

CS414: Object-Oriented Design - Fall 2018

Project 1: **Banqi Game Use Cases**

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Identified Use Cases:

- Create User Profile
- New Game
- Play Game/Move
- Forfeit game
- View Profile
- View Match History
- View Board Status
- Respond to invitation

Fully-dressed Use Cases:

Use case id:	1
Use case name:	Create User Profile
Overview:	User creates a user profile using an email address, and specifying a nickname to be used during play
Primary Actors:	User
Secondary Actors:	None
Pre-conditions:	<ol style="list-style-type: none">1. User must have a valid email2. Nickname must be unique3. User must not already have a User profile
Main flow:	<ol style="list-style-type: none">1. Use email to create an account2. Make a password3. Create a Nickname
Post-conditions:	The user now has a User Profile
Alternative flows:	The user has failed to create a valid profile

Use case id:	2
Use case name:	New Game
Overview:	User creates a new game and is required to invite a second user
Primary Actors:	User - Host
Secondary Actors:	User - 2nd Player
Pre-conditions:	Both User - Host, and User - 2nd Player have a profile
Main flow:	<ol style="list-style-type: none"> 1. User creates a new game 2. User puts name of other user in invite 3. Invite is sent to (other) User
Post-conditions:	A game is created with 2 users
Alternative flows:	The game is not created

Use case id:	3
Use case name:	Play Game/ Move
Overview:	The game is running and users take turns moving, with system checking conditions each move
Primary Actors:	User - Host, User - 2nd Player
Secondary Actors:	None
Pre-conditions:	Game exists, both Users are in the game
Main flow:	<ol style="list-style-type: none"> 1. System notifies User it is their move (on game creation, User that sent invite is first to move) 2. User attempts to move, System checks if move is valid 3. Move is made if valid, System updates game status 4. System checks if game is over <ol style="list-style-type: none"> a. If yes, game is over, record match history b. If no, other user gets notified it is their turn, repeats
Post-conditions:	Other User's move
Alternative flows:	Game Concludes Game is Forfeited Move is invalid

Use case id:	4
Use case name:	Forfeit Game
Overview:	A user who is in the game can cancel the game
Primary Actors:	User
Secondary Actors:	None
Pre-conditions:	The game exists, is active and is not cancelled
Main flow:	1. User who wants to quit, clicks on the Forfeit button
Post-conditions:	The game is cancelled
Alternative flows:	

Use case id:	5
Use case name:	View Profile
Overview:	User can view profile of their own account, and can view the accounts of any other user
Primary Actors:	User
Secondary Actors:	None
Pre-conditions:	User must have created a profile of their own. Other users must have created their own profiles
Main flow:	<ol style="list-style-type: none"> 1. User clicks on view own profile button to view their personal profile 2. User clicks view profile of a different user to view that users profile
Post-conditions:	User has viewed own account, or user has viewed another users profile
Alternative flows:	

Use case id:	6
Use case name:	View Match History
Overview:	A user can view the results of the previous Banqi games they have played.
Primary Actors:	User
Secondary Actors:	None
Pre-conditions:	A user has a valid profile to play Banqi games and the user has played at least one previous game
Main flow:	<ol style="list-style-type: none"> 1. User clicks on their own profile or that of another user. 2. User then selects an option to view the match history of that user.
Post-conditions:	User must exist to view their profile and history.
Alternative flows:	A user selects another user's profile but, once there, finds that user does not have a match history.

Use case id:	7
Use case name:	View Board Status
Overview:	A user is able to view the game board for a current Banqi game, which they are a part of.
Primary Actors:	User
Secondary Actors:	None
Pre-conditions:	The game exists and the user set to view the board is part of the game.
Main flow:	<ol style="list-style-type: none"> 1. User clicks on a view game status button 2. Information on the game is returned including a view of the board, whose turn it is, and who is playing which color
Post-conditions:	A user views the board for a game they are playing.
Alternative flows:	

Use case id:	8
Use case name:	Respond to Invitation
Overview:	A user is invited to play a game can either accept or reject that invitation.
Primary Actors:	User
Secondary Actors:	None
Pre-conditions:	The user of a new game sends an invitation.
Main flow:	<ol style="list-style-type: none"> 1. User receives an invitation to join a created game 2. User either accepts or rejects the game invite
Post-conditions:	The user joins a game if the invitation is accepted, or the user has rejected the invitation.
Alternative flows:	User (1) accepts the invitation, but a different User (2) accepted the game invite before User (1)