

Sokoban

You are going to create a JavaScript game, based on the game called "Sokoban". The first part of making the game is to create functions to be able to move your player through the game using the arrow keys on the keyboard. The game should respond to inputs without the normal behavior of the arrow keys (i.e. scrolling in the web page). The second task is to create the game board itself. You will be given an array of characters that represents a tile-based map. Your task is to take that character array, and turn it into a grid of html elements that can be used to represent the map, that the player can then move around inside.

Required Features:

- Create functions to get the keypresses to move your player, up, down, left and right.
- Create tile-based objects to present different kind of things.
- Create a grid of html elements to build the tile-based map
- A grid of html elements representing a tile-based game board
- A player object that can move between the tiles of the board.
 - Walls should stop the player
- Movable blocks that can be pushed by the player into empty spaces.
 - The game should end once all blocks have been pushed into the right spaces on the game board.

Code Requirements:

- You must use event listeners to handle key presses to make the player move.
 - The key press event listener should be able to handle the up, down, left and right arrow keys
 - The normal effect of those keys should be suppressed, to make sure that the page does not scroll when you press them.
- The grid map must be made up of html elements created through JavaScript commands.
 - The player and blocks should also be represented as html elements, in the same way, and move from tile to tile by moving their elements into other tile elements.

Resources:

- <http://www.w3schools.com/js/> - W3Schools JavaScript Reference
- <https://app.pluralsight.com/courses/js4cs> - JavaScript for C# Developers
- <http://sokoban.info/> - A example of the game in action
- <https://www.codeschool.com/courses/javascript-road-trip-part-1>

Subjects Covered:

- JavaScript interaction with HTML
 - Creating and modifying elements
 - Event listeners tied to the HTML document object model.
 - Making an interactive JavaScript / HTML application