

Sudoku - CRC Cards

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Software Engineering and Design

Class: SudokuDB

Responsibilities	Collaborators
Reads CSV file containing sudoku quizzes	
Stores sudoku quizzes	
Generates a sudoku board with a random quiz (for each time user plays a new game)	

Class: SudokuModel

Responsibilities	Collaborators
Initializes new game with a random sudoku quiz	SudokuDB
Initializes the 9x9 grid of the board with default state	SudokuGameLogic
Puts the number inputted by user on the board	SudokuCell
Deletes a number from the board	GridState
Undo a movement made on the board	SudokuStopWatch
Updates cells on the board	
Keeps track of remaining cells and mistakes made	
Stores reference to the stopwatch used to measure the elapsed time to solve sudoku	

Enum: GridState

Responsibilities	Collaborators
Stores state of each cell after user input	

Class: SudokuGameLogic

Responsibilities	Collaborators
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Works with a copy of the current sudoku board	SudokuChecker
Checks to see if cell can be edited based on the rules of the game	SudokuMovement
Undo a movement made on the board	
Deletes a number from the board	
Keeps track of number of remaining cells on the board	
Stores history of movements made on the board	

Class: SudokuChecker

Responsibilities	Collaborators
Checks for the inputted number in a given row	ErrorType
Checks for the inputted number in a given column	SudokuCell
Checks for the inputted number in a 3x3 grid	
Stores the conflicting cell if input is invalid	

Class: ErrorType

Responsibilities	Collaborators
Stores the types of error based on the row, column, and grid the number is entered in	

Class: SudokuMovement

Responsibilities	Collaborators
Stores each movement made on the board	

Class: SudokuCell

Responsibilities	Collaborators
Stores the coordinate info of a particular cell	

Class: Stopwatch

Responsibilities	Collaborators
Measures the time elapsed to finish the sudoku	

game	
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Class: ApplicationController

Responsibilities	Collaborators
Controller used to refer to the main JavaFX application	SudokuMain
	SudokuModel

Class: SudokuGameController

Responsibilities	Collaborators
Controls the actual game screen of the app	SudokuMain

Class: MenuController

Responsibilities	Collaborators
Controls the menu screen of the app i.e. the first screen after app is launched	SudokuMain

Class: SudokuMain

Responsibilities	Collaborators
Runs the actual app i.e. the main JavaFX application	SudokuModel

Enum: View

Responsibilities	Collaborators
Stores the FXML file paths for each view	