Operating Systems - Lab 3

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Design

Three threads are used to validate the sudoku, to ensure that the numbers it contains adhere to the sudoku constraint. One thread checks the rows, one the columns, and one all the grids. The check ensure that each section contains each of the values 1-9 only once, without checking the empty (0) spaces.

The solving algorithm is a backtracking algorithm. It iterates in order through the sudoku and inserts a number, starting at 1, into the sudoku. Then it runs the validation to see if that number works. If it doesn’t it returns and tries the number 2 and so one. If no number will fit, it backtracks to the previous step and tries a different number from there.

Console output:

