Chess Editor

February 9, 2021

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1 Project Definition

People like Chess and need a way to quickly develop and practice new strategies. I love Chess!!! Chess Editor will let people play Chess on their PC and set up the board the way they want to test different strategies, or just play in a different way. It will support playing against an AI, or playing against another person locally. It will include an account system to track wins and losses. For the purposes of testing, there will be an undo and redo button, as well as tools to set up specific board scenarios. It will be programmed in Java and we will use Stockfish for the AI.

2 Members

3 Definitions and Jargon

4 Project Requirements

4.1 Functional Requirments

4.1.1 Primary Requirements

The primary requirements of the project must be functional at 'all times'. These requirements include the following:

1. User can play a local game of chess.

4.1.2 Secondary Requirements

The secondary requirements of the project may not always be function and are dependent on specific situation. These requirements include the following:

1. User can play a game of chess remotely.
2. User can use program to analyze moves.

4.2 Usability

4.2.1 User Interface

The user interface must not be obtrusive and intuitive. Visuals need to be properly contrasted for differentiation.

4.2.2 Performance

The program must be able to perform without noticable performance drop in all situations with the exceptional of analysis and secondary features.

4.3 System

4.3.1 Hardware

The required hardware is a standard personal computer with a monitor display.

4.3.2 Software

Required Software A modern web browser will be required to use the application.

Operating System This project will primarily be a web application, so it will not be specific to any operating system in particular. The browser used however, may impact the application.

4.3.3 Database

This project will use a database to store online chess games.

4.3.4 Networking

Certain secondary functionality requires a network connection in order to work properly.

4.4 Security

User authentication to create and join online games.

5 Project Specification

5.1 Scope

This project will work to develop a chess web application similiar to lichess to develop the following skills:

- Working with Angular
- WOrking with remote distribution platform

The web application should be able to run a game of chess between two players.

5.2 Libraries/ Frameworks/ Development Environments/ Dependencies

This project will be developed using Angular Framework

5.3 Platform

This project will be a web application that can be accessed by a web browser.

5.4 Genre

This project is can be considered as a video game or an online game depending on the context.

6 System - Design Perspective

6.1 Subsystems

- User Authentication
- Game Management
- Editor
- Analysis
- Game Play

6.2 Sub-System Communication

6.2.1 Controls

6.2.2 IO

6.2.3 DataFlow

6.3 Entity Relationship Model

6.4 Overall Operation - System Model

7 System - Analysis Perspective

7.1 Subsystems

8 Project Scrum Report

8.1 Overall

8.1.1 Product Backlog

8.1.2 Sprint Backlog

8.1.3 Burndown Chart

8.2 Sprint 1

Sprint 1 began on January 22, 2021 and continued till Febuary 6, 2021. The period lasted one (1) day longer than its assigned duration.

8.2.1 Scrums

During the sprint, two scrum meetings took place:

- January 28, 2021: Discussed the framework of the project and decided to use Angular. Also discussed the scope of the project, decided to make it a web application. Mention of authetication services for server.
- Febuary 4, 2021: Discussed some work that was done since the previous scrum; includes diagrams and investigation of Google Authentication for the server.

8.2.2 Sprint Backlog

Item	Created by	Date	Status
Project Definition	dobrienUNCG	01/21/21	Completed by pizzaza
Project Requirements	dobrienUNCG	01/21/21	Completed during Scrums 1 and 2 by group
Identify Subsystems	dobrienUNCG	01/21/21	Moved to Sprint 2 backlog
Project Specification	dobrienUNCG	01/21/21	Moved to Sprint 2 backlog

9 Subsystems

9.1 Subsystem 1

9.1.1 Initial Design and Models

9.1.2 Data dictionary

9.1.3 Revisions

9.1.4 Scrum Backlog

9.1.5 Coding

Approach

Language

9.1.6 User Training

9.1.7 Testing

9.2 Subsystem 1: Chess Game

9.2.1 Initial Design and Models

The idea is to make this subsystem efficient and open so we can potentially add or reuse different components for the editor or analysis functionality. This will be reused for online games, so it would be best for this to be modular.

9.2.2 Data dictionary

9.2.3 Revisions

9.2.4 Scrum Backlog

Task	On	Assigned To	Completed On
Generate Chess Board			
Chess Pieces Classes			
Move Classes			
Player+Move Interfaces			
Display BOard			
Drag and Move Piece			
Validate Moves			
Detect Check			
Detect Win			

9.2.5 Coding

Approach This will developed using Angular to build the system.

Language This will be developed using TypeScript, HTML, and CSS.

9.2.6 User Training

9.2.7 Testing

10 Complete System

11 References