I'd like to create an account so that I can have access to the features offered by the RoyalPoker app. (Iteration 1)</p> <p>Default admin is given by username "admin" and password "Admin001"</p> <p>Default developer is given by the username "developer" and password "Developer002".</p> <p>Velocity points: 2</p>	<ul style="list-style-type: none"><li>• Make sure that admin or developer statuses are grantable (can be edited) by other admins or developers through a user information update.</li><li>• Make sure registration requirements for username (which must be between 5 to 12 characters and must start with a letter), password (which must start with a letter and contain a combination of lower, upper case letters and a numerical value), and password confirmation are met.</li></ul> <p>Success:</p> <ul style="list-style-type: none"><li>• Make sure that after clicking "Submit" with proper values for all fields, the user will be redirected to the front page.</li><li>• Make sure account is recorded in the database.</li></ul> <p>Failure</p> <ul style="list-style-type: none"><li>• Make sure that if not all register conditions are met, registration will fail.</li></ul>	<p>Preconditions:</p> <ul style="list-style-type: none"><li>• User is not already logged in.</li></ul> <p>Postconditions:</p> <ul style="list-style-type: none"><li>• User account is created.</li></ul>

<p><b>Story 2</b></p> <p>As a user, I want to login to my account so that I can use the app to the fullest. (Iteration 1)</p> <p>Velocity points: 2</p>	<ul style="list-style-type: none"> <li>Make sure that login credentials are valid (ex. Username is between 5 to 12 characters and must start with a letter and password starts with a letter and contains a combination of lower, upper case letters and a numerical value.</li> </ul> <p>Success:</p> <ul style="list-style-type: none"> <li>Make sure the user is redirected to the main page after a successful login.</li> </ul> <p>Failure:</p> <ul style="list-style-type: none"> <li>Make sure error is displayed if inputs are not the right.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>User is not already logged in.</li> <li>Entered username and password must match a set in the database before allowing a successful login.</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>User is logged into their account.</li> </ul>
<p><b>Story 3</b></p> <p>As a user, I want to be able to log out so that after I am done using the app, no one can use my account to play. (Iteration 1)</p> <p>Velocity points: 1</p>	<ul style="list-style-type: none"> <li>Make sure that all logged in users are given a “Log Out” button when they click their username.</li> </ul> <p>Success:</p> <ul style="list-style-type: none"> <li>Make sure that user is redirected.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>User must be logged in</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>User is logged out</li> </ul>
<p><b>Story 4</b></p> <p>As a user, I want to see my current progress so that I can have an idea of how many experience points I need in order to reach the next level. (Iteration 1)</p> <p>Velocity points: 2</p>	<ul style="list-style-type: none"> <li>Make sure that their experience is correctly associated with their account.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>User is logged in.</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>User is shown their current experience and experience needed to reach next level.</li> <li>The user's username and rank will be shown at the top of this menu. Account balance will be shown</li> </ul>

		<p>in bright green numbers, and a bar with the text “Next Level” that will show the necessary balance a player must achieve to level up in rank.</p>
<p><b>Story 5</b></p> <p>As a admin/developer, I want to be able to have control over user settings so that I can remove any users that violate the rules, assist in error fixing, etc.. (Iteration 1)</p> <p>Velocity points: 1</p>	<ul style="list-style-type: none"> <li>• Make sure that only admin and developer accounts are allowed to see this page.</li> <li>• Make sure that any changes done by the admin or developer still abide by database constraints.</li> </ul> <p>Success:</p> <ul style="list-style-type: none"> <li>• Make sure that the admin/developer is shown “User was successfully updated” message and redirected back to the user information page.</li> </ul> <p>Failure:</p> <ul style="list-style-type: none"> <li>• Make sure that regular users are redirected to a 403 page indicating that they do not have access to that page.</li> <li>• Make sure that if admin/developer changes something that violates the database constraints, an error is given and update is not recorded.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>• User role must be admin or developer.</li> <li>• Admin or developer must enter the link “https://royalpoker.herokuapp.com/users”.</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>• Admin or developer will be directed to a list of all the users.</li> </ul>

<p><b>Story 6</b></p> <p>As a user, I want to be able to see my profile page so that I can easily see a count of all the games played, when I created my account, etc. (Iteration 3)</p> <p>Velocity points: 2</p>	<p><b>Success:</b></p> <ul style="list-style-type: none"> <li>Make sure that if user enters link <a href="https://royalpoker.hero kuapp.com/profile/?id=5">https://royalpoker.hero kuapp.com/profile/?id=5</a>, that they will be directed to the user's profile page.</li> </ul> <p><b>Failure:</b></p> <ul style="list-style-type: none"> <li>If user enters link <a href="https://royalpoker.hero kuapp.com/profile/?id=5">https://royalpoker.hero kuapp.com/profile/?id=5</a>, that they will be shown an error if id 5 does not exist.</li> </ul>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>Must be logged in.</li> </ul> <p><b>Postconditions:</b></p> <ul style="list-style-type: none"> <li>User is at their own profile page.</li> </ul>
<p><b>Story 7</b></p> <p>As a user, I want to be able to see rankings of the top 20 players so that I can easily see the competition. (Iteration 3)</p> <p>Velocity points: 2</p>	<ul style="list-style-type: none"> <li>Make sure user is directed to the leaderboards page.</li> <li>Make sure list is correctly ranked according to user score.</li> </ul>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Postconditions:</b></p> <ul style="list-style-type: none"> <li>User is shown a list of top 20 players.</li> </ul>

## EPIC II: Searching System

As a user, I would like to identify games so that I can decide what actions to do next.

User Stories	Test Cases	Pre/post Conditions
<p><b>Story 8</b></p> <p>As a visitor or user, I want to quickly find games so that I can join a game as quick as I can. (Iteration 2)</p> <p>Velocity points: 3</p>	<ul style="list-style-type: none"> <li>Make sure that user is redirected to right search page.</li> </ul>	<p><b>Preconditions:</b></p> <ul style="list-style-type: none"> <li>None</li> </ul> <p><b>Postconditions:</b></p> <ul style="list-style-type: none"> <li>List of games will be shown.</li> </ul>

<p><b>Story 9</b></p> <p>As a user, I want to search for a game directly with the name of the game so that I can easily join the specific game I want. (Iteration 2)</p> <p>Velocity points: 3</p>	<ul style="list-style-type: none"> <li>Make sure that user is returned the game with the name they inputted.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>None</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>Gameroom is returned if a match in the database is found</li> </ul>
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### EPIC III: Private and Public Gameroom System

As a user, I would like to create game rooms so that I can play poker with others.

User Stories	Test Cases	Pre/post Conditions
<p><b>Story 10</b></p> <p>As a user, I want to create public games so that everyone can join my game. (Iteration 2)</p> <p>Velocity points: 2</p>	<p>Make sure that “New Game” button links to the correct options.</p> <ul style="list-style-type: none"> <li>Make sure game room name and minimum bet are recorded.</li> <li>Make sure only increments of 10 are allowed for minimum bets.</li> </ul> <p>Success:</p> <ul style="list-style-type: none"> <li>Make sure creator is redirected to game room.</li> </ul> <p>Failure:</p> <ul style="list-style-type: none"> <li>Make sure user is shown a error message explaining why creation was not possible.</li> </ul>	<ul style="list-style-type: none"> <li>is recorded in database.</li> <li>Game is now searchable by other users.</li> </ul>
<p><b>Story 11</b></p> <p>As a user, I want to create games with custom settings so that I can have control over who I play with.</p>	<ul style="list-style-type: none"> <li>Make sure that “New Game” button links to the correct options.</li> <li>Make sure game options are recorded in database.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>User must be logged in.</li> <li>Minimal bets for game rooms must be increments of 10.</li> </ul>



<p>(Iteration 2)</p> <p>Velocity points: 2</p>	<p>Success:</p> <ul style="list-style-type: none"> <li>Make sure user is redirected to game room.</li> </ul> <p>Failure:</p> <ul style="list-style-type: none"> <li>Make sure that if game creation is not possible, user is shown a error message explaining the issue.</li> </ul>	<p>Postconditions:</p> <ul style="list-style-type: none"> <li>Game is recorded in database.</li> <li>Game is now searchable/joinable by other users (if not made hidden).</li> </ul>
<p><b>Story 12</b></p> <p>As a user, I want to be able to delete games that I have created so that when I leave, the game leaves as well. (Iteration 2)</p> <p>Velocity points: 1</p>	<p>Success:</p> <ul style="list-style-type: none"> <li>Game room disappears from game list.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>Account username must match game room creator username.</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>Game is deleted.</li> </ul>
<p><b>Story 13</b></p> <p>As Bob the admin, I want to be able to delete games so that if I see any illegal activities in the game, I can have the power to remove the game and pursue further action if required. (Iteration 2)</p> <p>Velocity points: 1</p>	<ul style="list-style-type: none"> <li>Make sure that “New Game” button links to the correct options.</li> </ul> <p>Success:</p> <ul style="list-style-type: none"> <li>Make sure game is deleted.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>Account must be admin type.</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>Game is deleted.</li> <li>All users within the deleted game are kicked out of the game.</li> </ul>
<p><b>Story 14</b></p> <p>As a user, I want to be able to join games that others have made so that I practice my poker skills with other people. (Iteration 3)</p> <p>Velocity points: 2</p>	<ul style="list-style-type: none"> <li>Make sure that game rooms are shown to all users.</li> </ul>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>User must be logged in.</li> <li>User must have enough experience for the minimum bet.</li> </ul> <p>Postconditions:</p> <ul style="list-style-type: none"> <li>User enters game room.</li> </ul>

<b>Story 15</b>  As Bob the admin, I want to be able to see and join all games, no matter password protected or hidden games so that I can use my admin privileges on rule violating games. (Iteration 3)  Velocity points: 2	<ul style="list-style-type: none"> <li>Make sure only admins see join and remove button for all games.</li> </ul>	Preconditions: <ul style="list-style-type: none"> <li>User must be logged in and be an admin account.</li> </ul> Postconditions: <ul style="list-style-type: none"> <li>Admin joins game or deletes existing game.</li> </ul>
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#### EPIC IV: Multiplayer Texas Hold'em

As a user, I want to be able to play Texas Hold'em so that I can enjoy the most important part of RoyalPoker, the game itself.

User Stories	Test Cases	Pre/post Conditions
<b>Story 16</b>  As a user, I want to be able to play Texas Hold'em so that I can practice my skills. (Iteration 3)  Velocity points: 5	<ul style="list-style-type: none"> <li>Make sure buttons do the correct actions.</li> <li>Make sure pot is updated on revealing more cards.</li> </ul>	Preconditions: <ul style="list-style-type: none"> <li>User must be logged in.</li> </ul> Postconditions: <ul style="list-style-type: none"> <li>User is interacting with the game.</li> </ul>
<b>Story 17</b>  As a user, I want the rules for the Texas Hold'em game to be correct so that the rules I learn from RoyalPoker are applicable to Texas Hold'em games outside of the web app. (Iteration 3)  Velocity points: 5	<ul style="list-style-type: none"> <li>Make sure game rules are enforced.</li> </ul>	Preconditions: <ul style="list-style-type: none"> <li>User must be logged in.</li> </ul> Postconditions: <ul style="list-style-type: none"> <li>User is interacting with the game.</li> </ul>
<b>Story 18</b>	Success: <ul style="list-style-type: none"> <li>Make sure connection is made (all users within the game room</li> </ul>	Preconditions: <ul style="list-style-type: none"> <li>User must be logged in.</li> </ul>

As a user, I want to play with other people so that I can practice my skills. (Iteration 3)  Velocity points: 5	can see the new player).	Postconditions: <ul style="list-style-type: none"> <li>User joins game room and is seen by all other players.</li> </ul>
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## EPIC VI: Chat room

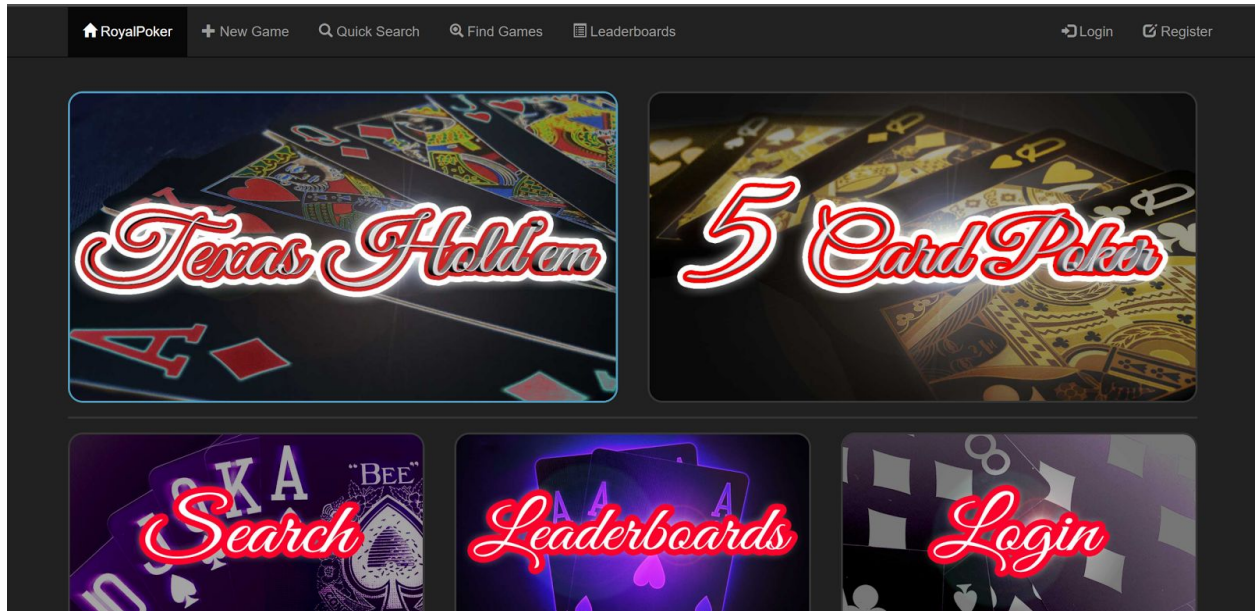
As a user, I want to be able to communicate with other people so that I can express my feelings.

User Stories	Test Cases	Pre/post Conditions
<b>Story 19</b>  As a user, I want to be able to chat with others so that I can easily express my feelings towards other players. (Iteration 1)  Velocity points: 4	<ul style="list-style-type: none"> <li>Make sure message is sent to the server.</li> </ul>	Preconditions: <ul style="list-style-type: none"> <li>User must be in the game room.</li> </ul> Postconditions: <ul style="list-style-type: none"> <li>Message is received by all users within the game room.</li> </ul>

## User Interface Requirements

### Pages:

- Homepage



- Header with navigation tabs (RoyalPoker homepage, new game, quick search, find games, leaderboards, login, register)
  - Username is shown in place of login and register buttons when user is logged in
    - When clicked, user balance, current progress, log out and share buttons will be shown.
- Body will include buttons to their corresponding pages (search for Texas Hold'em games, search for 5 Card Poker games, general search for all games, leaderboards, and login/ profile pages)
  - The login button becomes a profile button linking to the user's profile page if the user is logged in

- Login

The screenshot shows the 'Login' page of the 'RoyalPoker' website. The header is dark and contains navigation links: 'RoyalPoker', 'New Game', 'Quick Search', 'Find Games', and 'Leaderboards'. On the right side of the header are links for 'Login' and 'Register'. The main body is green and contains a light blue login form with the title 'Login'. The form has two input fields: 'Username' and 'Password', and a 'Submit' button.

- Header with navigation tabs
- Body includes login form
  - All types of users will have the same view

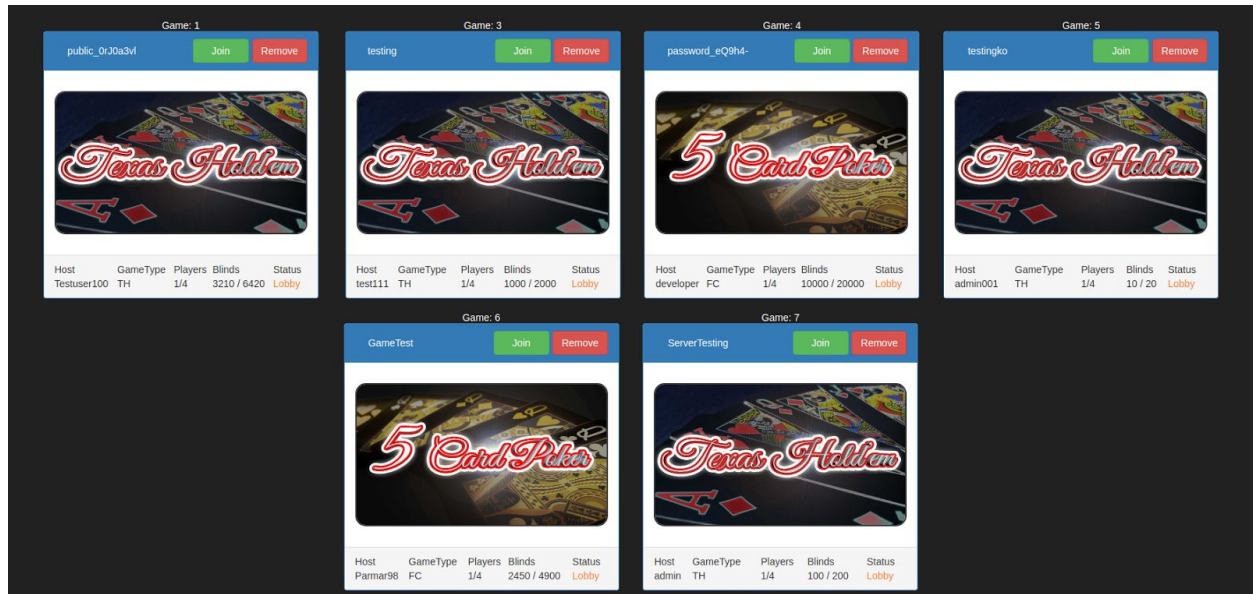
- Register

The screenshot shows the 'Register' page of the 'RoyalPoker' website. The header is dark and contains navigation links: 'RoyalPoker', 'New Game', 'Quick Search', 'Find Games', and 'Leaderboards'. On the right side of the header are links for 'Login' and 'Register'. The main body is blue and contains a light blue register form with the title 'Register'. The form has four input fields: 'Username', 'Password', 'Confirm Password', and 'Email', and a 'Submit' button.

- Header with navigation tabs
- Body includes register form with mandatory conditions shown when hovering over
  - Conditions include:

- Username must be set between the lengths of 5 to 12 and start with a letter
- Passwords must contain one upper and one lowercase letter, one number, and be at least 8 characters long
- Password must be confirmed
- Email will be an optional field

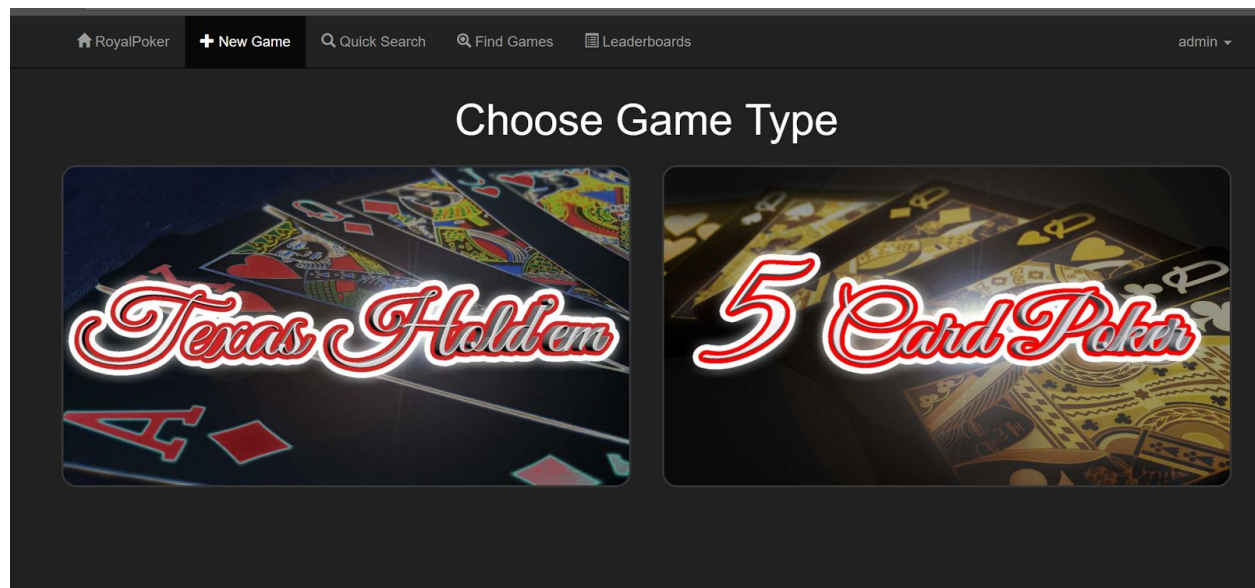
- Game search



- Header with navigation tabs
- Body will include a display of all the current games
  - Each game will include game information (creator's username, type of game, number of players, minimum bet of the game, and status of game)
    - Games will be either Texas Hold'em or 5-card poker
    - A count of the current number of players
    - The minimum bet set by the creator
    - Status of game will be one of the following
      - Lobby - the amount of players is not enough for a game to start
      - Playing - the game is in progress
      - Full - the game room is at maximum capacity
  - Users, admins and developers will have different views
    - Users will have basic permissions such as deleting those created by themselves and joining games that are not hidden

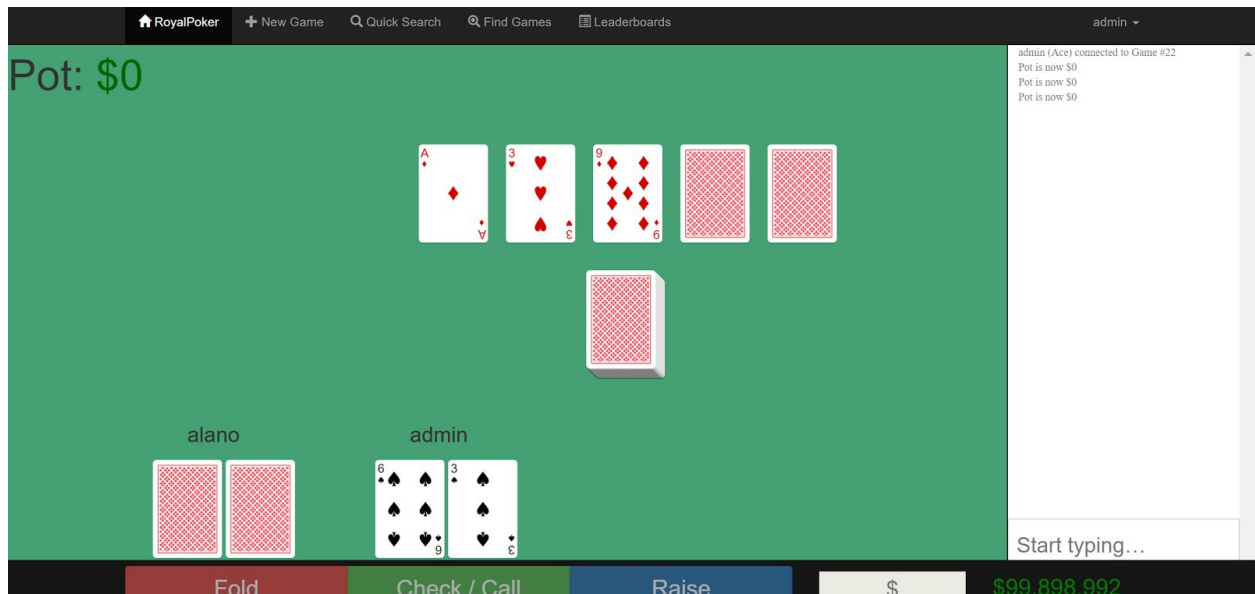
- Admins will have special permissions such as being allowed to remove games, see all games (including hidden), and join password protected games without entering passwords
- Developers will have similar permissions as admins except that they must enter passwords to enter password protected games, will not be allowed to remove games except those created by themselves, and will not be allowed to see hidden games

- **New Game**



- Header with navigation tabs
- Body will vary depending on step of game creation. User will be guided through different pages, each allowing user to create their own settings.
  - First page after clicking “New Game”, user will be greeted with game type options. User clicks on one of the two buttons, redirecting them to another page (next step).
  - Redirection brings user to step two, where user will be shown three buttons, public, password-protected, and hidden. User will choose one option, and will again be redirected.
  - Final redirection brings user to a page where they are shown a form where they fill out the game room name and the minimum bet. User will then click the submit button.

- Gameplay



- Header with navigation tabs
- Body includes the poker game in the middle, a chat on the right, and gameplay buttons on the lower left part of the screen
  - Gameplay buttons will include those for betting, folding, etc.