

## Scalable Vector Graphics (SVG) Basics

1. Copy text from <http://steamcoded.org/svg600.txt> and paste into an editor, and save as basics.svg
2. Draw a rectangle that starts at (0,0) and is 600 pixels wide and 600 pixels high  
`<rect x="0" y="0" width="600" height="600" style="fill:red;" />`
3. Draw a circle that is centered at (300,300) with a radius of 300  
`<circle cx="300" cy="300" r="300" style="fill:white;" />`
4. Draw an ellipse that is centered at (300,300) with x-radius of 300 and y-radius of 100  
`<ellipse cx="300" cy="300" rx="300" ry="100" style="fill:blue;" />`
5. Copy the ellipse from step 4 and paste on the next line, then change the x-radius, y-radius, and style attributes  
`<ellipse cx="300" cy="300" rx="100" ry="300" style="fill:navy;opacity:0.8;" />`
6. Add some text starting at (15,30)  
`<text x="15" y="30" style="font-family:Arial;font-size:20px;fill:yellow;">  
Basic Shapes</text>`
7. Create a group element with a style attribute  
`<g style="fill:none;stroke:magenta;stroke-width:4px;">  
</g>`
8. Draw a horizontal line using the path element as a child of the group element set the d attribute to Move to (0,300) and a Line to (600,300)  
`<path d="M0,300L600,300" style="stroke:lime;" />`
9. Draw a vertical line using the path element as a child of the group element set the d attribute to Move to (300,0) and a Line to (300,600)  
`<path d="M300,0L300,600" style="stroke:lime;" />`
10. Draw a curve using the path element as a child of the group element set the d attribute to Move to (0,300) and Quadratic curve to (300,300) and shaped by point (150,50)  
`<path id="wave" d="M0,300Q150,50,300,300" />`
11. Add to the end of the d attribute of step 10: Q450,550,600,300 another Quadratic curve to (600,300) and shaped by point (450,550)  
`<path id="wave" d="M0,300Q150,50,300,300Q450,550,600,300" />`
12. Reuse the "wave" curve and rotate it 90 degrees about point (300,300)  
`<use xlink:href="#wave" transform="rotate(90,300,300)"/>`
13. Add an image element and display your image at 1/2 it's size  
`<image x="300" y="0" width="300" height="300" xlink:href="BasicShapes.svg" style="opacity:0.5;" />`