CSci 130 Web Programming
Department of Computer Science, College of Science and Mathematics, Fresno State University

Project 1: Gomoku

In this project, you have to create a set of webpages that allow you to play Gomoku. It is an abstract strategy board game. Also called Gobang or Five in a Row, it is traditionally played with Go pieces (black and white stones) on a Go board, using 15×15 of the 19×19 grid intersections. As pieces are not moved or removed from the board, Gomoku may also be played as a paper and pencil game. The game is known in several countries under different names. The players play each turn by putting a piece on the board and the goal is to align 5 pieces (horizontally, vertically, or in diagonal).

Functionalities

1. You can change the size of the grid (15x15 or 19x19)
2. You can change the color of the grid through the webpage.
3. You can change the color of the pieces through the webpage.
4. It will provide a timer that gives the time since the beginning of the game.
5. It will indicate how many elements are placed on the board (total number of pieces, number of black pieces, number of white pieces).
6. It will indicate the current number of turns in the game.
7. It can detect when one of the two players has won the game. When a player has won the game, a message will be displayed giving the time.
8. You can select single or two player mode.
9. An artificial player (single player mode) that will try to prevent you to win.
10. A tool to suggest the worst or best moves for the players.

The set of webpages must contain:

1. A main page that gives the title of the game.
2. A menu where it is possible to navigate through different pages.
3. A page that briefly describes how to play.
4. A page that provides the main board for the game when the game starts.
5. A page that provides information about the author of the program (such as a mini CV).

The webpages must include:

1. Structured HTML elements with header, footer, sections, div ,…
2. Appropriate CSS content (layout of the pages). The layout will be judged on the consistence of the presentation across the different elements, and how you have judiciously used the features of CSS, in particular with the use of different panels for the presentation of the different entities.
3. Addition of WAI-ARIA features to improve the accessibility of the webpages.

Feedback

Formative feedback about the project progress will be given during the practical sessions.

Personal feedback will be provided during the presentation of the projects. Additional feedback will be provided by email.