

Concordia University  
Department of Computer Science and Software Engineering  
SOEN 341 — Software Process  
Winter 2007 — Section S  
Project Deliverable 2 Description

## Second Incremental Code Build

You have to deliver and demonstrate some code that implements a second version for each of the three programs — Game Player, Game Advisor, and Game Generator — associated with Sudoku on a 9-by-9 grid.

The rules of the game are simple: (1) Each row must contain precisely the numbers 1 to 9 without repetition. (2) Each column must contain precisely the numbers 1 to 9 without repetition. (3) Each 3-by-3 subgrid must contain precisely the numbers 1 to 9 without repetition.

The Game Player must allow a user to play a game by entering numbers into squares. The Game Advisor should give a hint as to what number to enter in a square in any given situation. The Game Generator must return a random game of the required difficulty.

The second version incorporates at least one difficult feature for each of the three programs, such as infinite undo and redo for the Game Player, encapsulated strategies (or heuristics for solving the game) for the Game Advisor, and estimates of the difficulty of a Sudoku game for the Game Generator.

Come prepared to the presentation. Construct various and appropriate test cases that will demonstrate that your code is effectively achieving its duty. You have to proceed with a demonstration of your build. The procedure for the reservation of a time slot for your demonstration will be available on the web page. The goal of the demonstration is to effectively demonstrate that you have three programs as described above. The grading scheme of the demonstration is as follows:

Effectiveness and level of preparation of the demonstration	/2
Effective and complete demonstration that the 3 programs are in fact working	/4
Compliance with the above mentioned design constraints	/4
Total	/10

## Project Design Document

You have to deliver this document following the template provided on the course web page (the Wiki web page, same as for Fall 2006). A detailed grading scheme and instructions are provided in the template. In section 4 (Dynamic Design Scenarios), include three scenarios:

[**Game Player**] User makes a wrong entry.

1. User is playing a game ...
2. User makes an entry.

3. User selects **undo**.
4. Game Player undoes the entry.

[**Game Advisor**] User seeks advice

1. User is playing a game ...
2. User selects a square and asks for advice.
3. Game Advisor selects a strategy/heuristic.
4. Game Advisor executes heuristic.
5. Game Advisor offers advice to User.

[**Game Generator**] User requests a **tough** game.

1. User requests a game with category **tough**.
2. Game Generator returns a game.

## Evaluation

As stated in the course outline, the code build (1) is worth 3% and the document (2) is worth 7%, for a total of 10% of the final numeric grade.

## Assignment Submission

All project assignments are to be handed in using the ENCS Electronic Assignment Submission system. A link to this system is available on the course web page. On the day of your build demonstration, you have to submit a zip file containing your document (see section 2 above), as well as your source code for this build. It has to be submitted by midnight on the due date of the assignment.