Sprint 2
Rollerball

Blueberries!

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Rollerball Refresher

- 7x7 square grid with middle 3x3 grid missing
- 4 Unique Pieces
  - 2x Rook
  - 2x Pawn
  - 1x Bishop
  - 1x King
- White always moves first
- Two Ways to Win
  - Checkmate Enemy King
  - Move king to enemy king starting location through clockwise movement of king
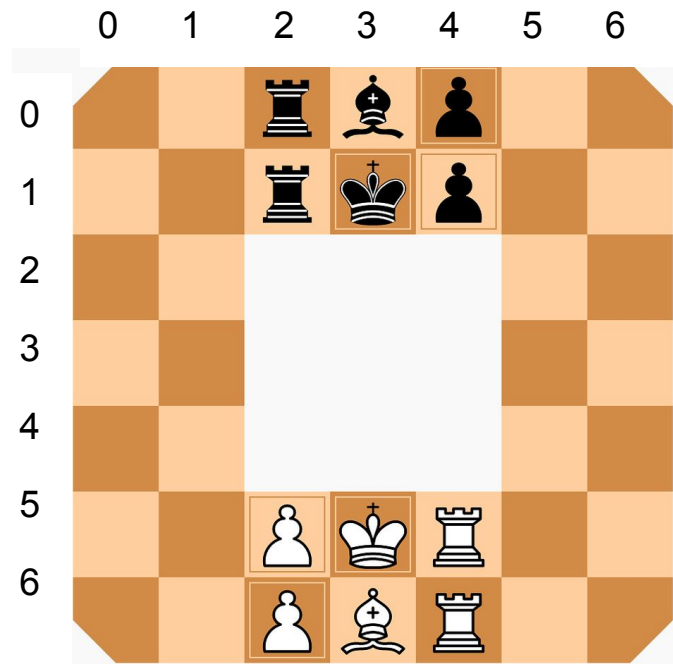

Figure 1: Rollerball Board
https://en.wikipedia.org/wiki/Rollerball_(chess_variant)

Sprint Planning

Department of Computer Science

First SCRUM Ceremony

- Based on feedback from Product Owner, we needed to split our user stories up into smaller stories.

10/02/2019

Sprint Planning Decisions:

- P2 is Due Nov 4 which is about 5 weeks away
- Decision was made to complete one 3 week sprint in this time frame. This allows each team member to get assigments done for this class and other classes before having to worry about working on this project.
- Sprint 2 will officially start on October 14th.
- Smaller user stories were discussed and created

Planning - User Stories

- I want to be able to move a piece

- I want to be able to start a match

- I want to be able to move a piece to a legal spot on the board

- I want to be able to see the board associated with the game I am playing

- I want to be able to register for an account

- I want to be able to login to my account

- I want to be able to logout of my account

- ...

Tasks (For one User Story)

- I want to be able to move a piece to a legal spot on the board

  - Implement legal move checks for Pawn (2 story points)

  - Implement legal move checks for Rook (2 story points)

  - Implement legal move checks for Bishop (2 story points)

  - Implement legal move checks for King (2 story points)

  - Add legal move checking to the move API endpoint (1 Story Point)

Acceptance Tests

- I want to be able to move a piece to a legal spot on the board

  - Piece **can** capture another piece of a **different** color

  - Piece **cannot** move to same square as another piece of **same** color

  - Bishop can rebound **once,** off **any** wall

  - Rook can rebound **once,** off a **corner**

  - King **cannot** move into **check**

  - **...**

Acceptance Tests (continued)

- I want to be able to register for an account

  - Email should be validated

    - email@email.com ✔️

    - email@email ❌

    - email.com ❌

  - UserID needs to be unique

    - Register new user named Joe ✔️

    - Attempt to register another user named Joe ❌

# Sprint Progress

User Stories that We Finished

- I want to be able to move a piece

- I want to be able to start a match

- I want to be able to move a piece to a legal spot on the board

- I want to be able to see the board associated with the game I am playing

- I want to be able to register for an account

- I want to be able to login to my account

- I want to be able to logout of my account

Class Diagram

- From the previous sprint we only had one design change
- Added a board reference to Each Piece
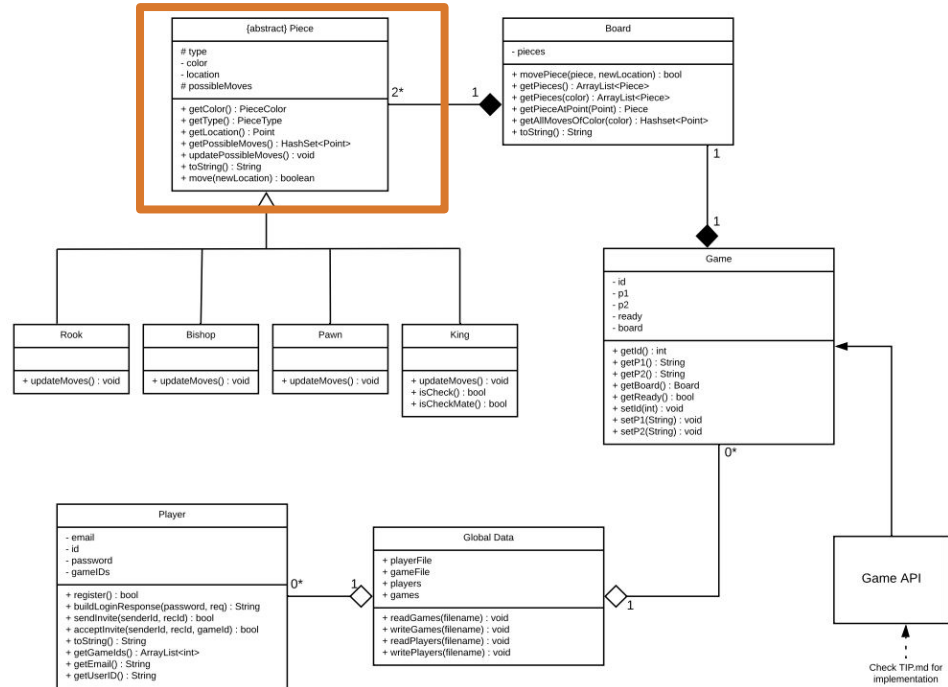
CRC Cards

- 7 total CRC Cards
- All but Piece card remained the same from sprint 1

Piece	
Responsibilities	**Collaborators**
-Checks if a requested move is valid -Calculates all possible moves from current location on board	-Board

Traceability Link Matrix - Server Side

User Story	GameApi class	Game class	Board Class	Piece super class	Player Class
I want to be able to move a piece	x			x	
I want to only be able to move a piece to a legal spot on the board	x			x	
I want to be able to see the game board associated with the game I am playing	x				
I want to be able to start a match	x				
I want to be able to register for an account	x				x
I want to be able to login to my account	x				x
I want to be able to logout of my account	x				
I want my past and current games to be displayed after logging in	x				
I want to be able to invite my friend to a match	x				
I want to be able to accept a new game invitation	x				
I want to be able to reject an invitation	x				
I would like to know if an invitation I have sent has been rejected or accepted	x				
I want to be able to view a history of all games that I have played	x				

Traceability Link Matrix - Client Side

User Story	Login class	Register class	Home Class	App	Board	Square	History
I want to be able to start a match							
I want to be able to move a piece							
I want to only be able to move a piece to a legal spot on the board							
I want to be able to see the game board associated with the game I am playing					x		
I want to be able to register for an account		x		x			x
I want to be able to login to my account	x			x			x
I want to be able to logout of my account			x	x			
I want my past and current games to be displayed after logging in							x
I want to be able to invite my friend to a match							
I want to be able to accept a new game invitation							
I want to be able to reject an invitation							
I would like to know if an invitation I have sent has been rejected or accepted							
I want to be able to view a history of all games that I have played							x

Last SCRUM Ceremony

10/30/2019

Implementation Decisions:

- Following a demo with the Product Owner, the following need fixed/implented before 11/4:
  - Larger font size on the front end
  - Need to be able to enter moves using the GUI (ie not using IntelliJ or Postman)
  - On registration form only allow valid email addresses

Major Action Items:

- Alex: Implement text entry for moving pieces from GUI
- Jared: Validate email address
- Sharon: Make font bigger
- Robbie: Update Class Diagram

Unit Testing Code Coverage

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
GameApi		0%		0%	20	20	75	75	12	12	1	1
Rook		65%		50%	33	60	26	94	0	11	0	1
Bishop		68%		53%	19	40	20	80	0	6	0	1
PieceSerializer		63%		61%	5	11	5	26	0	3	0	1
King		59%		23%	15	23	19	43	3	8	0	1
Player		67%		66%	3	13	12	41	2	10	0	1
Board		86%		80%	5	21	13	60	3	11	0	1
Piece		87%		80%	12	43	6	44	2	12	0	1
GlobalData		91%		100%	1	8	9	43	1	6	0	1
Game		85%		n/a	3	9	6	20	3	9	0	1
GameIdDeserializer		0%		n/a	2	2	4	4	2	2	1	1
Pawn		99%		92%	1	13	1	43	0	5	0	1
Rook.Direction		100%		n/a	0	1	0	2	0	1	0	1
Bishop.moveDirection		100%		n/a	0	1	0	1	0	1	0	1
Piece.Orientation		100%		n/a	0	1	0	1	0	1	0	1
PieceType		100%		n/a	0	1	0	2	0	1	0	1
PieceColor		100%		n/a	0	1	0	2	0	1	0	1
Total	1,028 of 3,301	68%	133 of 309	56%	119	268	196	581	28	100	2	17

Sprint Retrospective

Sprint Retrospective

What went well?
- Well defined tasks
- Good communication

What we can do better next Sprint?
- Meet with the product owner more often
- Unit testing code coverage could be better

Demo Time

Demo

- Attempt to register new user with an invalid email address
- Register new user
- Demonstrate login with wrong password
- Login with correct password
- Send game invite - No UI yet - will use Postman
- See the game appear
- Send move requests
  - Pawn move
  - Bishop rebound and take piece
  - King cannot move into check