TDT4136 Assignment 4

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1 Results

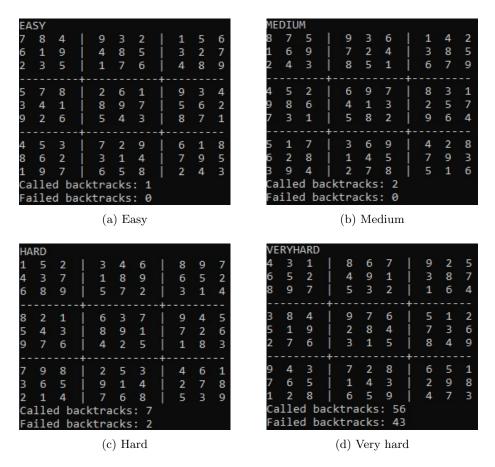


Figure 1: Solutions for the supplied sudoku boards

2 Discussion

We see from Figure 1 (a) that when backtracking_search is called on the easy board, the board is solved by performing inference; backtrack is called, and is immediately returned since the board is solved.

From Figure 1 (b) we see that the board is solved with one call to inference, and is then finished by a complete backtrack call.

For the two other examples, multiple paths are explored, as can be seen by the failed backtrack calls. This is because the algorithm performs a depth first search, and backtracks if a path can not yield a valid solution.

The total run-time of this algorithm does not vary much for the easy, medium, and hard example, but for the very hard example, a notable increase is observed. This is natural due to the increased number of paths that must be explored.