**Test Plan**

for

Chesstackle

Version 1.0 approved

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# Introduction

This document lays out the process to test the software for issues.

# Test Plan Objectives

This document will be used to validate and verify the code, making sure each piece can only move in their pre-determined positions and take only in their legal ways.

# Test Strategy

# System Test

Verify that the program compiles without any errors. Unit testing to verify that each class works, additionally verifying if the classes properly interact with each other.

# User Acceptance Test

Executing the program and playing several games to verify no game-breaking bugs occur.

# Environment Requirements

# PC

Windows 10 unit with up-to-date Java (version 8 update 161) installed.

# Functions To Be Tested

* Only one move per turn.
* The Pawn may only move 1 square forward.
* The Pawn may move 2 squares forward if it has not moved this game.
* The Pawn may only take 1 square diagonally.
* The Rook may only move vertically or horizontally.
* The Rook may only move vertically or horizontally.
* The Rook may not jump over other pieces.
* The Bishop may only move diagonally.
* The Bishop may only take diagonally.
* The Bishop may not jump over other pieces.
* The Queen may move diagonally, vertically, or horizontally.
* The Queen may take diagonally, vertically, or horizontally.
* The Queen may not jump over other pieces.
* The Knight moves first one step in a diagonal or horizontal direction, then another step diagonally in an outward direction.
* The Knight may land on an opposing piece to take it.
* The square any piece lands may not contain a piece of the same color.
* Game pieces taken are removed from the board for the remainder of the game.
* The game will end if an opponent’s King is in check when their turn is over.

**Verification of Special Features**

* The game board’s squares will change color to denote where a piece may move, when selected.
* The graveyard will keep track of all pieces taken this game.
* The Pawn may be promoted to any piece if it reaches the opposite edge of the board.
* The game will restart to the original setup when the restart button is pressed.
* The game will end with the current player loser when the surrender button is pressed.
* The game will display a timer to measure how long it has been the current player’s turn.