CS5610-Web Development | Project 1: Othello

Project Report

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# Introduction and Game Description

The project is an implementation of the board game Othello. Othello is marketed/popular name of the game Reversi, invented in 1883 by either of two Englishmen (each claiming the other a fraud), Lewis Waterman or John W. Mollett. Othello is a strategy board game for two players, played on an 8x8 unchecked board. Each square in the grid can either be empty or contain a piece. There are sixty-four identical game pieces called disks (often spelled "discs"), which are light on one side and dark on the other. Players take turns placing disks on the board with their assigned color facing up. At the start of the game, four discs are placed in the center of the board, with two dark(black) disks diagonal across and two light discs diagonally across while all of them are adjacent. During a play, any disks of the opponent's color that are in a straight line and bounded by the disk just placed and another disk of the current player's color are turned over to the current player's color. A valid move in the game consists of a move where at least one of the piece is reversed.

The object of the game is to have most disks turned to display your color when the last playable empty square is filled. Some variants of the game exist where the starting position of the pieces differ from the standard order or the objective of the game is reversed, ie, the one having the least pieces at the end wins the game, are sometimes-but rarely played.

UI Design

The UI of the game has been mainly focused on three technologies: ReactJS, Bootstrap4 and CSS; however, we have also used some elements of react-strap too in it.

A dark background theme (black with a CSS gradient generated image) is used for the game. The board has been given a Forest Green color for the board, which I subtly florescent and soothing to eye at the same time.

The layout has been divided using Bootstrap’s containers, with appropriate padding where and when necessary. Reactstrap cards have been used instead of Bootstrap cards in the JSX for better compatibility, and to display the necessary information to the user in an eye-catching manner. react-shapes library has been used to draw disks, and use the auto-close with close b handle toastify element to display the data to the user during the game. We have also used Bootstrap Modal class for user input instead of pop-up windows to make the user experience better and comfortable.

The game is divided into two pages: the home page(or the lobby) where users can see all the games on the server and has the options to create/join/observe a game and the game page, where the game actually happens.