

# Chess Editor

January 27, 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 Project Requirements

### 2.1 Functional Requirements

#### 2.1.1 Primary Requirements

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

1. User can play a game of chess:
  - Locally (vs Player)
  - vs Computer
2. User can create, load, and play chess scenarios and variants like:
  - Chess960
  - 3-Check
  - King of The Hill [1]
  - Horde
3. The user is able to add a chess engine<sup>1</sup>.

#### 2.1.2 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.

### 2.2 Usability

#### 2.2.1 User Interface

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

#### 2.2.2 Performance

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

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<sup>1</sup>Whether the chess engine works is dependent on the engine. However at least two public chess engines must work with the application.

## **2.3 System**

### **2.3.1 Hardware**

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

### **2.3.2 Software**

**Required Software** The required software includes:

- Graphviz: Reason

**Operating System** This program must be able to on both Windows 10 and Linux (specifically OpenSuse 15.2).

### **2.3.3 Database**

(POSTPONED)

### **2.3.4 Networking**

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

## **2.4 Security**

There are currently no security requirements with the exception of optional password protection for saved games and hosted games.

### **3 Project Specification**

#### **3.1 Scope**

#### **3.2 Libraries/ Frameworks/ Development Environments/ Dependencies**

#### **3.3 Platform**

#### **3.4 Genre**

### **4 System - Design Perspective**

#### **4.1 Subsystems**

##### **4.1.1 Models**

### **5 System - Analysis Perspective**

#### **5.1 Subsystems**

### **6 Project Scrum Report**

#### **6.1 Product Backlog**

#### **6.2 Sprint Backlog**

#### **6.3 Burndown Chart**

### **7 Subsystems**

#### **7.1 Subsystem 1**

##### **7.1.1 Initial Design and Models**

##### **7.1.2 Data dictionary**

##### **7.1.3 Revisions**

##### **7.1.4 Scrum Backlog**

##### **7.1.5 Coding**

#### **Approach**

#### **Language**

#### **7.1.6 User Training**

#### **7.1.7 Testing**

### **8 Complete System**

### **9 References**

#### **References**

- [1] Chess.com, “Chess variants - the 6 most important ones.”