SUDOKU SOLVER USING BACKTRACKING

A PROJECT REPORT

Submitted by

AUGUSTIN DENNIS F 312317104035

CHARUGUPTA M R 312317104043

DHINESH L P 312317104055

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OMR, CHENNAI - 119

ANNA UNIVERSITY : CHENNAI 600 025

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BONAFIDE CERTIFICATE

Certified that this project report **"SUDOKU SOLVER USING BACKTRACKING"** is the bonafide work of **" AUGUSTIN DENNIS F , CHARUGUPTA M R and DHINESH L P"** who carried out the project work under my supervision.

SIGNATURE SIGNATURE

Dr R Pugalenthi, M.E., Ph.D., Dr JESLINE,M.E.,Ph.D.,

HEAD OF THE DEPARTMENT SUPERVISOR

LAB AFFAIRS

Associate Professor Associate Professor

Department of Department of

Computer Science and Engineering, Computer Science and Engineering,

St. Joseph’s College of Engineering, St. Joseph’s College of Engineering,

OMR, Chennai-119 OMR, Chennai-119

Submitted for the Viva Voice held on

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INTERNAL EXAMINER EXTERNAL EXAMINER

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ABSTRACT

`Sudoku' is a popular Japanese puzzle game that trains our logical mind.

The word Sudoku means `the digits must remain single'. The Sudoku problem is

important as it finds numerous applications in a variety of research domains with

some sort of resemblance. Applications of solving a Sudoku instance are found

in the fields of Steganography, Secret image sharing with necessary reversibility,

Encrypting SMS, Digital watermarking, Image authentication, Image Encryption,

and so and so forth. All the existing Sudoku solving techniques are primarily

guess based heuristic or computation intensive soft computing methodology.

They are all cell based, that is why very much time consuming. Nowadays

Sudoku is a very popular game throughout the world and it appears in different

Medias, including websites, newspapers and books. There are numerous methods

or algorithms to fin d Sudoku solutions and Sudoku generating algorithms.

However, the science behind this game is much more complex than it looks. This

paper explains possible number of valid grids in a 9*9 sudoku and developed a

programming approach for solving a 9*9 sudoku puzzle and the results have been

analyzed in accordance with various number of clues for 9*9 sudoku using

Backtracking Algorithm.

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