P04 Flexbox Layout and JavaScript I

1
Change your responsive Connect-Four-Layout to a Flexbox layout. Experiment with the possibilities of Flexbox. Try to implement the page with and without CSS Media Queries.

2
We will start with developing the game. Please take your solution from the previous exercise and replace the board picture by an HTML-canvas. Use the same size as before (500 x 400 pixel).

3
Now is the time to implement some JavaScript:

1. Create a jQuery event listener for the *document.ready* event that starts a method *run.*
2. Implement the *run* method. This method should call *init* and afterwards *drawBoard*.
3. The *init* method should initialize a two-dimensional array called *cellStates.* For each cell X, Y, this array stores the state. cellStates[0][0] contains the state for the cell in the upper left corner. The state is represented by one of the following three values:

   0: The cell is empty
   1: There is a red piece in the cell
   2: There is a yellow piece in the cell

4
Take a look at the following method *drawCell:*

```
BORDER: 5,    //the border on all four sides of the canvas.
ROWS: 6,      //the number of rows on our board
COLUMNS: 7,   //the number of columns on our board

drawCell : function(canvas, x, y, state) {
     var cellWidth =
     ((canvas.width - 2 * this.BORDER) / this.COLUMNS);
     var cellHeight =
     ((canvas.height - 2 * this.BORDER) / this.ROWS) ;

     var ctx = canvas.getContext('2d');

     ctx.lineWidth = 4;
     ctx.strokeStyle = "#086788";
     ctx.strokeRect (this.BORDER + x*cellWidth,
                    this.BORDER + y*cellHeight,
                    cellWidth, cellHeight);
     if (state == 1 || state == 2) {
          if (state == 1) {
               ctx.fillStyle = "#DD1C1A"; //red
          }
          else {
               ctx.fillStyle = "#f6f600"; //yellow
          }
          var path = new Path2D();

          path.arc(...);
          ctx.fill(path);
     }
},
```

This method draws cell *x,y.*

1. Integrate this method in your program by implementing *drawBoard* that should call drawCell for all cells.
2. In drawCell, the call to *path.arc* is missing. Implement this call.