

Software Requirement Specification for CS101 project on Sudoku auto Solver

Lab batch:- Friday

Group No.- 20

INTRODUCTION :- Sudoku is a logic based ,combinatorial no. Placement puzzle . The main objective of the sudoku game is to fill a 9x9 grid with digits so that each column ,each row and each of the nine 3x3 subgrids are filled with digits from 1 to 9.

SCOPE:- In this project the program will provide the user the facility to validate the input entries of a sudoku..The program also solve the sudoko problem input by the user.

WEB REFERENCES http

[:// www . youtube . com / watch ? v = p – gpaIGRCQI](http://www.youtube.com/watch?v=p-gpaIGRCQI)

<http://codereview.stackexchange.com>

<http://www.geeksforgeeks.org/backtracking-set-7-sudoku/>

BOOK REFERENCES- An introduction to programming by A.G Ranade by Mc Graw hill publications

Modules:

1. Algorithm involved- This part basically contains the algorithms involved in solving a sudoku completely. For solving the sudoku the program uses the backtracking method along with the brute force method.

2. Mechanism- The mechanism of Sudoku solving involves using the backtracking method. First we start with a sudoku filled with random no. from 1 to 9 . we select the first non filled grid and put the min no. that is not assigned and does not violate the rules of sudoku . Then we move

forward to the next empty grid and fill the min value the that can be inserted . Suppose no value is satisfied then the previous grid is selected again to put the next available no. Do this till the whole sudoku is completed.

Brief description of project

1. Display of the sudoku auto solver - the program display would consist of an empty 9x9 grid.
2. The user will give various numbers in the grid.
3. The user may click on the check option to validate if the entries input

are in accordance with the rules of the game.

4. The user may click the solve button which will display the solved Sudoku. On pressing the solve button the program will automatically check the validity of the Sudoku before displaying the solved Sudoku. **Note-** the solved Sudoku will only be displayed if the inputs are in accordance with the rules of the game.

5. The user may enter the whole suduko and check if the solution is valid.

6.The user may overwrite the number inputted by re-entering a new number or input zero if he/she wants that grid to remain empty.

7.The graphics package used in our program is simple cpp.The code blocks should be combined with simple cpp graphic package.

Team members-

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