

## **ABSTRACT**

*In areas of the game, sudoku is one of a very popular logic game. Sudoku games can be classified into the type of Latin Square, with an additional constraint on the contents of each region separately. Sudoku board made up of nine pieces measuring  $3 \times 3$  boxes (called blocks / subgrid) are arranged in such a way as to generate a large box measuring  $9 \times 9$ . This game is very difficult to play because they have to fill in the numbers in each column, with a unique number or none of the rows, columns and gridnya. With the existing difficulties created hint function. Hint's function is to provide assistance to fill in any blanks as a guide to determine the next value that will fill into the blanks in the game Sudoku.*

*There are some troubleshooting with one algorithm using Backtracking algorithm based on DFS. With Backtracking algorithm based on DFS (Depth First Search) is solving the problem that is going on selesaiakan recursively and conduct problems in a systematic search for solutions to all possible solutions exist. Searches done by visiting the tree nodes. Trees that are traced dynamic tree, a tree that is constructed during the search for solutions takes place. search solution is complete when there are no more unvisited nodes of node that can be achieved.*

*Testing of the algorithm implementation into the Backtracking Sudoku game between playing matches that manually using the settlement's easier with the completion or with the help of Backtracking algorithm and turnaround time faster Sudoku game.*

**Keywords: Backtracking Algorithms, Sudoku, DFS (Depth First Search)**