

Sudoku Game

Gitesh Kharga, Ayush Ombale, Siddesh Shelke, Mrs Vijaya Chavan

Students, Department of Computer Technology

Lecturer, Department of Computer Technology

Bharti Vidyapeeth Institute of Technology, Navi Mumbai, India

Abstract: *In today's world of hectic life people tend to use more phones and lose the ability of basic logical reasoning and do not do much brain related exercise due to which our project Sudoku Game is very important as it helps in logical reasoning and brain development.*

Keywords: Game

I. INTRODUCTION

Nowadays Sudoku puzzles are becoming increasingly popular among people all around the world. The Sudoku game is now very famous again and therefore many developers have tried to generate even more complicated and more interesting puzzles. In today's world, the Sudoku game is getting very popular and appears in almost all newspapers and websites. Hence the purpose of this project is to create a Sudoku game that would help the user with their puzzle as well as make their own Sudoku puzzle sets and can check whether the puzzle they have made is valid or not.

5	3			7			
6			1	9	5		
	9	8					6
8				6			3
4			8		3		1
7				2			6
	6					2	8
			4	1	9		5
				8			7
						7	9

This is an example of a Sudoku puzzle example given above

The Sudoku recreation has a graphical consumer interface, a trouble generator, and is written in Java. The solver and generator will paintings together.

Using a green technique to enforce the trouble solver discovers the solution to the riddles created with the aid of using generator, in addition to the consumer-entered puzzles

The generator will generate plenty of distinctive

Sudoku puzzles that are very popular. This initiative may even offer us with top expertise of the various additives of android studio.

Rules

Take any integer from 1 to 9. Check if it's safe to put it in the cell. (rows, columns and boxes) If sure, set it and increment to the next position before going back to step 1.

If unsure, return to step 1 without incrementing.

When the matrix is completely filled, remove k random entries.

to complete the game
Then determine if the sudoku answer is correct.

II. WORKING

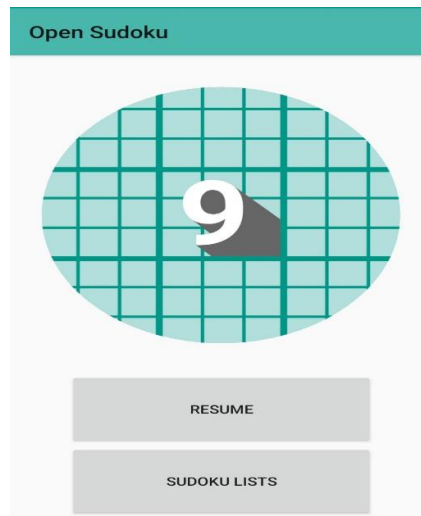
To work properly, the game must be able to:

Evaluate game progress: Calculate if the game is over and how many numbers are left for each peer group, tile in the same column, row, or square.

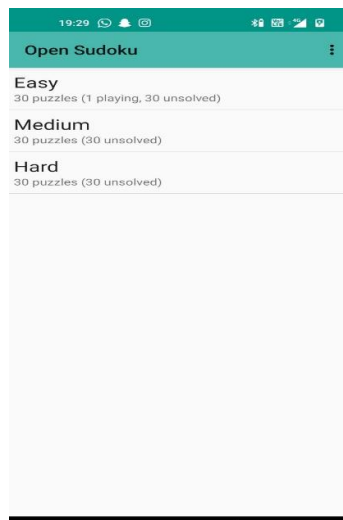
Track potential conflicts within each peer group: know how many times a number is used per peer group (a complete pool is one with each number used exactly once)

You can gauge game progress by scanning a complete 9x9 puzzle and comparing the numeric value of a tile with the value of the corresponding 24 cells (8 per column, row, or square). However, this technique is inefficient, code-heavy, and elusive.

To keep the implementation efficient, clean, and fun to work with, game state keeps track of how many times each number is used based on a peer pool. As soon as you open our app you will see the logo of our app and two buttons that is “resume” button and sudoku lists button



In the next part we will have three options in our gaming mode that is easy level medium level and hard level and under each of these levels we have 30 puzzles each so that user can play without getting bore and we have not given the solution for it as it will make the challenge easy for them.



Tools and Platform

Minimum Requirement

Processor – Intel i5

CPU speed -1.4 Ghz

RAM- 512 MB

Hard Disk- 80 gb

Os- Windows 2007

Application –Android studio

History

The first Sudoku puzzle appeared in 1979.

New York City first published a Sudoku puzzle published by the puzzle publisher Dell Magazines in the journal Dell Pencil Puzzles and Word Games.

First printed with the name "NumberPlace".

Howard Garns, a retired architect and freelance puzzle maker, designed this first puzzle.

This mathematical structure is inspired by the Latin square invented by Leonhard Euler. The puzzle was introduced in Japan by Nikoli in 1984 as "Sudoku". This can be translated as "number must be single" or "number must be unique", later abbreviated as Sudoku.

Sudoku puzzles can use symbols and colors instead of numbers. Sudoku is still a trademark of Nikoli.

The popularity of this game began in earnest in 2005. It can now be found in many newspapers and magazines around the world.

Scope of the Project

The purpose of the proposed project is to improve thinking skills.

The game keeps track of all the records you set during the game and you can choose between easy and difficult difficulty.

You can create your own Sudoku and always go back to the previous steps to find a solution.

It's a very difficult task to do manually. This is because it requires a lot of memory, memory, and mathematical calculations.

The game "Sudoku" improves the thinking and eyesight of the brain.

III. CONCLUSION

I believe that through creating this Sudoku solver and generator, I have enhanced my programming abilities. This was arguably the largest programme I built in terms of time and lines of code. The code isn't of the finest quality, and there's a severe lack of documentation, but some of the project's concerns were fun to address. The gains of the "smart" approach over the naïve algorithm exhibited in the previous measurements were demonstrated by building the solver. Finally, I had the opportunity to take part in anything that could be regarded as minor.