

TESTING MANUAL

Team Snickerdoodle :: Sudoku

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Application Design Using Java

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Tuesdays, Fridays @ 8:00AM - 10:05AM

1. Testing Plan

Overview

This testing manual provides step-by-step instructions for testing the Sudoku application. The goal of this is to verify that all features function as expected and that the application provides a smooth and error-free user experience. The game should run smoothly with no errors and the UI be user-friendly and intuitive.

Testing Environment

Operating System: Windows 10 Home

Java Version: Java 17

Tools: JavaFX for UI testing

2. Test Cases and Results

Test Cases

The program will not require the user to input in any files or inputs prior to the start of the game.

Test Case/Objective	Description	Outcome
Verify that the Sudoku puzzle generator produces valid puzzles at different difficulty levels.	<ol style="list-style-type: none">1. Launch the Sudoku application and start a new game.2. Verify that the generated puzzle is valid (i.e., follows Sudoku rules) and has only one solution.	Each generated puzzle should adhere to Sudoku rules, with exactly one solution.
Verify that all user interface elements are functional and visually consistent.	<ol style="list-style-type: none">1. Test all buttons (1-9) and menu options (Start New Game, Quit) to ensure they perform the correct actions.2. Check that the selected cell receives user input validated in real-time.3. Check that the original numbers for the board cannot be edited.4. Pressing the numbers buttons enough times will cause them to gray-out due to having the max number of it on the board	All UI elements should be responsive, visually consistent, and function as expected. The original Sudoku board cannot be edited and empty cells are updated in real time by the user's input.
Verify that all board buttons work as intended.	<ol style="list-style-type: none">1. Pressing the Solve button will prompt the	All buttons should be responsive and function as

	<p>user to confirm the action, and display a completed board.</p> <ol style="list-style-type: none">2. Pressing the Clear button will erase only the user inputted numbers (in white).3. Pressing the Generate button will wipe the board and create a new Sudoku game to complete.4. Pressing the Check button will return visual feedback to the user indicating if their inputted numbers are right or wrong (cell turns green or red)	<p>stated in the description.</p>
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