# Sudoku Game

## Requirements:

### Functional Requirements:

1. Generate Sudoku Puzzle

* Should generate sudoku puzzle

1. Validate

* Validate user input for position

1. Track incorrect attempts

* Track number of incorrect attempts and close game when it reaches 3

1. Hint

* reveal one block when asked for hint, max 3 hints for game
* Return message hints are over

1. Win

* If all the blocks are guessed win the game

### Non-Functional Requirements

1. Generate Random Sudoku Puzzle
2. Should validate user input in less than a 10ms

## Class Diagram

SudokuPuzzle

* grid: int[][]
* solution: int[][]
* hintCount: int
* inCorrectAttempts: int
* status: ENUM/String

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* GenerateSudoku() | generate and print the grid
* validate(int row, int col, int num) | boolean | print game over or Game won
* getHint() | print grid and reveal one more position