Use Case ID	1
Use Case Name	User Registration
Overview	Any user can register to the system. An email address(unique) is required to register, as well as a password and username (unique).
Primary Actors	User
Secondary Actors	Authenticator
Pre-Conditions	A user is not already registered.
Main Flow	1. A user enters their email address(unique). 2. The user enters their preferred password. 3. The user re-enters the same password for confirmation. 4. The user enters a username (unique). 5. The system will indicate to the user that the user has been registered.
Post-Conditions	The user is now registered.
Alternative Flow	1. A user enters their email address. It isn't unique. 2. A user enters new address that is unique. The user then begins from #2 of the main flow.
Alternative Flow 2	1. A user completes #1-4 of the main flow. 2. A user enters a username. It isn't unique. 3. A user enters a new username that is unique.
Use Case ID	2
Use Case Name	Create A Game
Overview	A registered user can create a game. The creator becomes a player in that game.
Primary Actors	User
Secondary Actors	n/a
Pre-Conditions	The user is already registered.
Main Flow	1. User Logs in. 2. User request to create a game. 3. User enters the game name 4. User press create game 5. The system notify the user that the game has succesfully created.

Post-Conditions	A game has been created with the user that created it as a player.
Alternative Flow	1. At step1 of the Main Flow the user enters an invalid name and/or password, the system displays an error message. The user can choose to either return to the beginning of the Main Flow or cancel the login, at which point the use case ends. 2. At step4 of the Main Flow user pressed "cancel" and user is taken to the main memu, at which point the use case ends.
Use Case ID	3
Use Case Name	Invite User to Join Game
Overview	A registered user can invite another registered user or set of registered users to join a created game.
Primary Actors	User
Secondary Actors	n/a
Pre-Conditions	A user is registered. That registered user has created a game.
Main Flow	1. A list of registered users are shown 2. User select the user they want to invite 3. User sends an invite to another registered user to join their game.
Post-Conditions	The registered user(s) have received their invites to join the game.
Alternative Flow	1. User sends an invite to multiple registered users to join their game.
Use Case ID	4
Use Case Name	Log-in
Overview	This use case describes how user logs into the system.
Primary Actors	User
Secondary Actors	Authenticator
Pre-Conditions	The user is registered already.
Main Flow	1. The system requests that the user enter his/her name and assword. 2. The user enter his/her name and password. 3. The system validates the enter name and password and logs the actor into the system.

Post-Conditions	The user is now logged into the system
Alternative Flow	1. At step2 of the Main Flow the user enters an invalid name and/or password, the system displays an error message. The user can choose to either return to the beginning of the Main Flow or cancel the login, at which point the use case ends.

Use Case ID	5
Use Case Name	Accept/Reject Invitation
Overview	A registered user can accept or reject any invitation to join a game that they receive.
Primary Actors	User
Secondary Actors	n/a
Pre-Conditions	A registered user has received an invitation to join a game
Main Flow	1. A user checks what game they have been invited to play. 2. The user is prompted to accept or reject the game. 3.The user accepts the game.
Post-Conditions	The invitation has been accepted or rejected and is no longer there.
Alternative Flow	1. A user checks what game they have been invited to. 2. The user is prompted to accept or reject the game. 3. The user rejects the game.

Use Case ID	20
Use Case Name	Logout
Overview	The user is done using the app and they want to sign out
Primary Actors	User
Secondary Actors	Game system
Pre-Conditions	The user is logged in
Main Flow	1. Includes (Log-in) 2. The user is done using the application 3. The user clicks on the logout button 3.The system log the user out
Post-Conditions	The user is logged out
Alternative Flow	n/a

Use Case ID	6
Use Case Name	Join Multiple Games
Overview	A registered user can be a part of different games at the same time.
Primary Actors	User
Secondary Actors	n/a
Pre-Conditions	A user is registered. That user has already joined a game.
Main Flow	1. The user receives a game invite. 2. Include(Accept/Reject Invitation) 3. The user accepts the game invitation.
Post-Conditions	The user is now playing both games.
Alternative Flow	1. Include(Create A Game). 2. Include(Invite User to Join Game) 3. The invited user accepts the game invitation.

Use Case ID	7
Use Case Name	Quit game
Overview	A player can quit a game at anytime
Primary Actors	User
Secondary Actors	n/a
Pre-Conditions	A user is part of a game.
Main Flow	1. User selects to quit the game 2. The game prompts the user if he/she is sure? 3.The user selects yes 4.User is taken to the main menu
Post-Conditions	The user is taken to the main menu
Alternative Flow	1.At step3 of the Main Flow the user select "no" and the game continues.

Use Case ID	8
Use Case Name	Unregister
Overview	A registered user can unregister from the system.
Primary Actors	User
Secondary Actors	n/a
Pre-Conditions	A user is currently registered.

Main Flow	1. A user decides to unregister from the system. 2. The user clicks the unregister button. 3. The system asks if they are sure? 4. The user selects yes. 4. Include(Quit Game). The system quits all games the user is a part of.
Post-Conditions	The user is no longer registered. The user is no longer part of any games they were a part of pre-unregister.
Alternative Flow	1. A user decides to unregister from the system. 2. The user clicks the unregister button. 3. The system asks if they are sure? 4. The user selects no. 4. The user remains registered and a part of all their joined games.
Use Case ID	9
Use Case Name	View Game Report
Overview	The system must record the history of games played by each user.
Primary Actors	User
Secondary Actors	Game System
Pre-Conditions	A user is registered.
Main Flow	1. The user joins or creates a game 2. The game system records the start date and time of the game. 3. The game system records the opponent(s) username. 4. The user plays and wins the game. 5. The game system records the end date and time of the finished game. 6. The game system records a game status "win" for the user.
Post-Conditions	The user is done with the game. The system has a record of the game.
Alternative Flow	1. The user joins or creates a game 2. The game system records the start date and time of the game. 3. The game system records the opponent(s) username. 4. The user plays and loses the game. 5. The game system records the end date and time of the finished game. 6. The game system records a game status "loss" for the user.

Alternative Flow 2	1. The user joins or creates a game 2. The game system records the start date and time of the game. 3. The game system records the opponent(s) username. 4. The user plays and ties the game. 5. The game system records the end date and time of the finished game. 6. The game system records a game status "tie" for the user.
Alternative Flow 3	1. The user joins or creates a game 2. The game system records the start date and time of the game. 3. The game system records the opponent(s) username. 4. The user quits the game before it finishes. 5. The game system records the end date and time of the finished game. 6. The game system records a game status "abandoned" for the user.
Use Case ID	10
Use Case Name	View Profile
Overview	A registered user can see a profile of any other registered user
Primary Actors	User
Secondary Actors	
Pre-Conditions	A user is registered.
Main Flow	1. A selects another user's username. 2. The user selects "view profile". 3. The user views the selected usernames history of played games.
Post-Conditions	User's profile is un-changed
Alternative Flow	
Use Case ID	11
Use Case Name	Start Game
Overview	User request to start the game
Primary Actors	User
Secondary Actors	Game System
Pre-Conditions	The user(s) is already registered and logged in
Main Flow	1. The user has chosen to begin a game 2. The system checks if minimum number of players required for the game have joined 3. The game begins

Post-Conditions	The User(s) start playing the game
Alternative Flow	1.At Main Flow step2 the minimum number of players required for the game have not been met. The system prompt the user to wait for the remaining users; the user wait until the maximum number of user for that game has been reached. 2.At Main Flow step2 the minimum number of players required for the game have not been met. The system prompt the user to wait for the remaining users; the user pressed "cancel" and the user is taken to the main memu. At this point the use case ends.

Use Case ID	12
Use Case Name	Request to Join
Overview	User request to join a game
Primary Actors	User
Secondary Actors	Game System
Pre-Conditions	The user is already registered
Main Flow	1.User logs in 2.User request to join a game 3.A list of games is shown 4. The user select a game from the list 5. The sytem check if the game started or not 6.The user becomes part of the game.
Post-Conditions	User has succesfully joined the requested game.
Alternative Flow	1. At step1 of the Main Flow the user enters an invalid name and/or password, the system displays an error message. The user can choose to either return to the beginning of the Main Flow or cancel the login, at which point the use case ends. 2. At step5 of the Main Flow, the system check shows that the game has started; user is denied access. User repeats steps 3-5 until they finds a game that did not start.

Use Case ID	13
Use Case Name	Initiate game
Overview	Begin playing the game
Primary Actors	User

Secondary Actors	Game System
Pre-Conditions	User(s) has succesfully joined the game.
Main Flow	1. Player(s) are waiting to start. 2. System determines which player goes first. 3. The System determined player makes first move.
Post-Conditions	The system determined player initiates the game.
Alternative Flow	1. Player(s) are waiting to start. 2. System checks rules for the X game. 3. System determines no rules pertain to which player will iniate game. 4. System grants permission to the player who created the game to make first move.
Use Case ID	14
Use Case Name	Set Rotation
Overview	Determine the rotation of the game
Primary Actors	User(s)
Secondary Actors	Game System
Pre-Conditions	Game has been initiated
Main Flow	1. Player(s) are waiting to make a move. 2. System determines which player goes next based on rules. 3. The chosen player makes his move
Post-Conditions	The System determined player makes a move
Alternative Flow	1. At step2 of the Main Flow the system determines which user goes next 2. the chosen user press "quit" 3. the game stop 4. The user get taken to the main memu. At this point the use case ends.
Use Case ID	15
Use Case Name	Check game status
Overview	The system check to see if a game is active
Primary Actors	User
Secondary Actors	Game System
Pre-Conditions	The system checked if the game is active or not
Main Flow	1. User request to make a move 2. The sytem check if the game is active

Post-Conditions	The system successfull found the status of the game
Alternative Flow	n/a
Use Case ID	16
Use Case Name	Make move
Overview	The user request to make a move
Primary Actors	User
Secondary Actors	Game System
Pre-Conditions	Game has been initiated
Main Flow	1. include(Check game status) 2. include(Validate move) 3. the system determine if it is the player turn to move. see use case ID 14 4. the user make a move
Post-Conditions	The user successfully made a move
Alternative Flow	1. At step1 of the Main Flow the system determined that the game is not active and the user is notify that they can not make a move because the game is unactive. 2. At step2 of the Main Flow, user submits his move request to the System, the System determines that the move is NOT valid, and the system prompts user to make another choice. 3. At step3 of the Main Flow the system determines that it is not the user turn to play and the user wait until prompted otherwise by the system to make a move.
Use Case ID	17
Use Case Name	Validate move
Overview	Where a player can move
Primary Actors	User
Secondary Actors	Game System
Pre-Conditions	It's current Players turn
Main Flow	1. Player submits his move request to the System. 2. The System determines that the move is valid. 3. Player moves to desired spot.
Post-Conditions	Player makes a valid move

Alternative Flow	1. Player submits his move request to the System. 2. The System determines that the move is NOT valid. 3. System prompts player to make another choice. 4.Steps 1 & 2 are repeated until System determines the request is valid. 5. Player moves to desired spot.
Use Case ID	18
Use Case Name	Save Active Game State
Overview	The system saves active game states
Primary Actors	User(s)
Secondary Actors	Game System
Pre-Conditions	There is an active game
Main Flow	1. A user is playing an active game. 2. The user decides to leave the game but not quit. 3. The user selects save game. The game system stores the game state.
Post-Conditions	Active game states are saved
Alternative Flow	
Use Case ID	19
Use Case Name	Save game outcome
Overview	Determine when a game is over
Primary Actors	User(s)
Secondary Actors	Game System
Pre-Conditions	The game is active
Main Flow	1. Player N just made his move. 2. System determines Player N won the game. 3. System determines the rest of players lose. 4. System determines game is over.
Post-Conditions	The game ends
Alternative Flow	1. Player N just made his move. 2. System determines based on rules that there are no more moves lefts for any of the Players. 3. System determines there is no clear winner. 4. System determines game results in a draw.

Alternative Flow2	1. Player N just made his move. 2. System determines based on rules that there are no more moves lefts for any of the Players. 3. System determines Player A and Player B both have same score. 4. System determines game results in a tie between Players A & B.