Sudoku Solver

Project Specification and Planning Document

# Revision History

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| Revision Date | Revision Comment |
| 2016-12-23 | Document created |

# Project Summary

A program that accepts a text document defining a standard Sudoku board. It then solves the puzzle and returns the result to the user. There are two versions: a console version and a graphical version.

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| Project Start | 2015-12-15 |
| Project Last Modified | 2016-12-04 |
| Programming Language | Java |

# Project Description

This project is a set of two Java programs that leverage that same base class to provide an interface by which a user can automate the process of solving a standard game of Sudoku. The method by which the project solves these boards is recursive backtracking. The method is used as a brute force means to solve a board using the standard rules of the puzzle.

The user provides a text file with a representation of the Sudoku board that he/she would like to solve in the following form:

0 8 0 3 0 5 0 0 0

0 1 0 0 6 0 0 0 5

0 0 2 1 9 0 3 0 0

0 0 3 2 0 0 7 0 9

7 0 0 0 0 0 6 0 0

0 5 1 0 3 7 8 0 0

0 0 6 0 8 0 0 0 3

2 7 8 0 0 3 1 0 6

0 0 0 0 2 0 0 0 0

Each row of the puzzle is represented by a line in the text file. Within each line, a cell and its contents are given. An empty cell is represented with a 0. This file may then be placed anywhere on the file system for access within the application later. Once the program parses the file, the computer then starts to solve the puzzle. If a solution is found, the computer provides it to the user.

# Project Files and Content