GRAPHIC ERA UNIVERSITY, DEHRADUN

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

(CSE III Semester Bootcamp Project)

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Report on Sudoku

Submitted to:

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1.1 About Project

Sudoku is a puzzle game designed for a single player, much like a crossword puzzle. The puzzle itself is nothing more than a grid of little boxes called “cells”. They are stacked nine high and nine wide, making 81 cells (usually less than half of them) already filled in. Here we have to create the full sudoku game using coding skills.

1.2 System Requirement

1.2.1 Hardware Requirement:

- PROCESSOR: INTEL
- RAM: 2 GB (Minimum)
- STORAGE: 5 MB (Maximum)
- OPERATING SYSTEM: WINDOWS 10

1.2.2 Software Requirement:

- CODEBLOCKS
- TURBO C++
- ANY OTHER SOFTWARE SUPPORTING C and C++

1.3 Variable Description Table

VARIABLE DISCRIPTION TABLE		
VARIABLE	**DATA TYPE**	**PURPOSE**
N	int	Stores the size of the 2D matrix.
row	int	Stores the number of rows.
col	int	Stores the number of colomns.
startRow	int	Stores the starting index of the row.
startCol	int	Stores the starting index of the colomn.
num	int	Stores the number to be written in the next block of the grid.

1.4 Modules:

1.4.1 bool isSafe (int grid[N][N], int row, int col, int num)

Used to check whether it will be allowed to assign number to the given row, column.

1.4.2 bool solveSudoku (int grid[N][N], int row, int col)

Used to check if we have reached the 8th row and 9th column, we are returning true to avoid further backtracking.

1.4.3 main()

main() is the function where the execution of the program begins. Here we are initializing the sudoku and calling the solveSudoku() function for the further working of the program.

1.4.4 void print()

Function to print the grid.

1.5 Reference:

1.5.1 Websites:

- www.codewithc++.com
- www.tutorialspoint.com