

# CS414 - P2 Presentation

Team 'We Them Boys' - Legan Chess

Alex Guentchev

Lance McMullin

Westin Musser

Jesse Schmidt

Joseph Tonski



# The XGame



Pawn movements in Legan chess

- Legan Chess
  - Invented by L. Legan in 1913.
  - Pieces start in the corners, as illustrated
  - Pawn movement changes
  - No castling, and no en passant
-

# Development Progress: Login & Registration



## Legan Chess Online

Legan Chess is a chess variant with its main differences being the start position (shown above) and pawn movement. Pawns move diagonally and capture orthogonally. There is no castling and no en passant, but otherwise standard chess rules apply.

[Log in to play now!](#)

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! No account found for given email and password. ✕

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! There is already a registered user with the given username or email ✕

[Sign Up](#)

Already have an account? [Log In](#)

# Development Progress: Match creation

## Match Creation

To start a match, find an opponent to send a game request!

Search for a user

|

Your starting color: White

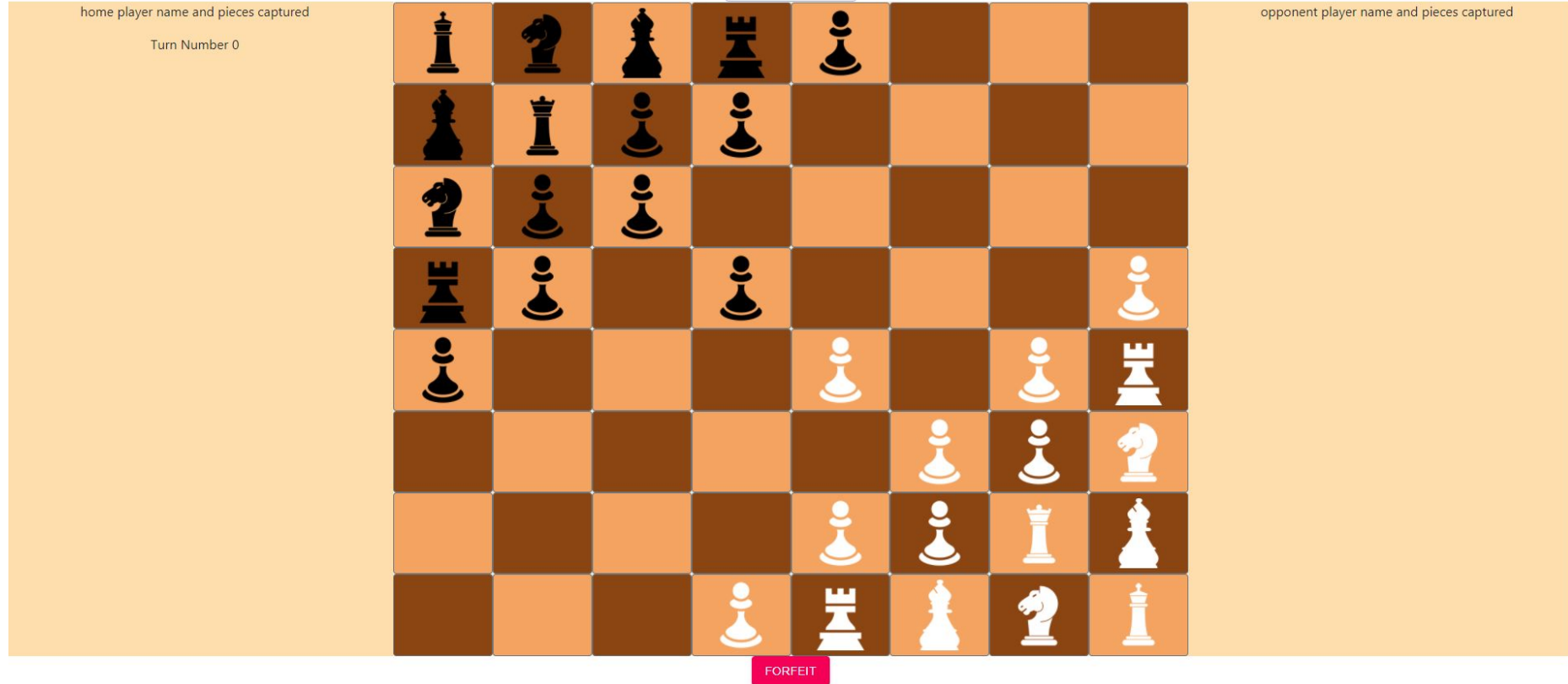
☐ Black

☒ White

Create Match

Cancel

# Development Progress: Match UI



# User Stories and Tasks

ID	Work Item Type	Title	Assigned To	State	Priority
4	User Story	As a new user I would like to register for the platform	McMullin, Lance (EID) <lancemc@colostate.edu>	Active	1
5	User Story	As a user, I would like to be able to log out of the platform	Alex Guentchev <agenchev@colostate.edu>	Active	2
6	User Story	As a user, I would like to be able to log into the platform	Alex Guentchev <agenchev@colostate.edu>	Active	1
7	User Story	As a user, I would like to be able to unregister from the platform	Jesse Schmidt <jessejs@colostate.edu>	Active	3
8	User Story	As a player, I would like to create a new match	Joseph Tonski <jojojr@colostate.edu>	Active	1
10	User Story	As a player, I would like to be able to accept invitations to matches	Joseph Tonski <jojojr@colostate.edu>	Active	1
11	User Story	As a player, I would like to be able to reject invitations to matches	Jesse Schmidt <jessejs@colostate.edu>	Active	3
13	User Story	As a player, I would like to be able to quit a match.	Musser,Westin (EID) <wstnmssr@colostate.edu>	Active	3
14	User Story	As a user, I would like to be able to view my profile	Musser,Westin (EID) <wstnmssr@colostate.edu>	New	4
15	User Story	As a player, I want to play Legan chess		Active	1
16	User Story	As a player, I want to exit a match to resume later	Joseph Tonski <jojojr@colostate.edu>	Closed	2
17	User Story	As a player, I want to resume a previously started match	Jesse Schmidt <jessejs@colostate.edu>	Active	2
18	User Story	As a player, I want to be notified about the outcome of a match	McMullin, Lance (EID) <lancemc@colostate.edu>	Active	4

# Development Progress: Kanban Boards

xGame Team ☆ 🚀 View as Backlog

New Active 3/5

+ New item

6 As a user, I would like to be able to log into the platform

Alex Guentchev

State ● New

0/3

5 As a user, I would like to be able to log out of the platform

Alex Guentchev

State ● New

0/2

+ Add Task

- ☐ Unit test for logout
- ☐ Implement logging out of a session

7 As a user, I would like to be able to unregister from the platform

Jesse Schmidt

State ● New

0/3

+ Add Task

- ☐ Implement confirmation popup
- ☐ Implement confirmation popup

4 As a new user I would like to register for the platform

McMullin, Lance (EID)

State ● Active

2/5

+ Add Task

- ☒ User Class Diagram
- ☒ User CRC Diagram
- ☐ Implement registration form
- ☐ Unit test registration form
- ☐ Implement API for adding a registered user

15 As a player, I want to play Legan chess

Joseph Tonski

State ● Active

4/10

+ Add Task

- ☒ ChessPiece CRC Diagram
- ☒ ChessPiece Class Diagram
- ☒ Chessboard Class Diagram
- ☒ Chessboard CRC Diagram
- ☐ Implement Legan chess engine
- ☐ Design database schema for chess

+ Add Task

- ☐ Create quit button
- ☐ Report a game concession that updates player stats

14 As a user, I would like to be able to view my profile

Musser,Westin (EID)

State ● New

2/6

+ Add Task

- ☒ MatchRecord CRC Diagram
- ☒ MatchRecord Class Diagram
- ☐ Create tab or window for profile
- ☐ Make a "pretty print" to display player info
- ☐ Request player info when profile page loads
- ☐ Implement a "packet" that the player's information will be sent over in

16 As a player, I want to exit a match to resume later

Joseph Tonski

State ● New

0/3

+ Add Task

- ☐ Service/repo to save state of match
- ☐ Unit test save functionality
- ☐ Create/Update UI

17 As a player, I want to resume a previously started match

Joseph Tonski

State ● New

0/3

+ Add Task

- ☐ Create service/repository to retrieve match state
- ☐ Unit test match state retrieval
- ☐ Create/Update UI

18 As a player, I want to be notified about the outcome of a match

McMullin, Lance (EID)

State ● New

0/2

+ Add Task

- ☐ implement list or pop up of active match invitations
- ☐ deactivate all other invitations to the current game
- ☐ create accept button that triggers game start
- ☐ Unit test acceptance

11 As a player, I would like to be able to reject invitations to matches

Jesse Schmidt

State ● New

0/3

+ Add Task

- ☐ create reject button that deactivates the invitation
- ☐ send a notification to the player who sent the message about the rejection
- ☐ unit test rejection

13 As a player, I would like to be able to quit a match

Musser,Westin (EID)

State ● New

0/2

+ Add Task

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0/3

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13 As a player, I would like to be able to quit a match

Musser,Westin (EID)

State ● New

0/2

+ Add Task

xGame Team ☆ 🚀 View as Backlog

New Active 7/5 Resolved 0/5 Closed

+ New item

4 As a new user I would like to register for the platform

McMullin, Lance (EID)

State ● Active

Priority 1

0/3

+ Add Task

- ☒ User Class Diagram
- ☒ User CRC Diagram
- ☐ Implement registration form
- ☐ Implement API for adding a registered user

15 As a player, I want to play Legan chess

Joseph Tonski

State ● Active

Priority 1

15/78

+ Add Task

- ☒ ChessPiece CRC Diagram
- ☒ Chessboard Class Diagram
- ☒ Chessboard CRC Diagram
- ☒ Implement Legan chess engine
- ☒ Design database schema for chess
- ☒ Create Database
- ☒ Design Legan chess engine
- ☐ Implement match UI/Visuals
- ☐ Service/repo to save state of match

6 As a user, I would like to be able to log into the platform

Alex Guentchev

State ● Active

Priority 1

1/2

+ Add Task

- ☐ Implement login service
- ☒ Create Board View for login

5 As a user, I would like to be able to log out of the platform

Alex Guentchev

State ● Active

Priority 2

0/1

+ Add Task

- ☐ Logout UI

4 As a player, I would like to create a new match



# Design Artifacts: CRC Cards

UserService	
Responsibilities	Collaborators
-Create new user -Deactivate user -Get user profile	-UserRepository -UserCredentials

MessageService	
Responsibilities	Collaborators
-Send new message -Read messages	-MessageRepository

ChessMatchService	
Responsibilities	Collaborators
-Create match -Get match -Update match	-ChessMatchRepository

UserCredentials	
Responsibilities	Collaborators
-Stores user credentials	

UserRepository	
Responsibilities	Collaborators
-CRUD operations on User entities	

MessageRepository	
Responsibilities	Collaborators
-CRUD operations on Message entities	

ChessMatchRepository	
Responsibilities	Collaborators
-Crud operations on Match entities	

User	
Responsibilities	Collaborators
-DAO for User table	

Message	
Responsibilities	Collaborators
-DAO for Message table	

ChessMatch	
Responsibilities	Collaborators
-DAO for Match table	

ChessPiece (Abstract)	
Responsibilities	Collaborators
-Template for each game piece -Declare methods for Pieces to define	-King -Queen -Knight -Rook -Bishop -Pawn

King	
Responsibility	Collaborators
- Implement abstract Piece methods for King	ChessPiece

Queen	
Responsibility	Collaborators
- Implement abstract Piece methods for Queen	ChessPiece

Knight	
Responsibility	Collaborators
- Implement abstract Piece methods for Knight	ChessPiece

Rook	
Responsibility	Collaborators
- Implement abstract Piece methods for Rook	ChessPiece

Bishop	
Responsibility	Collaborators
- Implement abstract Piece methods for Bishop	ChessPiece

Pawn	
Responsibility	Collaborators
- Implement abstract Piece methods for Pawn	ChessPiece

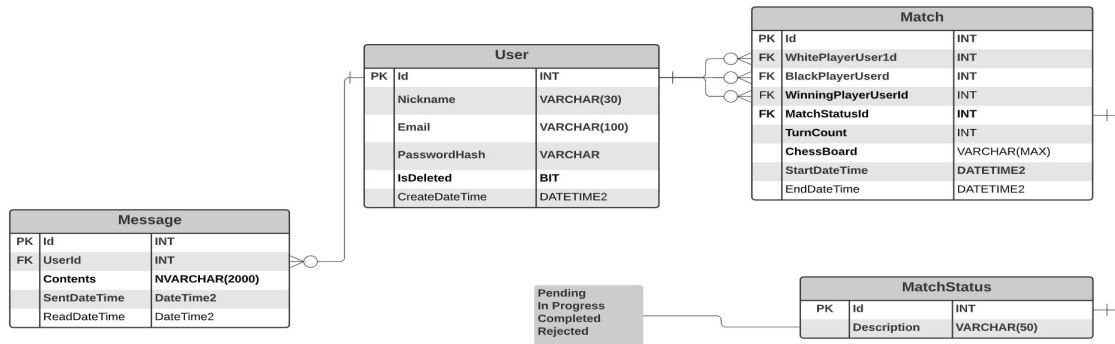
ChessBoard	
Responsibilities	Collaborators
-References to all pieces and their relative positions on board	-ChessPiece



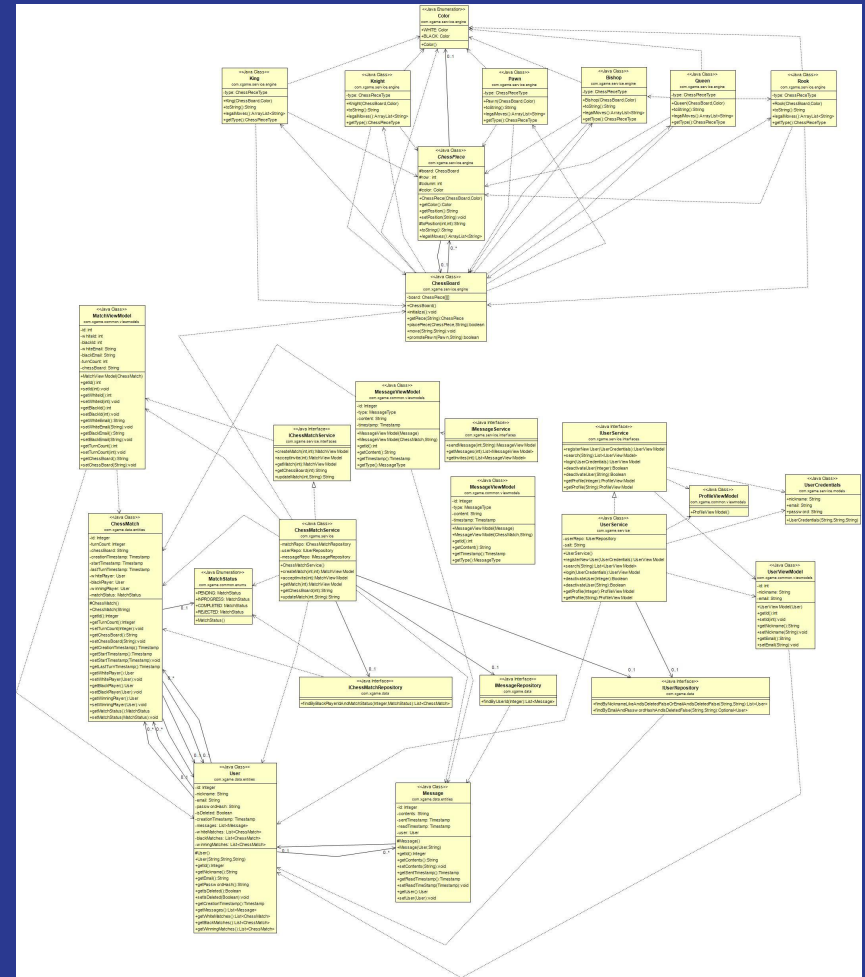
# Design Artifacts: Database Diagram

xGame Database Diagram

Team We Them Boys | September 26, 2020



# Design Artifacts: UML Class Diagram



# Development Guide

- Architecture
- RestAPI
  - Endpoints for User, Match, Message
- Environment
  - IntelliJ, Node.JS, NPM
- Server
  - Eclipse, Spring, MariaDB

Team We Them Boys' xGame Development  
Guide



# Traceability Link Matrix

Component (Java class)→ Requirement ↓	MatchStatus	MessageType	IMessageRepository	MessageViewModel	ProfileViewModel	UserViewModel	IChestMatchRepository	IM
Register						X		
Log out						X		
Log in						X		
Create new match	X	X	X	X			X	
Invite to match	X	X	X	X			X	
Accept match invitation	X	X	X	X			X	
Exit a match to resume later	X						X	
Resume a match	X						X	

# Sprint 1 Review (10-12-20)

- This sprint saw a lot of design and initial skeleton work done, but the kanban board did not represent this. More tasks should be made for each piece of work being done, and the board should be kept current.
- Moving forward, more tasks that are specific to the work being done. Importantly, continue to carry over tasks from user stories without getting lost in development. Continue linking PRs to tasks in DevOps to maintain concurrency.
- Moving forward, be more careful not to duplicate tasks. Consider existing tasks during discussions of making new ones.

# Sprint 1 Retrospective (10-12-20)

- We discussed the front end design well. How it looks will reflect what we want, thanks to effectively communicating goals and ideas.
- We should update teammates more on progress and where we are with each task
- To improve here, we will be more consistent with sending daily updates (even if we don't have a significant update)

# Sprint 2 Review (10-26-20)

- We underestimated the complexity of the chess engine. This was resolved by splitting up the rest of the engine features into multiple tasks.
- We also underestimated a handful of other tasks. This was resolved by adjusting time estimates, moving people to whatever tasks are open, and moving some tasks to the next sprint. This adjustment was expected after the first couple of sprints.
- Pull requests taking too long to get reviewed by three people and then merged. This was resolved by requiring one fewer approval.



# Sprint 2 Retrospective (10-26-20)

- What went well
  - Good team interactions & assistance when people ran into issues
  - Good & consistent communication
  - Good communication between people working on different parts of the application
  - Team members are following the scrum expectations well (join the live scrums when you can, written update when you cannot)
  - Got a majority of the baseline functionality done
- What could be improved
  - Pull requests took too long to get reviewed, merged
- What we will commit to improve in the next sprint
  - Shift expectation to look at pull requests within 2 days, in addition to requiring only 2 reviews