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Title: Double Jump

Description: Online checkers game. The users will be able to go to a website and play a game of checkers.

Vision Statement: An easy to use, no installation web based game that allows people to play checkers with their friends.

Motivation: We were interested in making a board game or some sort of web app, so why not do both? Additionally, a lot of applications are becoming web based so it will be a great skill to develop.

Risks:

- The web server goes down.
- Learning new programming languages.
- Unfamiliarity with services we will be using.
- **Mitigation Strategy:**
 - Use online web tools to efficiently learn what we need to know.
 - Use proven stable web services to minimize downtime.

VCS: GitHub <https://github.com/psevery/csci3308>

Requirements:

User Requirements			
ID	Description	Agile Sizing	Priority
US-01	As a user, I want to be able to play a game against my friend on the same computer.	13	High
US-02	As a user with online friends, I want to be able to log in and play with them so we can challenge each other even when we aren't together.	13	Medium
US-03	As a user with no online friends, I want to be able to play against computer AI so I can hone my skills.	20	Low
US-04	As a user, I want to be able to keep track of my past games so that I can track my Win-Loss ratio.	2	Low
US-05	As a user, I want to be able to select themes so that I can have a customized experience playing checkers.	4	Nice to have

Functional Requirements			
ID	Description	Agile Sizing	Priority
FR-01	When a user loads the website, a new checker board game should be set up. (8x8, alternating dark and light, pieces placed on dark squares)	8	High
FR-02	Users can move checker pieces around the board via clicking and dragging.	8	High
FR-03	Users take turns moving pieces.	2	High
FR-04	Pieces can only be moved diagonally.	1	High
FR-05	One piece per square (pieces cannot be moved onto squares inhabited by other pieces).	1	High
FR-06	Pieces can hop over other pieces and remove them from the board.	2	High
FR-07	If a piece reaches the opposite end of the board, it is marked as a king, and can move forwards and backwards.	3	High
FR-08	If all of a player's pieces are removed, they lose, and their opponent wins	3	High
FR-09	Users should be able to securely create an account.	7	Medium
FR-10	Users should be able to log in to their account, after entering the correct login information.	6	Medium
FR-11	Users should be able to search for and connect with other online users and to start a real time game.	8	Medium

Non-Functional Requirements			
ID	Description	Agile Sizing	Priority
NFR-01	Performance: The website should load extremely quickly, in an amount of time well under a half second.	3	High

NFR-02	Performance: The webserver should be able to support thousands of concurrent users.	4	Medium
NFR-03	Performance: There should be virtually no delay between when a user makes a move and when the move is registered on the board.	3	High
NFR-04	Usability: The user should not need to follow more than one link before being presented with a checkers board.	2	Medium
NFR-05	Platform Constraints: The website should work on Chrome and Firefox browsers with equal grace.	6	Medium
NFR-06	Operation: All members of the group are knowledgeable about maintaining the web-server.	4	High
NFR-07	Legal: The code is all open source to allow the community to learn from, and better our project.	1	Medium
NFR-08	Interface: The web server should implement a REST api.	4	High

Methodology: Agile

Project Tracking Software: Trello: <https://trello.com/b/Yy1sSF1F>

Project Plan:

