

STEAMCODED.ORG

## Coding a Yin Yang in SVG on a $\mathbf{6 0 0}$ by $\mathbf{6 0 0}$ grid

To get started copy the code of this image into your editor: http://steamcoded.org/lessons/grid600x600.svg.txt and save the file as yinyang.svg and open the file in a browser.

In the editor, add the SVG elements (per instructions below) where indicated in the SVG code, i.e. on the blank line below the comment line <!-- insert SVG elements here -->. Important: Save the file and refresh the browser after each step.

1: Create a <path> element with the following commands:
Moveto 300,0
Arc with $x$ and $y$ radius:150, rotate: 0 , large arc flag:0, sweep flag:1, ending at $(300,300)$
hint: M300,0A150,150,0,0,1,300,300
Add a style attribute with value: "fill:none;stroke:black;"
2: Append an Arc command to the end of the path command. Note: the arc will start at the ending coordinates of the arc command in step 1, i.e. $(300,300)$
Arc with $x$ and $y$ radius:150, rotate:0, large arc flag:0, sweep flag:0, ending at $(300,600)$
hint: A150,150,0,0,0,300,600
3: Append another Arc command to the end of the path command. Note: the arc will start at the ending coordinates of the arc command in step 2, i.e. $(300,600)$
Arc with $x$ and $y$ radius:300, rotate:0, large arc flag:0, sweep flag:0, ending at $(300,0)$
hint: A300,300,0,0,0,300,0
4: Change the style attribute from "fill:none;stroke:black;" to "fill:black;stroke:none;"
5: Before the path element, add a circle element centered at $(300,300)$ with a radius of 300 and style="fill:white; stroke:black;stroke-width:2px;"

6: After the path element, add a circle element centered at $(300,150)$ with a radius of 30 and style="fill:black;"
7: After the path element, add a circle element centered at $(300,450)$ with a radius of 30 and style="fill:white;"
When complete, change the style attribute of the first element from "display:initial" to "display:none" which hides the grid. Then change the style attribute of the second element from "opacity:0.5" to "opacity:1"

