**Sudoku Solver using C**

**Introduction**

This project is the implementation of Sudoku Solver using C language. Its a puzzle in which players insert the numbers 1 to 9 into a 9x9 grid consisting of nine sub-grid of 3x3 size in such a way that every number appears once in each horizontal line, vertical line, and in sub-grid as well.

**Operating System** : Windows (In this case I have used Windows but it can also be done on Linux and Mac OS as well).

**Programming Language** : C language.

**Software Required** : Microsoft Visual Code (Any other C/C++ IDE).

The code can be run using any C/C++ compiler (preferred compile: Mingw).

**Explanation**

1. **printboard ()** – The printboard () function print the output Sudoku board.
2. **number\_unassigned (int \*row, int \*column)** - This function checks if all cells are assigned or not. If there is any unassigned cell then this function will change the values of row and column accordingly.
3. **is\_safe(int n, int r, int c)** – This function check if we can put a value in a particular cell. It does this so by checking if the same number is present in the particular column, row or in the particular sub-matrix.
4. **sudoku\_solver()** – This function is for solving of the Sudoku and uses the concept of Backtracking.

If the user enters the incorrect Sudoku board then the program will show a message saying “No Solution”.