Requirements Document

Team 2

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Table 1: Team Member

ID Number	Name
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Table 2: Revision Control

Version	Date	Description
1.0	‘16. 10. 21.	Start a project of developing Sudoku system

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1 System

Sudoku is a puzzle game designed for a single player. Grids are stacked nine high and nine wide, making 81 grids total. The puzzle comes with some of the girds already filled in, and the player guess the values of empty grids with some sudoku rules.

1.1 Purpose

This document is to define requirements for Sudoku system. The intended audience of this document is describes in table below.

Group of the readers	Reasons for reading
User and customers	To give feedback about the requirements
System developers	To understand what functions and properties the system must contain
Testers	To test the system against the requirements
Project team	To follow-up the status of the project against the requirements

Table 3: Intended audience of this document

2 Domain Model

Before specific requirements were identified, a domain analysis (see following figure and description) was conducted to identify essential concepts.

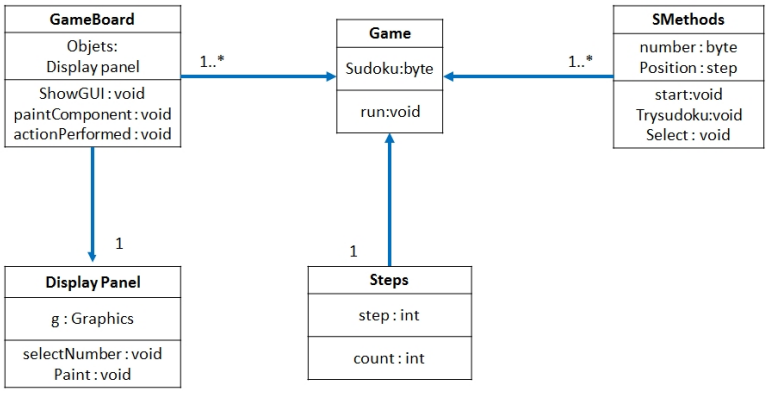

Figure 1: Domain Model

Concept name	Description
GameBoard	'GameBoard' is a puzzle board displayed on the screen
Game	'Game' is a set of sudoku game
SMethods	'SMethods' is sudoku methods generate puzzle, and check the result
Display panel	'Display panel' display all the components to be displayed on the game screen
Steps	'Steps' indicate step of how many times user input values in the grids.

Table 4: Domain concepts

3 Actors

Any user who know how to play a sudoku game can be an actor of this program.

4 Use Cases

4.1 Overview

We proposed to develop sudoku puzzle which is satisfied three conditions. The first version that we develop in here is minimal version. This version produce basic function and user interface of sudoku puzzle. The user can input numbers of 1 to 9 into grids of sudoku puzzle. After all the grids are filled, the user can check the result of the game.

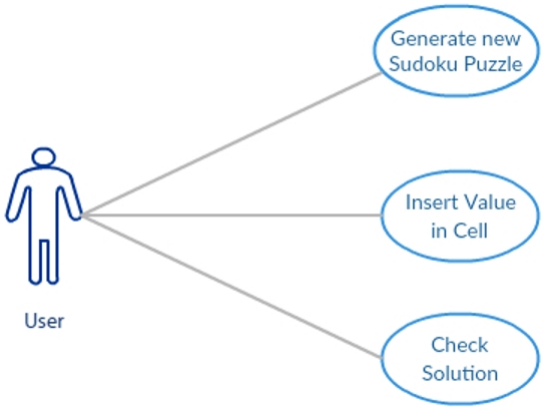

Figure 2: Use Case Diagram

Use Case 1

Name
Generating a new puzzle

Summary
When the user open this program and click the 'Start' button, the sudoku generator will make a set of game. Each game has 81(9*9) grids.

Actors
Any user.

Precondition
A executable file of this game should be provided to the user.

Main Scenario

1. The user double click the executable file of sudoku game.
2. The system provide a 'Start Your Sudoku' button on the game screen.
3. The user click the button.
4. The new set of game is generated on the game screen.

Exceptions
N/A

Postcondition
The user can input a number into grids.

Priority
Must

Use Case 2

Name
Inserting a value into a grid

Summary
The user can input a number(only 1 to 9) into an empty grid.

Actors
Any user.

Precondition
The user must be executing the sudoku program.

Main Scenario

1. The system has many empty(not selected) grid that waiting for number.
2. A grid have small nine numbers(1 to 9) on it and user can click on of them.
3. The user click a number in an empty grid.
4. The grid will have just one bigger number user selected.

Exceptions
N/A

Postcondition
The user can check after all the grids are filled whether all the values are located correctly.

Priority
Must

Use Case 3

Name
Check success or failure

Summary
The user can check the success or failure of the game, after all the grids have their value.

Actors
Any user.

Precondition
The user should fill all the grids with valid number(1 to 9).

Main Scenario

1. The user fill all the empty grid with a valid number(1 to 9).
2. The system give a message when all grids are full, success or failure.

Exceptions
If all the grids were not filled, the system can't check the result.

Postcondition
The user can get a message about success or failure.

Priority
Must

5 Non-Functional Constraints

5.1 Product requirement

Usability requirement

-
- User can note numbers in each squares.
- When squares are full, the system shall inform success or fail.

5.2 Organizational requirement

Implement requirement

- All code for sudoku game must be written by using JAVA language.
- This project should follow incremental development method.

6 References

N/A