



Test Cases

Team Keep-It-110!

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Priority (PR):

- **H = high (Must have)**
- **M = medium (Should have)**
- **L = low (Could have)**
- **W = lowest (Would be nice to have)**

Status (S):

- **C = Completed**
- **IP = In Progress**
- **N = Not Started**

Test Case #	Test Case Title	PR	S
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1. Login			
1.1	Sign-Up	H	C
1.2	Sign-In	H	C
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4.3	Analyze Aggregate Match Statistics	W	N
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5.2	Change App Icon	W	C
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5.5	View Rating	L	C

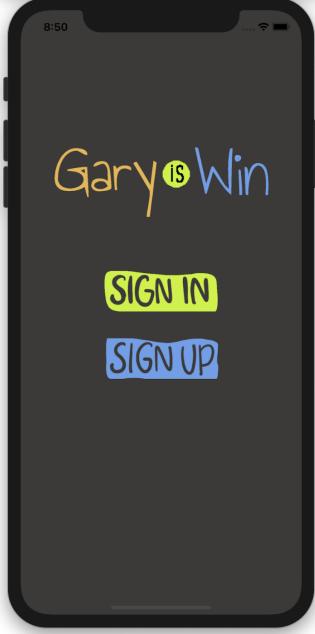
Text Color Legend
Test Values
Application Screen
Buttons

GLOSSARY OF TERMS

Account	An arrangement by which a user is given personalized access to the game application, by entering a username and password.
Avatar	The 2D figure that represents the player during a match.
Challenge	A method to initiate gameplay, in which a player can start a match and invite others to play with them.
Guest	A player who is playing the game without an account.
(Game) Host	The player who initially starts a match and challenges other players to play with them.
Leaderboard	A scoreboard displaying the rating, names and current scores of the leading competitors in the game.
Match	A single round of gameplay resulting in one player winning and the other losing.
Matchmaking	The process of locating and connecting suitable players together to take part in a multiplayer game session.
Opponent	The player who is playing against a respective player.
Player	The user of the application who is playing the game.
Statistics	Data collected and analyzed from completed matches. Includes but is not limited to: win amount, loss amount, and rating.



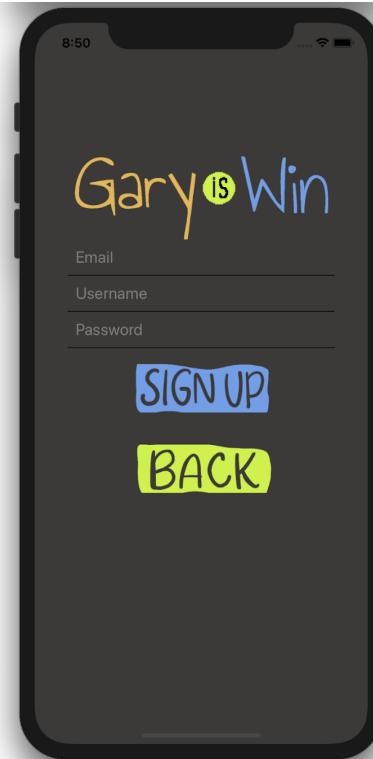
TEST CASE 1.1: Sign-Up

Priority	High - Must have feature
Status	Completed
Description	The user creates a new account by submitting a unique email address, unique username, and password.
User Goal	To create a new account.
Desired Outcome	The user will have a new account.
Dependent Test Cases	N/A
Requirements	SR 1.1
Pre-conditions	<ol style="list-style-type: none">1. User has opened the app and is at the Start Page. 
Post-conditions	The user's account data will be stored in the database, and the user is redirected to the Start Page .
Trigger	The user does not have an account yet and would like to register to use the application.

Workflow

1. The user shall tap on the **Sign Up** button.

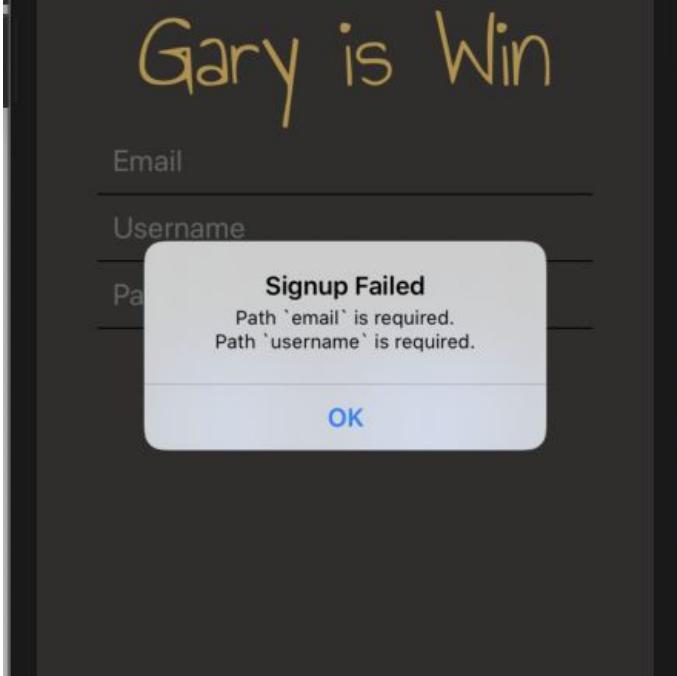
2. The system shall display the **Signup Page** with text fields for the user to fill out.



3. The user shall enter **garyTester2** for the Username field.
4. The user shall enter **cse110pass2** for the Password field.
5. The user shall enter **email_signup@test.com** for Email field.
6. The user shall tap the **Sign Up** button below the filled out text fields.

7. The system shall register this new user using the information collected from the above fields and shall display the **Start Page**.

Result: This test passes when **Signup Page** transitions to **Start Page** and the user can use their newly created

	<p>credentials to login through the Login Page.</p>
Alternate Workflow	<p>A text field is left blank:</p> <p>7. After tapping the Sign Up button, if any of the text fields is left blank, the system shall display a "Signup Failed" pop-up.</p> 

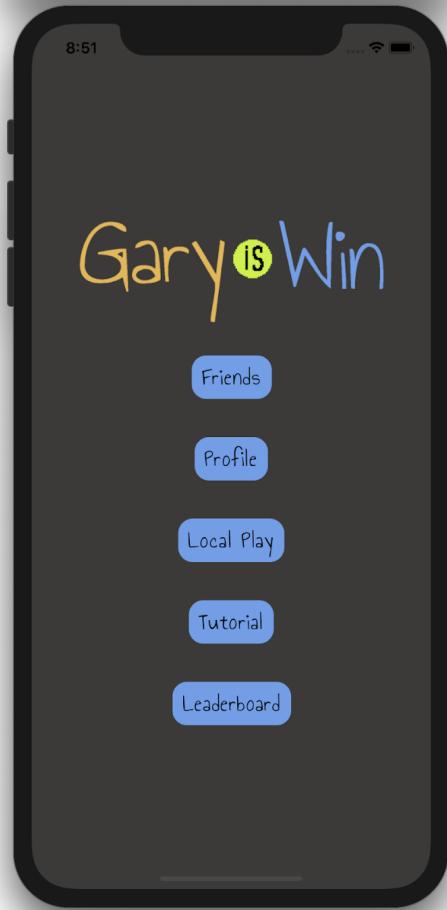


TEST CASE 1.2: Sign-In

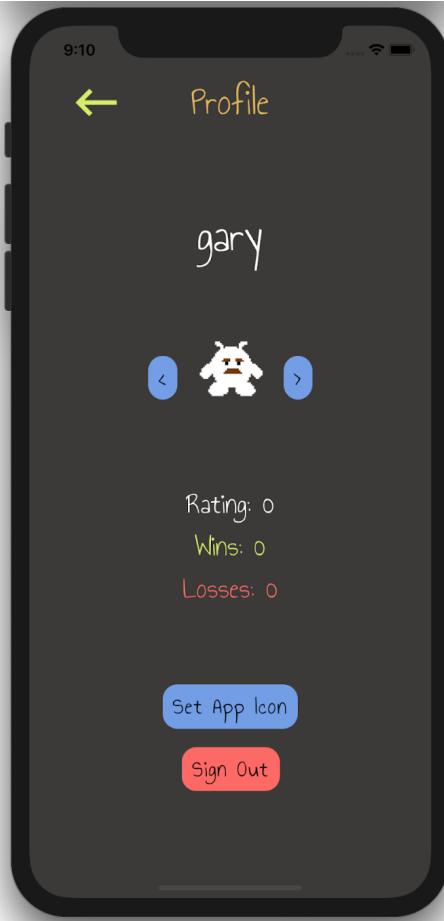
Priority	High - Must have feature
Status	Completed
Description	The user logs into their account using their username and password.
User Goal	The user wants to log into their account to use the application.
Desired Outcome	The user has access to the functionality of the app.
Dependent Test Cases	TC 1.1
Requirements	SR 1.2
Pre-conditions	<ol style="list-style-type: none">1. The user is not signed in.2. The user is on the Start Page. 
Post-conditions	The user is signed in and is redirected to the Home Page that leads to the corresponding user's Profile Page .

Trigger	The user wants to perform actions that they would otherwise not be able to do without signing in.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the Sign In button.  2. The system shall display the Login Page with text fields for the user to fill out.  3. The user shall enter gary for the Username field. 4. The user shall enter cse110pass for the Password field. 5. The user shall tap the Sign In button located below the filled text fields. 

6. The system shall authenticate the user and proceed to the **Home Page**.



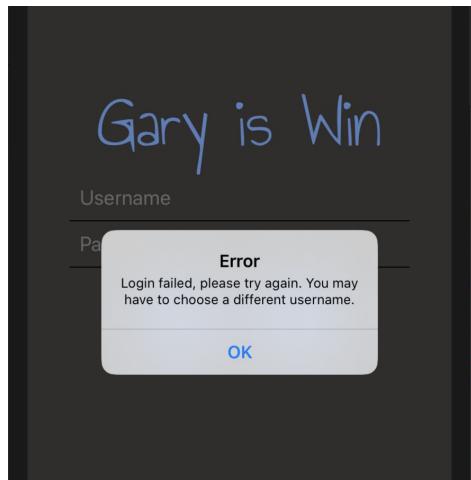
Result: This test passes when **Login Page** transitions to **Home Page** and the user's information is visible on the **Profile Page**.



Alternate Workflow

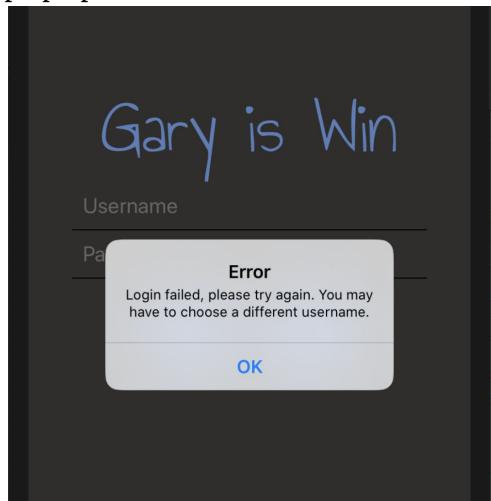
A text field is left blank:

6. After tapping the **Sign In** button, if any of the text fields is left blank, the system shall display an Error popup



The inputted username and password don't match:

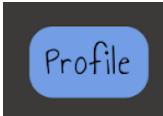
6. After tapping the **Sign In** button, if the authentication fails because either username and password do not match or username is not found in the database, the system shall display an Error popup





TEST CASE 1.3: Sign-Out

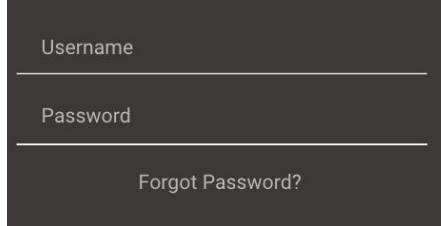
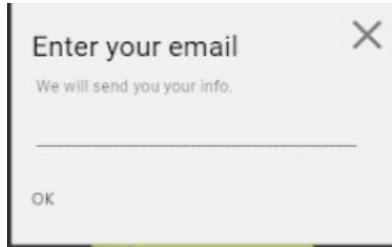
Priority	High - Must have feature
Status	Completed
Description	The user logs out of their account.
User Goal	The user wants to remove access to their account from the device, and / or wants to sign in to another account.
Desired Outcome	The user is logged out of the application.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 1.3
Pre-conditions	<ol style="list-style-type: none">1. The user has an account and is signed in with credentials from TC 1.2.2. The user is on the Home Page. 
Post-conditions	The user is logged out of their account.

Trigger	The user wants to log out of their account.
Workflow	<p>1. The user shall tap on the Profile button.</p>  <p>2. The system shall redirect the user to the user's Profile Page.</p>  <p>3. The user shall tap on the Sign Out button on the bottom of the page.</p>  <p>4. The system shall return the user to the Start Page.</p> <p>Result: This test passes when the user is redirected to the Start Page and no longer has access to the account Friends Page and Profile Page.</p>
Alternate Workflow	N/A



TEST CASE 1.4: Reset Password

Priority	Lowest - Would be nice to have feature
Status	Not Started
Description	The user resets their password by entering their email. An email containing the password reset link will be sent to the user.
User Goal	The user wants to reset their password, so that they can login to their account.
Desired Outcome	The user is able to login with their new password and not the old password.
Dependent Test Cases	TC 1.1
Requirements	SR 1.4
Pre-conditions	<ol style="list-style-type: none">1. The user has an account and is not signed in.2. The user is on the Login Page. 
Post-conditions	The user receives an email containing the link to the password reset page and is directed to the Login Page .
Trigger	The user has forgotten their password and wants to

	login.
Workflow	<p>1. The user shall tap on Forgot Password?.</p>  <p>2. The system shall display a password reset pop-up with a field for the user's email.</p>  <p>3. The user shall enter test_email@gmail.com and tap OK.</p> <p>4. The system shall send a password reset link to the test_email@gmail.com email.</p> <p>5. The user shall click on the link sent to the email to redirect to a Password Reset Page.</p> <p>6. The system shall display a field for the new password and the new password confirmation.</p> <p>7. The user shall input newpassword in the new password field and the new password confirmation field then tap Confirm.</p> <p>8. The system shall redirect the user to the Login Page.</p> <p>Result: This test passes when the user is able to log in with the new password.</p>
Alternate Workflow	<p>The inputted email is invalid:</p> <p>3. The user shall enter invalid_email@gmail.com and tap OK.</p> <p>4. The system shall display an “Email not found” error message in red and prompt the user to try a valid email. Continue from step 4 in default workflow.</p>



TEST CASE 1.5: Play as Guest

Priority	Lowest - Would be nice to have feature
Status	Not Started
Description	The user accesses the functionality of the app without logging into an account.
User Goal	The user wants to play the game without logging in.
Desired Outcome	The user will be able to play the game without having an account.
Dependent Test Cases	N/A
Requirements	SR 1.5
Pre-conditions	<ol style="list-style-type: none">1. The user is on the Login Page.2. The user is not logged into an account.
Post-conditions	The user has access to gameplay; however, none of the user's statistics or friends will be saved to an account.
Trigger	The user wants to play the game but does not have an account or does not want to login to an account.
Workflow	<ol style="list-style-type: none">1. The user shall tap the Play as Guest button.2. The system shall redirect the user to the Home Page. <p>Result: This test case passes when the guest taps the Profile button and there is a “Temporary User” text in the header.</p>
Alternate Workflow	N/A

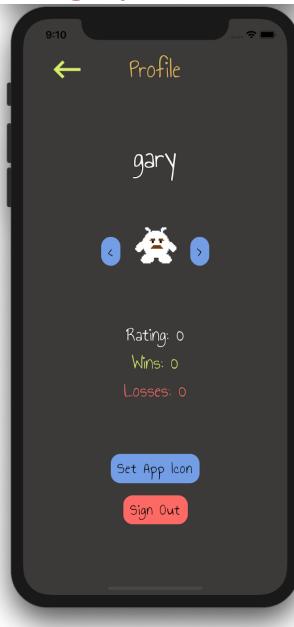


TEST CASE 1.6: Stay Logged In

Priority	Low - Could have feature
Status	Completed
Description	The system remembers the user's login credentials.
User Goal	The user inputs their credentials once and the system remembers it so that the user doesn't re-enter repeatedly.
Desired Outcome	The user will be authenticated if they were previously signed in.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 1.6
Pre-conditions	<ol style="list-style-type: none">1. The user has previously signed in to the application with the predefined credentials in TC 1.2.2. The app is closed (not backgrounded).
Post-conditions	The user is automatically signed in upon opening the app from a closed state.
Trigger	The user wants to be authenticated without entering their credentials every time they open the app from a closed state.
Workflow	<ol style="list-style-type: none">1. The user shall open the app.2. The system shall automatically authenticate the user and redirect the user to the Home Page.



Result: This test passes when the user has access to their personal account statistics and profile. This **Home Page** leads to **gary's Profile Page**.

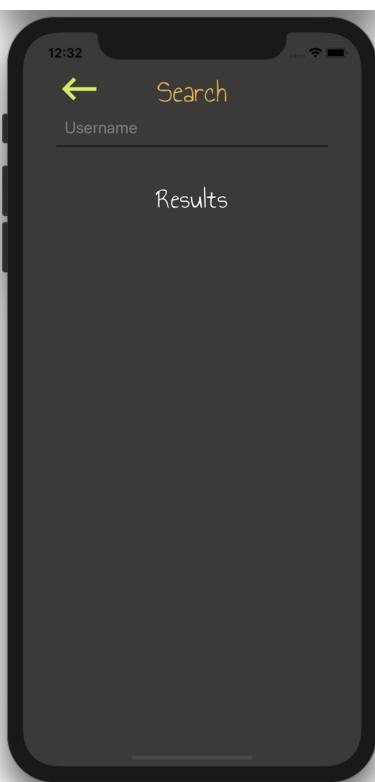


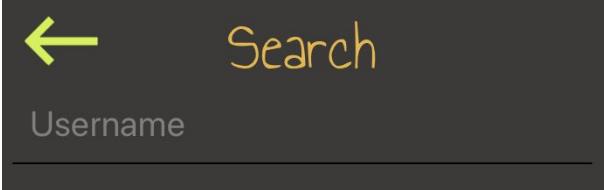
Alternate Workflow	N/A
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TEST CASE 2.1: Add a Friend

Priority	High - Must have feature
Status	Completed
Description	The user adds a friend to their friend list with the friend's username.
User Goal	The user wants to add a friend to their friend list in order to play games together in the future, and to see their match statistics.
Desired Outcome	The user's friend is added to their friend list.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 2.1
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.22. The user has navigated to the Friends Page. 
	<ol style="list-style-type: none">3. The account with username garyTester2 exists

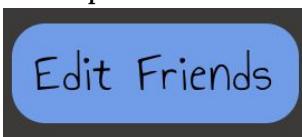
	(created in TC 1.1)
Post-conditions	The user's friend's username and statistics show up on the user's Friends Page .
Trigger	The user wants to add a friend to their friends list.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the Add Friends icon on the top right corner.  2. The system shall redirect the user to the Search Page.  3. The user shall input garyTester2 into the search field prompt. 4. The system shall display a list of usernames that contain the input. 5. The user shall tap the Add button to the right of the user with the proper username.

	 <p>Result: This test passes when garyTester2's username and statistics can be viewed from the user's Friends Page.</p>
Alternate Workflow	<p>The submitted username is not registered with the server:</p> <ol style="list-style-type: none"> 4. The user shall input invalidUsername into the search bar.  <ol style="list-style-type: none"> 5. The system shall display an empty results list, indicating that there are no users with that username. 



TEST CASE 2.2: Remove a Friend

Priority	Medium - Should have feature
Status	Completed
Description	The user removes a friend from their friends list.
User Goal	The user wants to remove a friend.
Desired Outcome	The user's friend is removed from their friends list.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1
Requirements	SR 2.2
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user has navigated to the Friends Page.  <ol style="list-style-type: none">3. Paul is on their friend's list.
Post-conditions	The friend is removed from the user's Friends Page .

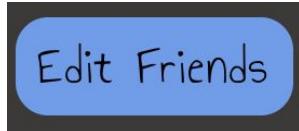
Trigger	The user wants to remove a friend from their friends list.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the Edit Friends button at the top of the screen.  2. The system shall display the editing screen for the user's friends list.  3. The user shall tap on the Remove button to the right of Paul.  <p>Result: This test passes when the user no longer sees Paul on their Friends Page.</p>
Alternate Workflow	N/A



TEST CASE 2.3: Block a Player

Priority	Lowest - Would be nice to have feature
Status	Completed
Description	The user blocks a friend from their friends list.
User Goal	The user wants to block a friend from their friends list.
Desired Outcome	The user successfully blocked their friend.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1
Requirements	SR 2.3
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. George is currently a friend of the user.3. The user has navigated to the Friends Page.



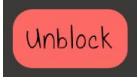
Post-conditions	The player the user wishes to block is listed as a blocked player on the user's blocked list and they will not be able to play a match together in the future.
Trigger	The user wishes to block a player.
Workflow	<p>1. The user shall tap on the Edit Friends button at the top of the screen.</p>  <p>2. The system shall display the editing screen for the user's friends list.</p>  <p>3. The user shall tap on the Block button to the right of George.</p> 

	<p>Result: This test passes when the user no longer sees George on their Friends Page. The user sees George on their blocked list (viewable by tapping the Blocked Players button on the Friends Page). George will not show up in the search results when the user searches for George on the Search Page.</p>
Alternate Workflow	N/A



TEST CASE 2.4: Unblock a Player

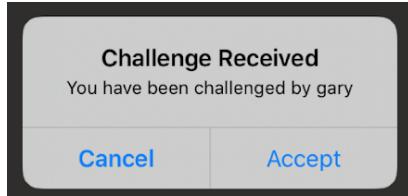
Priority	Lowest - Would be nice to have feature
Status	Completed
Description	The user unblocks a previously blocked user.
User Goal	The user wants to unblock a previously blocked user.
Desired Outcome	The previously blocked user is no longer blocked by the user and may be added as a friend again.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.3
Requirements	SR 2.4
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user has navigated to the Friends Page.  <ol style="list-style-type: none">3. George is on the user's blocked players list (blocked in TC 2.3).

Post-conditions	The player the user wishes to unblock is no longer listed as a blocked player on the user's blocked list, and they will be able to play together in the future.
Trigger	The user wishes to unblock a player.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the Blocked Players button at the top of the screen.  2. The system shall display the user's blocked players list.  <ol style="list-style-type: none"> 3. The user shall tap on the Unblock button to the right of George.  <p>Result: This test passes when the user no longer sees George on their blocked players list. George will show up in the search results when the user searches for George on the Search Page.</p>
Alternate Workflow	N/A



TEST CASE 2.5: Challenge a Friend to a Match

Priority	High - Must have feature
Status	Completed
Description	The user challenges a friend to a match.
User Goal	The user wants to challenge a friend to a match.
Desired Outcome	The user starts a match with a friend.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1
Requirements	SR 2.5
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user has navigated to the Friends Page.  <ol style="list-style-type: none">3. garyTester2 is online (account defined in TC 1.1)4. garyTester2 on the user's Friends Page (added in TC 2.1).
Post-conditions	A match starts and the two players have been redirected to the Match Page .

Trigger	The user wishes to play a match against their friend.
Workflow	<p>1. The user shall tap on the Challenge button displayed to the right of garyTester2.</p>  <p>2. The system shall redirect the user to a Waiting Page.</p>  <p>3. garyTester2 shall accept the challenge by tapping the Accept button.</p> 

4. The system shall direct both players to the **Match Page**.



Result: This test passes when the two players are directed to the same game board on the **Match Page** and are able to play a match together.

Alternate Workflow

The friend rejects the match offer:

3. **garyTester2** shall reject the match offer.
4. The system shall keep the current user on the **Waiting Page** rather than redirecting them to the **Match Page**.



TEST CASE 3.1: Move Avatar

Priority	High - Must have feature
Status	Completed
Description	The user moves their avatar on the board.
User Goal	The user wants to move their avatar on the board.
Desired Outcome	The user's avatar has moved.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5
Requirements	SR 3.1
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is currently in a match and is on the Match Page.  <ol style="list-style-type: none">3. It is the user's turn to move their avatar on the board.
Post-conditions	The user has made a move and their avatar on the board has made the respective move on the board.
Trigger	It is the user's turn to move their avatar on the board.

Workflow	<ol style="list-style-type: none"> 1. The user shall swipe either up, down, left, or right in the direction they want their avatar to move. 2. The system shall update the Match Page and move the user's avatars in the respective direction. <p>Result: This test passes when each of the user's avatars have been moved by one tile in the respective direction.</p>
Alternate Workflow	<p>The selected position was not valid:</p> <ol style="list-style-type: none"> 1. The user shall attempt to move in an invalid direction (for example: into the wall or an object defined as stop). 2. The system shall keep the user's avatar in the initial position without wasting one of the user's moves.



TEST CASE 3.2: Place Shape

Priority	High - Must have feature
Status	Completed
Description	The user places a shape on the board.
User Goal	The user wants to place a shape on the board.
Desired Outcome	The user placed a shape on the game board.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5
Requirements	SR 3.2
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is currently in an online match and is on the Match Page. 
Post-conditions	The user has placed a shape on the board.

Trigger	It is the user's turn to place a shape.
Workflow	<p>1. The system shall highlight the shape to be placed on the top left of the screen.</p>  <p>2. The user shall tap on a valid board cell that they want the shape to be placed in.</p> <p>3. The system shall update the Match Page and render the shape on the respective board cell.</p> <p>Result: This test passes when the shape is placed on the respective board cell on the Match Page for both players.</p>
Alternate Workflow	<p>The cell selected by the user is occupied:</p> <p>2. The user shall tap on an invalid board cell for the shape placement.</p> <p>3. The system shall not place a shape on any board cell and allow the user to continue attempting to place the shape until a valid cell is chosen.</p> <p>4. The system shall update the Match Page and render the shape on the respective board cell.</p>



TEST CASE 3.3: Win Match

Priority	High - Must have feature
Status	Completed
Description	The user wins the match.
User Goal	The user wants to win the match.
Desired Outcome	The user won the match.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5 , TC 3.1 , TC 3.2
Requirements	SR 3.3
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is currently in a match and on the Match Page.
Post-conditions	The user has won the match, and the match has ended.
Trigger	The user wants to win the match and to increase their rating.
Workflow	<ol style="list-style-type: none">1. The user or the opponent shall meet a win

- condition.
2. The system shall end the match and display a **PostMatch Page**.
 - a. If the user wins, the following page appears



- b. If the user loses, the following page appears



Result: This test passes when the winner of the match has gained 1 win (win count viewable in **Profile Page**) and the winner of the match has gained rating points while the loser of the match has lost rating points.



TEST-CASE 4.1: Play Locally

Priority	Low - Could have feature
Status	Completed
Description	The user may play locally.
User Goal	The user wants to play a local match.
Desired Outcome	The user is in a local match.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 4.1
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is on the Home Page. 
Post-conditions	The user is in a local match, playing as both P1 and P2.

Trigger	The user wants to play locally.
Workflow	<p>1. The user shall tap on the Local Play button at the bottom of the screen.</p>  <p>2. The system shall redirect the user to a Match Page.</p>  <p>3. The user shall be able to play the match as both P1 and P2.</p> <p>Result: This test case passes when the user is redirected to the Match Page where their opponent is themselves</p>
Alternate Workflow	N/A



TEST CASE 4.2: Play Random Opponent

Priority	Low - Could have feature
Status	Completed
Description	The user pairs up with a random user based on rating and a match is started between them.
User Goal	The user wants to be in a match against a random user of similar skill level.
Desired Outcome	The user paired up with a random user for a match.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 4.2
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user has navigated to the Friends Page.
	
Post-conditions	The user is engaged in a match with a random user.

Trigger	The user wants to play a match against a random user.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the Random Play button at the bottom of the page to queue up for matchmaking.  2. The system shall redirect the user to the Waiting Page.  3. garyTester2 shall also be on the Waiting Page. 4. The system shall match the user with garyTester2 and redirect the two matched users to the same Match Page.

Alternate Workflow	<p>Result: This test passes when the user is redirected to the Match Page, and the user is paired with garyTester2 and is able to play a match with them.</p> <p>User leaves matchmaking queue:</p> <ol style="list-style-type: none"> 3. The user shall tap on the Back icon at the bottom of the Waiting Page to dequeue from matchmaking. <p style="text-align: center;"></p> <ol style="list-style-type: none"> 4. The system shall redirect the user back to the Friends Page.

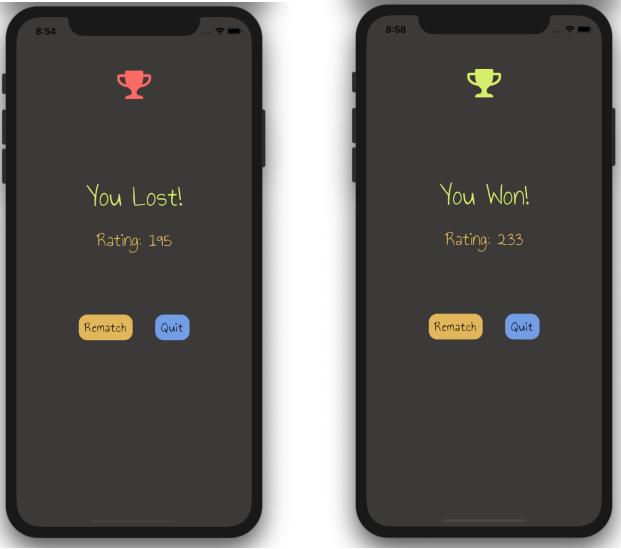


TEST CASE 4.3: Analyze Aggregate Match Statistics

Priority	Lowest - Would be nice to have feature
Status	Not Started
Description	The user views a collection of data and statistics gathered from the user's previous matches.
User Goal	The user wants to view their aggregate match statistics.
Desired Outcome	The user has accessed their match statistics.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 4.3
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is on the Home Page.
Post-conditions	The user has been redirected to their match statistics page.
Trigger	The user is interested in how they are doing in the game and wants to look at their match statistics.
Workflow	<ol style="list-style-type: none">1. The user shall tap on the Profile button.2. The system shall redirect the user to the Profile Page.3. The user shall tap on the Statistics button on the page.4. The system shall redirect the user to their personal Statistics Page. <p>Result: This test passes when the user is able to view their personal aggregate game statistics (wins, loses, and rating) as well as the result of previous matches.</p>
Alternate Workflow	N/A



TEST CASE 4.4: Rematch After a Match Ends

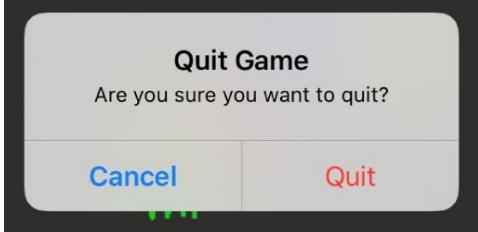
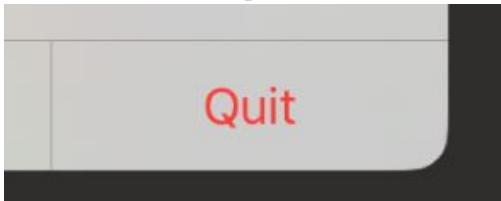
Priority	Low - Could have feature
Status	Completed
Description	The user requests a rematch after a match ends.
User Goal	The user wants to rematch against their opponent.
Desired Outcome	The user rematches against their opponent.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5 , TC 3.1 , TC 3.2 , TC 3.3 , TC 4.2
Requirements	SR 4.4
Pre-conditions	<ol style="list-style-type: none">1. The user has finished a match with another user.2. The user is on a PostMatch Page. 
Post-conditions	The user and their opponent are on the Match Page in a new match.
Trigger	The user's match just ended and the user wants a rematch.
Workflow	<ol style="list-style-type: none">1. The user shall tap on the Rematch button at the bottom of the screen.

	 <ol style="list-style-type: none"> 2. The system shall display the rematch request on the opponent's screen. 3. The user's opponent shall tap on the Rematch button to accept the rematch. 4. The system shall redirect both players to a new Match Page and start a new match. <p>Result: This test passes when the user's opponent's screen has a message declaring the user's request for a rematch.</p>
Alternate Workflow	<p>Rematch Request Denied:</p> <ol style="list-style-type: none"> 3. The user's opponent shall tap the Quit button instead of the Rematch button. 4. The system shall redirect the opponent to their respective Friends Page and the user remains on the PostMatch Page.



TEST CASE 4.5: Prematurely End a Match

Priority	Medium - Should have feature
Status	Completed
Description	The user leaves in the middle of an ongoing match.
User Goal	The user wants to leave an ongoing match.
Desired Outcome	The user left the match.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5
Requirements	SR 4.5
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is currently in a match and is on the Match Page. 
Post-conditions	The user is no longer in a match and has left the Match Page .
Trigger	The user wishes to leave in the middle of a match.
Workflow	<ol style="list-style-type: none">1. The user shall tap the Quit button at the bottom of the Match Page.

	 <p>2. The system shall display a confirmation prompt for the user asking if the user wishes to quit.</p>  <p>3. The user shall tap on the Quit Button.</p>  <p>4. The system shall end the match for both players and redirect them both to the Friends Page.</p> <p>Result: This test passes when both users playing in the same match are redirected to the Friends Page.</p>
Alternate Workflow	N/A



TEST CASE 4.6: Chat With Opponent

Priority	Lowest - Would be nice to have feature
Status	Not Started
Description	The user communicates with the opponent via text during a match.
User Goal	The user wants to communicate with the opponent via text during a match.
Desired Outcome	The user chats with the opponent.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5 , TC 4.2
Requirements	SR 4.6
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is currently on the Match Page and in a match with another user. 
Post-conditions	The chat is updated with new messages from either player.
Trigger	The user wants to say something to their

	opponent.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the chat bar at the bottom of the screen.  2. The system shall enable a keyboard for the user to type on. 3. The user shall type in any text and tap the Checkmark icon to the right of the chat bar.  4. The system shall display the chat in the chat box. <p>Result: This test passes when both players in the match are able to see the new chat message in the chat box.</p>
Alternate Workflow	N/A



TEST CASE 4.7: Watch a Replay of a Match

Priority	Lowest - Would be nice to have feature
Status	Not Started
Description	The user watches a replay of a match they played.
User Goal	The user wants to watch a replay of a match they played.
Desired Outcome	The user viewed a replay of a previous match.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5 , TC 4.2
Requirements	SR 4.7
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user has played at least one match.3. The user has navigated to the Home Page.
Post-conditions	The user is watching a replay of the moves made in a previous match.
Trigger	The user wants to watch a replay of a previous match.
Workflow	<ol style="list-style-type: none">1. The user shall tap the Profile button.2. The system shall redirect the user to the Profile Page.3. The user shall tap the Match History button.4. The system shall redirect the user to the MatchHistory Page.5. The user shall tap on the Watch Replay button of the most recent match on the page (the match on the top of the screen).6. The system shall redirect the user to the MatchReplay Page where a video of the match will autoplay. <p>Result: This test passes when the user is on the MatchReplay Page and is able to view a replay of the selected match.</p>

Alternate Workflow	N/A
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TEST CASE 4.8: Review Moves Made During Match

Priority	Lowest - Would be nice to have feature
Status	Not Started
Description	The user can view the moves made during the current match.
User Goal	The user wants to review the moves made during a match.
Desired Outcome	The user will be able to view the moves made during an ongoing match.
Dependent Test Cases	TC 1.1 , TC 1.2 , TC 2.1 , TC 2.5
Requirements	SR 4.8
Pre-conditions	<ol style="list-style-type: none"> 1. The user has logged in with the predefined credentials in TC 1.2. 2. The user is currently on the Match Page and in an online match with another player.
Post-conditions	The user's moves and their opponent's moves will be listed on the side for viewing.
Trigger	The user or the opponent has made a move.
Workflow	<ol style="list-style-type: none"> 1. The user shall make a move (TC 3.1, TC 3.2). 2. The system shall display this new move in the previous moves list on the side. <p>Result: This test case passes when the most recent move is updated on the previous moves list on the side of the current Match Page.</p>
Alternate Workflow	The opponent makes a move: <ol style="list-style-type: none"> 1. The opponent shall make a move (TC 3.1, TC 3.2).

	2. The system shall display this new move in the previous moves list on the side.
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TEST-CASE 5.1: Change Player Avatar

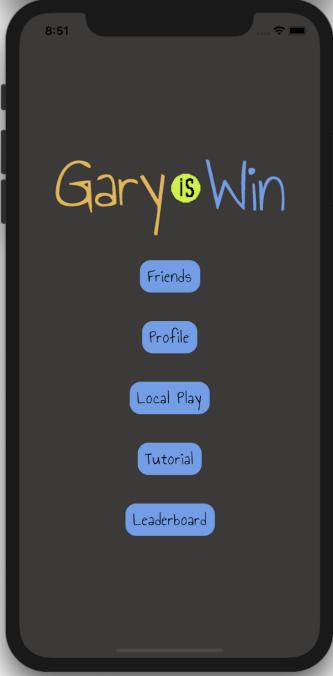
Priority	Low - Could have feature
Status	Completed
Description	The user changes their in-game avatar.
User Goal	The user wants to change their in-game avatar.
Desired Outcome	The user changed their in-game avatar.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 5.1
Pre-conditions	<ol style="list-style-type: none"> 1. The user has logged in with the predefined credentials in TC 1.2. 2. The user is on the Home Page. 

Post-conditions	The user's representative avatar has been changed to an avatar of their choice.
Trigger	The user wants to change their avatar.
Workflow	<p>1. The user shall tap on the Profile button at the bottom of the screen.</p> <p>2. The system shall redirect the user to their respective Profile Page.</p> <p>3. The user shall tap on either the < or > button next to their current avatar.</p> <p>4. The system shall render the next avatar in the cycle.</p> <p>5. The user shall repeat step 3 until they land on an avatar they want.</p> <p>6. The system shall update the user's avatar to the resulting avatar of choice.</p> <p>Result: This test passes when the user's profile is showing the new avatar as the user's avatar. When the user plays a match, their respective avatar is the new</p>

	avatar.
Alternate Workflow	N/A



TESTE-CASE 5.2: Change App Icon

Priority	Lowest - Would be nice to have feature
Status	Completed
Description	The user changes the app's icon on their device.
User Goal	The user wants to change the app's icon on their device.
Desired Outcome	The user has changed the app's icon on their device.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 5.2
Pre-conditions	<p>3. The user has logged in with the predefined credentials in TC 1.2.</p> <p>4. The user is on the Home Page.</p> 

Post-conditions	The user's app icon has been changed to their respective avatar.
Trigger	The user wants to change their app icon.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the Profile button at the bottom of the screen. 2. The system shall redirect the user to their respective Profile Page. <p>3. The user shall tap on either the Set App Icon button below their current avatar.</p> <p>4. The system shall render the user's avatar as the app's display image on the user's device.</p> <p>Result: This test passes when the user's avatar is displayed as the app's icon on the user's device.</p>
Alternate Workflow	N/A

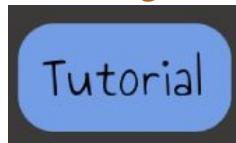


TEST CASE 5.3: Play Tutorial

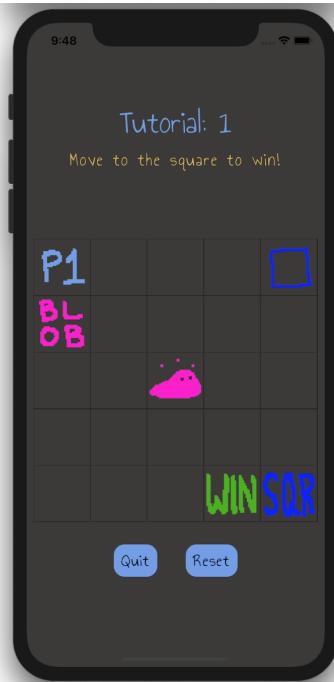
Priority	Lowest - Would be nice to have feature
Status	Completed
Description	The user learns the rules of the game.
User Goal	The user wants to learn the rules of the game.
Desired Outcome	The user is familiar with the game rules.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 5.3
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user is on the Home Page. 
Post-conditions	The user has finished playing through the tutorial.
Trigger	The user is unfamiliar with the rules of the game.

Workflow

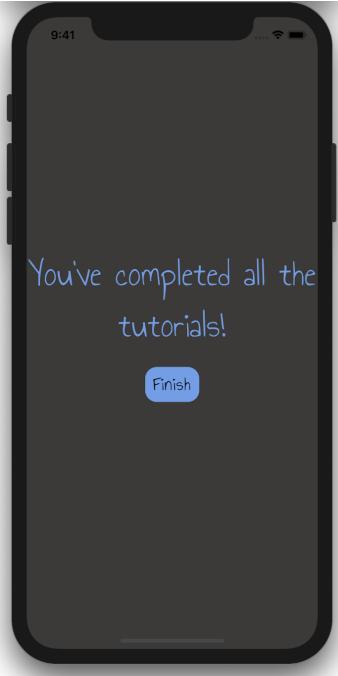
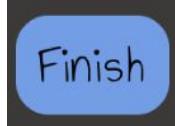
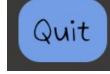
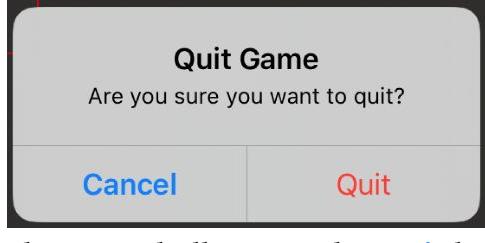
1. The user shall tap on the **Tutorial** button on the **Home Page**.



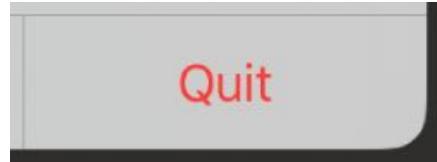
2. The system shall redirect the user to the **Tutorial Page**.



3. The user shall complete the first stage in the tutorial.
4. The system shall immediately direct the user to the second stage of the tutorial.
5. The user shall complete the remaining stages in the tutorial.
6. The system shall display a message at the end of the tutorial, notifying the user that they have completed the tutorial.

	 <p>7. The user shall tap on the Finish button at the bottom of the page.</p>  <p>8. The system shall redirect the user back to the Home Page.</p> <p>Result: This test passes when the user is redirected back to the Home Page.</p>
Alternate Workflow	<p>User quits the tutorial:</p> <p>5. The user shall tap on the Quit button at the bottom of the end tutorial page.</p>  <p>6. The system shall display a confirmation popup message.</p>  <p>7. The user shall tap on the Quit button on the</p>

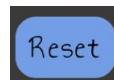
popup message.



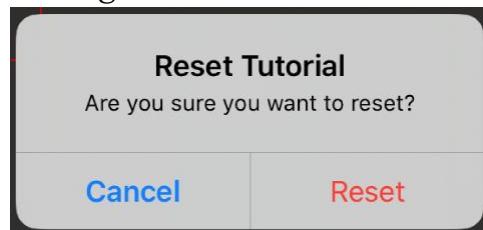
8. The system shall redirect the user back to the **Home Page**.

User resets tutorial stage:

5. The user shall tap on the **Reset** button at the bottom of the end tutorial page.



6. The system shall display a confirmation popup message.



7. The user shall tap on the **Reset** button on the popup message.



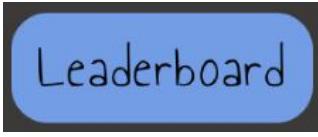
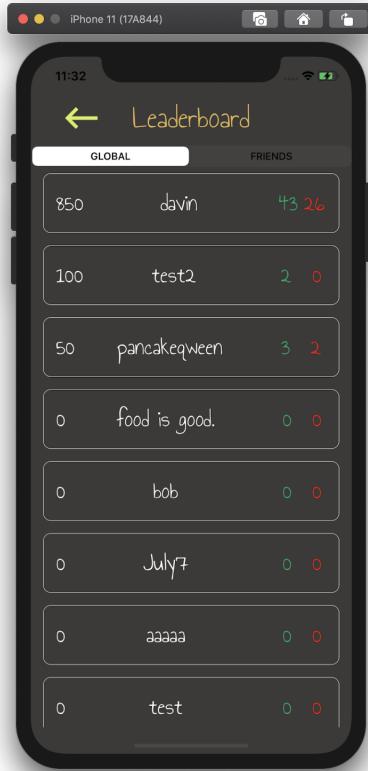
8. The system shall re-render the current tutorial stage and reset all the objects and avatars on the board.



TEST CASE 5.4: View Leaderboard

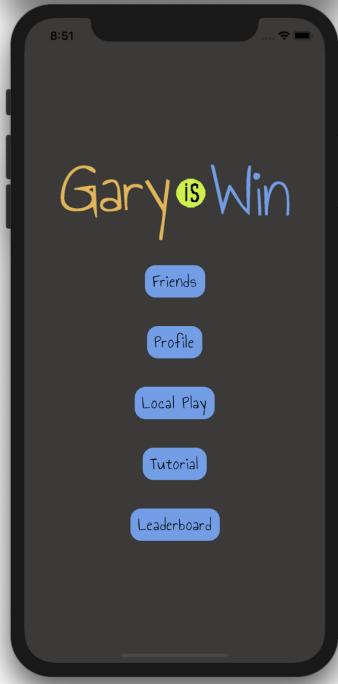
Priority	Low - Could have feature
Status	Completed
Description	The user views the leaderboard to see where they rate in the game in comparison to other players.
User Goal	The user wants to check their own or another player's rating.
Desired Outcome	The user accessed the leaderboard and viewed player ratings.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 5.4
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user has navigated to the Home Page.

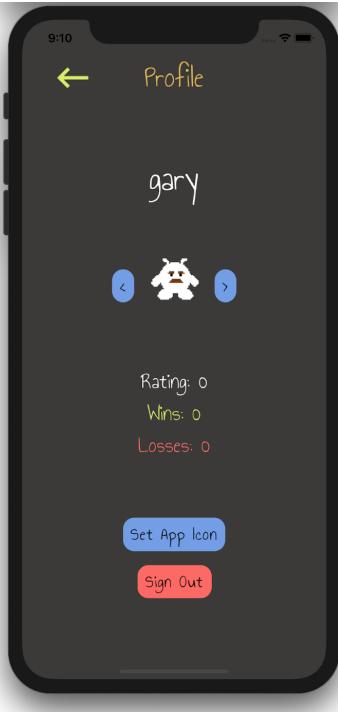


Post-conditions	The user has been redirected to the Leaderboard Page .
Trigger	The user wants to check their own or another player's rating.
Workflow	<ol style="list-style-type: none"> 1. The user shall tap on the Leaderboard button.  2. The system shall redirect the user to the Leaderboard Page.  <p>Result: This test passes when the user is able to view a leaderboard of the top 10 players in the game and of the top players in the user's friend list, ordered from highest to lowest rating (from top to bottom).</p>
Alternate Workflow	N/A



TEST CASE 5.5: View Rating

Priority	Low - Could have feature
Status	Completed
Description	The user can check their rating in the game.
User Goal	The user wants to check how they are doing statistically in the game.
Desired Outcome	The user will be able to check their rating in the game.
Dependent Test Cases	TC 1.1 , TC 1.2
Requirements	SR 5.5
Pre-conditions	<ol style="list-style-type: none">1. The user has logged in with the predefined credentials in TC 1.2.2. The user has navigated to the Home Page.
	
Post-conditions	The user is able to view their personal rating in the game.

Trigger	The user wants to see their personal rating.
Workflow	<ol style="list-style-type: none"> 1. The player shall tap on the Profile button. 2. The system shall redirect the user to their respective Profile Page with their wins, losses, and rating displayed.  <p>Result: This test case passes when the user is on the Profile Page and is able to view their personal rating and statistics.</p>
Alternate Workflow	N/A