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The project I am proposing is a multi-threaded sudoku solver. The program takes an input string of 81 integers. The 81 integers represent a 9x9 sudoku board, with zero being a blank space. For example, the string:

“050072601000001300100938005000009036300000172620740809006300040438620000500184060” represents this board:

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

The program uses a recursive brute force algorithm to find the solution. A parent thread creates multiple children threads, each of which start at a random guess by filling in a random empty cell with a random digit. Each thread runs its recursive function until it finds a solution or determines no solution is available. Once a thread finds a solution, it sends it to the parent thread which prints the solution and kills all of its children threads. This project can be scaled down to a smaller sudoku board if the time to execute is too long.