Project 1: Mastermind

Develop a program to play Mastermind, either between two human players or between a human player and the machine.

Project 2: Sudoku

Develop a program that helps solving sudokus. The program must generate correct sudokus with constraints decided by the user: number of cells already full, degree of difficulty, etc. The user can then solve the sudoku under the machine’s guidance. Alternatively, the user can propose a sudoku that the machine must validate and possibly solve.

Optionally, the program could propose and solve more complex variants of the sudoku (with intersections, samurai sudokus, ...)

Project 3: Hidato

Develop a program that helps solving hidatos. The program must generate correct hidatos with constraints decided by the user: board shape, number of cells, number of cells already full, degree of difficulty, etc. The user can then solve the hidato under the machine’s guidance. Alternatively, the user can propose a hidato that the machine must validate and possibly solve.

Comments for all three projects:

Besides the quality factors of any program (design, coding, efficiency, robustness, reusability, usability, documentation, ...) we will highly value the intelligence of the program when acting as a player or solving a problem.

In all three projects, the program must be able to:
- Keep a player ranking and a record list
- Allow saving the current state to resume the game later
- Control that the game rules are applied correctly
- Admit different levels of difficulty and help

Delivery dates

First: Friday, October 9th
Second: Friday, November 20th (specification of shared classes: November 6th; acceptance of shared classes: November 30th)
Third: Monday, December 21st
Interviews: starting from January 7th