

CSC 667/867
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Term Project
Milestone 4: Application Logic

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Team-i Github Repository

<https://github.com/sfsu-csc-667-spring-2018/term-project-team-i>

Table of Contents

Chess	3
User Actions	3
Player Creates A Game Room.	3
Player Joins A Game Room	3
Player Sends a Message	3
Player Forfeits A Game	3
Player Requests A Draw	3
Events	4
Game Room has received all required Players	4
Game Has Started But A Player Leaves The Room	4
Player Moves A Chess Piece To Position	4
Player's King Piece Is Checked	4
Player's King Is Checkmated	5
Player Responds To Draw Request	5
API	5
Action: Player creates an account	5
Action: Player creates a game room	5
Action: Player joins a game room	5
Action: Player sends a message in the lobby	6
Action: Player moves a chess piece	6
Action: Player forfeits the game	6
Action: Player draw request	6
Action: Player draw response	6

Chess

User Actions

Player Creates A Game Room.

Input:

- Player, Navigation Bar, Create Game Button.

Outcome:

- New game room created with the Player assigned as host and is the 'white' faction. The Game is set in 'idle' state.

Player Joins A Game Room

Input:

- Player, Game Lobby, Join Game Button.

Outcome:

- Player joins in a game room as the opponent against the host, whom is another Player.

Player Sends a Message

Input:

- Player, Message, Lobby, Game Room

Outcome:

- Player submits a message into the chat box and the message is sent over to the Server, which is then disseminated to all users in the chat box.

Player Forfeits A Game

Input:

- Player, Game, Forfeit Button

Outcome:

- Player, while in an active Game, clicked on the Forfeit Button and confirmed his/her request in the popup. The forfeiting Player receives a loss and the opposing Player receives a win. The Game state is set to 'inactive'.

Player Requests A Draw

Input:

- Player, Game, Draw Button

Outcome:

- Player, while in an active Game, clicked on the Draw Button and confirmed his/her draw request. The draw request is sent over the opposing Player. The Game is paused.

Events

Game Room has received all required Players

Conditions:

- Game room has received the required number of Players to start the game.

Outcome:

- The Game state is changed from 'idle' to 'active'.
- The host Player, which is of the 'white' faction, gets first turn.

Game Has Started But A Player Leaves The Room

Conditions:

- The Game is 'active' but one of the Players leaves the Game Room.

Outcome:

- A one minute timer starts counting down.
- If the timer reaches zero then the remaining Player wins by default.
- If the remaining Player also leaves before timer reaches zero then both Players will receive a 'draw'.
- If the missing Player returns before the timer elapses then the Game will resume.

Player Moves A Chess Piece To Position

Conditions:

- Player moves one chess Piece to another position.

Outcome:

- If it is not the Player's turn then the move is cancelled.
- If it is the Player's turn but the move is invalid (i.e not possible for the selected chess Piece) then it will display an error message.
- If the move is valid then the Piece will move to new position and the turn switches over to the opponent.
- If the move is valid and there is an opposing piece at the destination coordinates, then the opposing piece's alive state is set to false, and will be removed from the chessboard.

Player's King Piece Is Checked

Conditions:

- Player's King Piece is in range to be captured by the opposing Player's chess Piece.

Outcome:

- The Player whose King Piece is checked has to move the King to a safe position, or use another Piece to intercept the opponent's capturing Piece by eliminating it or blocking its path.

Player's King Is Checkmated

Conditions:

- A Player's King Piece is in position to be captured and cannot avoid it by any means.

Outcome:

- The Player whose King Piece cannot avoid capture will receive a lost, and the opposing Player will receive a win.
- The Game state will be set to 'inactive'.

Player Responds To Draw Request

Conditions:

- One Player has submitted a draw request and is awaiting for the opposing Player to respond.

Outcome:

- The responding Player denies the request and the game will then resume.
- The responding Player accepts the request and the game's state will be set to 'inactive'.

API

Action: Player creates an account

POST /registration

{ user_name: string, name: string, password: string, email: string }

Action: Player creates a game room

POST /game

{ playerId: int }

Action: Player joins a game room

POST /game/:gameId

{ playerId: int }

Action: Player sends a message in a game room

POST /game/:gameId/message

{ playerId: int, message: string }

Action: Player sends a message in the lobby

POST /lobby/message
{ playerId: int, message: string }

Action: Player moves a chess piece

POST /game/:gameId/move-piece
{ playerId: int, pieceId: int, coordinate_x: string, coordinate_y: string }

Action: Player forfeits the game

POST /game/:gameId/forfeit
{ playerId: int, forfeit: boolean }

Action: Player draw request

POST /game/:gameId/draw-request
{ playerId: int, draw-request: boolean }

Action: Player draw response

POST /game/:gameId/draw-response
{ playerId: int, draw-response: boolean }