Conceptual Architecture Document

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**Conceptual Architecture for a Simple Sudoku Game**

**Overview of Components and Connectors**

The architecture for the Sudoku game will be divided into three main components:

1. the user interface
2. the verification component
3. the data model/data store

Each of these three components will have its own type of connectors to match:

1. event connectors to handle user input
2. procedure connectors to handle logic
3. data access connectors to handle state/model requests

The user interface will display a graphical representation of the Sudoku puzzle. It will respond to user manipulation via event connectors. A user will select an available square and type a number to fill in that square. When a user wishes to validate an input or set of inputs, the user will click the Verify/Solve button.

The verification component will handle the logic to check if each user move is viable to complete the puzzle. It will use procedure connectors, in particular method calls. After the user presses the Verify/Solve button, the verification component will check the correctness of the user’s input. Each square will change its presentation if its input is incorrect.

The data store will contain the information representing the Sudoku puzzle. It will be changed with data access connectors. This component will hold the various types of available Sudoku puzzles, from easy to difficult.

**Basic Game Design Principles**

The Sudoku game is designed to be played by a single user on a single machine.

The game will be built using Java 1.7, so it can be played on machines with any operating system that has a viable Java virtual machine implementation.