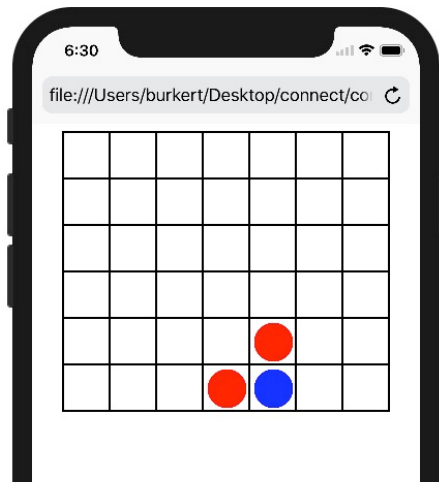**ZHAW**

**School of
Engineering**

# P11 Mobile Web: Layout, JavaScript

In the folder "connect-four", you find a partial implementation of the Connect-Four game. This implementation doesn't use a canvas element, just plain HTML, CSS and JavaScript.



1
Analyze the way the graphics are generated. The HTML file is almost empty, since most of the work is done in JavaScript. Have a look at the generated DOM nodes (browser's developer tools). Inspect the stylesheet. It uses CSS *float* to place the cells.

- Test the example with various screen sizes?
- Create a version that uses CSS Flexbox to layout the board.
- Create a version that uses CSS Grid to layout the board.

2
The JavaScript implementation is not yet finished. A row in the table is represented by two integers. The bits in the integers represent the blue and red pieces und one row. Consequently, there are two arrays, one for the rows with the blue pieces and the other for the rows with the red pieces. Finding out whether a field is occupied is just a *bitwise or* combined with a *bitwise and* operation. If you don't like the chosen representation: you are free to change everything... ☺

Finish the implementation of the game. Minimum requirements:

- Add missing comments.
- Add an event handler that alternately drops red and blue pieces each time a column is touched or clicked. Hint: Attach the event handler to the board and use delegated events.
- Optional: a button to start a new game.
- Optional: checking whether a player has won.