

Milestone 3

Team #10

Github Repo: <https://github.com/csc667-02-sp19/csc667-sp19-Team10>

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Entities and their operations

1. User

Data:

- a. userId
- b. username(String)
- c. password (String)
- d. winCount (Int)
- e. loseCount (Int)
- f. drawCount(Int)
- g. rating (Double)
- h. isActive (Boolean)

Operations:

- a. register // register page
- b. validateLogin // validate user input for login
- c. getConnectedPlayers // show online players on lobby page, using *isActive*

2. Lobby chatroom

// lobby page only

Data:

- a. username (String)
- b. message (String)
- c. time (Date)

Operations:

- a. getMessage // return JSON object with username and message

3. Game chatroom

// game room only

Data:

- a. username (String)
- b. message (String)
- c. time (Date)

Operations:

- b. getMessage // return JSON object with username and message

4. Leaderboard

Data:

- a. username (String)
- b. userId (String)
- c. winCount (Int)
- d. loseCount (Int)
- e. drawCount (Int)

Operations:

- a. retrieveLeaderboard // return JSON object to render stats

5. chessBoard //Game

Data:

- a. gameId (Int)
- b. player1 (String) // player who created game
- c. player2 (String) // init null until player2 joins
- d. startTime (Date) // init null until player2 joins
- e. endTime (Date) // init null until game is over
- f. playerTurn (Int) // init null until player makes movement
- g. result (String) // init null, display who won or "draw" if draw
- h. moveTimeLimit (Time) // user defined during creation of game
- i. gameTimeLimit (Time) // user defined during creation of game
- j. fen (String) // position of pieces, and whose turn
- k. pgn (String) // history of moves per round
- l. isAvailable (Bool) // Game State is available or not
- m. currentTime (Time) // init 0:00, Timer for the current time

Operations:

- a. getAvailable // retrieve a player slot available to join or show current game
- b. updateStartTime // init start time
- c. updateTurn // determined which player going to make the movement
- d. updateMovement // Chess make movement, and update it on the board "Submit"
- e. checkGameStatus // Check the game is finished or not associate with result(String)
- f. updateResult // Update game result
- g. getGameTimeLeft // retrieve time left in game
- h. getMoveTimeLeft // retrieve time left for player move

6. Board (Our team are using chessboard.js, so we don't need to implement the actual chess)

Data:

- a. boardId
- b. [A1-A8] // holds 0 or 1; 0 for empty spot, 1 for non-empty spot
- c. [B1-B8]
- d. [C1-C8]
- e. [D1-D8]
- f. [E1-E8]
- g. [F1...F8]
- h. [G1-G8]
- i. [H1-H8]

Operations:

- i. retrieveBoard // for rendering in frontend
- j. updateBoard // update the last position for chess pieces

7. chessSet

Data:

- a. pieceType
- b. color
- c. position //stores a section of the board (e.g. A1 or E3)

Operations:

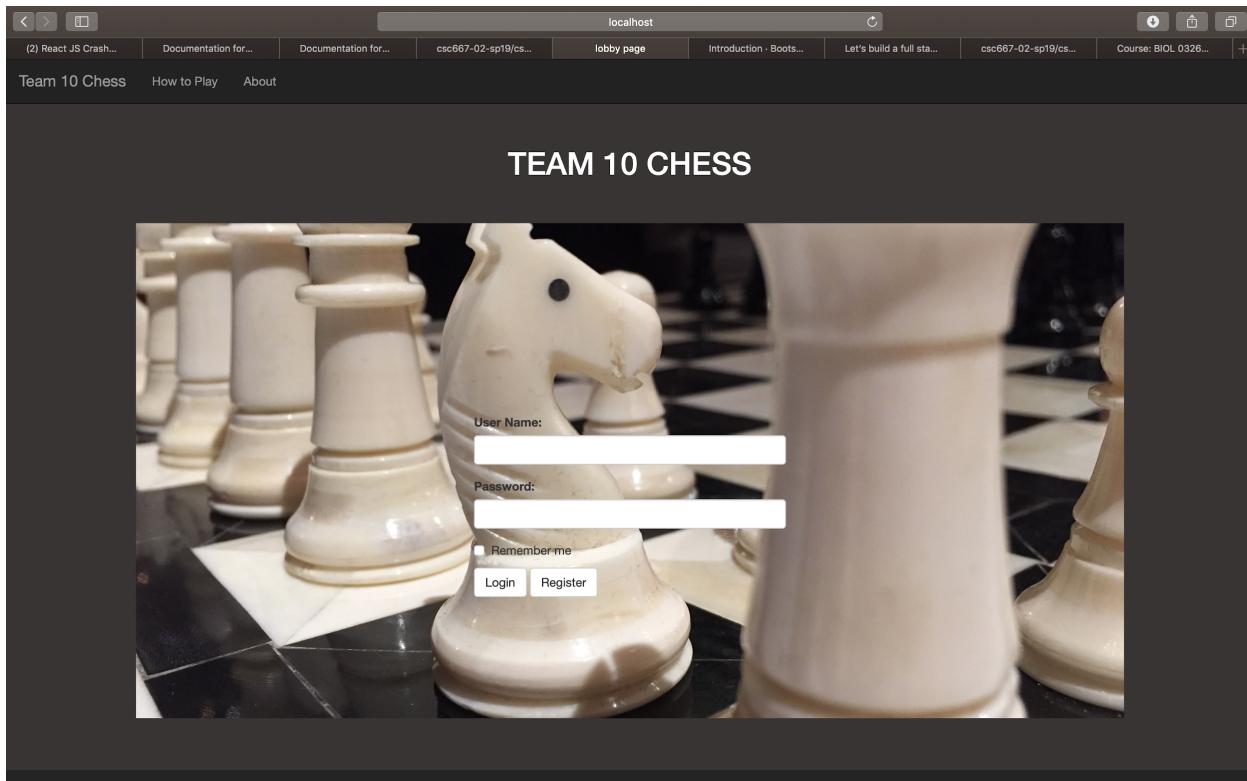
a. retrievePiece // for mapping between Board entity and chessSet entity

Routes

1. "/", render login page
2. "/register", saves all form information to the user table database and continue to lobby page
3. "/validateLogin", checks user table database for form information and continue to lobby page
4. "/lobby", render lobby page
5. "/lobbyLeaderboard", checks leaderboard table database for the top 10 users and send the top 10 users
6. "/leaderboard", render leaderboard page and gets leaderboard table data from the database
7. "/chessBoard", render chess game page
8. "/gameSetup", saves all information (e.g. move limit timer = 2 mins) to the game table database
9. "/startGame", start the timer of the game, white goes first, and start move timer
10. "/playerMove", checks player movement and determine if its a valid move. If so, move to that position and change player turn.
11. "/getWinner", determine the winner between the two players, update both user's information in the user table database, update the leaderboard table database (determine order of table)
12. "/profile", render profile page
13. "/setupProfile", saves all form information to the user table database

Screenshots of the implemented HTML code

We left out the "Profile Settings", "About", and "How to Play" pages because they are extras that we will implement if we have time after we have implemented all of the priority 1 requirements.



The screenshot shows the lobby page with the title "TEAM 10 CHESS". It features three main sections: "Current Games", "Available Games", and "Leader Board".

Current Games:

Player	Time	Move
Johnson	23:45	Theirs
Anthony	1 day	Yours

Available Games:

Player	Time	Rank
John	3 days	15
Mary	1 day	23

Leader Board:

Rank	Player	Wins	Loss	Draw
1	Anthony	1054	5	2
2	Steve	204	68	1
3	Leo	308	206	4
4	Kurtis	209	206	9
5	Dave	309	503	3
6	Johnson	205	503	3
7	Kathy	109	530	3
8	Betty	30	609	3
9	Al	3	509	3
10	Rose	2	1209	3

Chat:

- Leo: Hi, wanna play some chess?
- Steve: You're on!

Buttons:

- Create Game
- Send

localhost

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Team 10 Chess Lobby Profile Settings How to Play About Steve R Logout

Create New Game

Select time per move 1 min

Timed Game

Yes
 No

Select time per game Select one
 10 min
 20 min
 1 hour

Create Game Close

Welcome to the Team 10 Chess Lobby. Here you can create your own games or join existing ones.

To create your own game, click on the "Create Game" button.

Current Games

Player	Time	Move
Johnson	23:45	Theirs
Anthony	1 day	Yours

Available Games

Player	Time	Rank
John	3 days	15
Mary	1 day	23

Create Game

Rank Player Wins Loss Draw

1	Anthony	1054	5	2
2	Steve	204	68	1
3	Leo	308	206	4
4	Kurtis	209	206	9
5	Dave	309	503	3
6	Johnson	205	503	3
7	Kathy	109	530	3
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9	AI	3	509	3
10	Rose	2	1209	3

Leo: Hi, wanna play some chess?
Steve: You're on!

Send

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TEAM 10 CHESS

Johnson W

Submit Move

Resign Game

Your Move

Time Left: 12:54

Steve R ●

Johnson W: This is my first time, take it easy on me.

Send