

Sudoku game essay sample

[Entertainment](#), [Games](#)



The main objective of this project is to create a game through which the user will be able to play a Sudoku puzzle. Our project deals with the task of designing a game of Sudoku using various algorithms. These are algorithms, both for generating games of various difficulties for the user and also for solving the puzzles provided by the user. A user will be able to ask for a random puzzle or the user will be able to manually input a puzzle. In either case, the software will be able to ask for a hint showing the next easiest step. The user will be able to perform some other tasks such as saving the current game, loading a game of the specified format, changing the looks of the software disabling sound, ask for help and so on.

EXISTING SYSTEM

Sudoku is a game made up of 81 cells organized into 9 rows, 9 columns, and 9 boxes. A puzzle will start with 17 or more cells already filled in, once all the cells have been filled the user gets a notification stating whether or not his solution is correct. If there is any error on the part of the user he can undo his move and then try again. This will result in higher time required to solve the puzzle. If a valid puzzle is submitted by the user, the Sudoku solver returns an error message.

PROPOSED SYSTEM

In proposed solution, for the interface part we will use dynamic textboxes as the cells. The users will be able to input numbers from the keyboard or from the virtual keypad through the mouse. To store puzzle we will use a special file type and store the puzzle as a set of strings. We will also maintain a stack to keep of every user move. In this way we will be able to 'undo' user

moves as when desired. Our goal is to build a software product that can create, modify, solve and save Sudoku puzzle. The hope is that person will after time, gain expertise regarding Sudoku by using this product. There are several existing solver for solving the problem including backtracking; the algorithm is highly time consuming.

CONCLUSION

In this project we have developed an organized method to solve the problem. Our proposed algorithm solves a $9(32)*9(32)$ Sudoku puzzle for all difficulty levels, and the results obtained using our approach is highly interesting in terms of computation time in comparison to that of other existing Sudoku solvers.