



# What is SVG?

- SVG stands for Scalable Vector Graphics
- SVG is used to define vector-based graphics for the Web
- SVG defines the graphics in XML format
- Every element and every attribute in SVG files can be animated
- SVG is a W3C recommendation
- SVG integrates with other W3C standards such as the DOM and XSL

## SVG is a W3C Recommendation

SVG 1.0 became a W3C Recommendation on 4 September 2001.

SVG 1.1 became a W3C Recommendation on 14 January 2003.

SVG 1.1 (Second Edition) became a W3C Recommendation on 16 August 2011.

## SVG Advantages

Advantages of using SVG over other image formats (like JPEG and GIF) are:

- SVG images can be created and edited with any text editor
- SVG images can be searched, indexed, scripted, and compressed
- SVG images are scalable
- SVG images can be printed with high quality at any resolution
- SVG images are zoomable
- SVG graphics do NOT lose any quality if they are zoomed or resized
- SVG is an open standard
- SVG files are pure XML

SVG has some predefined shape elements that can be used by developers:

- Rectangle <rect>
- Circle <circle>
- Ellipse <ellipse>
- Line <line>
- Polyline <polyline>
- Polygon <polygon>
- Path <path>

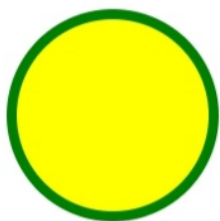
```
<html>
<body>

<h1>My first SVG</h1>

<svg width="100" height="100">
  <circle cx="50" cy="50" r="40" stroke="green" stroke-
width="4" fill="yellow" />
  Sorry, your browser does not support inline SVG.
</svg>

</body>
</html>
```

# My first SVG



```
<html>
<body>

<svg width="400" height="110">
  <rect width="300" height="100"
style="fill:rgb(0,0,255);stroke-width:3;stroke:rgb(0,0,0)" />
  Sorry, your browser does not support inline SVG.
</svg>

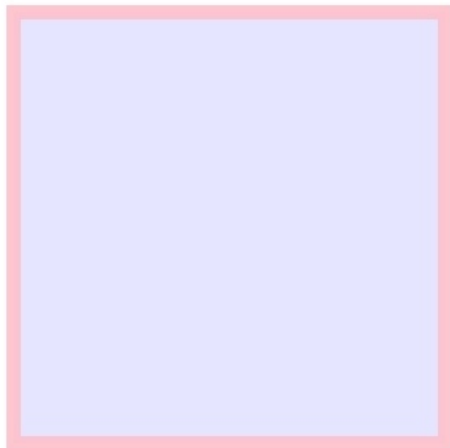
</body>
</html>
```



```
<html>
<body>

<svg width="400" height="180">
  <rect x="50" y="20" width="150" height="150"
style="fill:blue;stroke:pink;stroke-width:5;fill-
opacity:0.1;stroke-opacity:0.9" />
  Sorry, your browser does not support inline SVG.
</svg>

</body>
</html>
```



## Code explanation:

- The x attribute defines the left position of the rectangle (e.g. x="50" places the rectangle 50 px from the left margin)
- The y attribute defines the top position of the rectangle (e.g. y="20" places the rectangle 20 px from the top margin)
- The CSS fill-opacity property defines the opacity of the fill color (legal range: 0 to 1)
- The CSS stroke-opacity property defines the opacity of the stroke color (legal range: 0 to 1)

The `<audio>` tag is used to embed sound content in a document, such as music or other audio streams.

The `<audio>` tag contains one or more `<source>` tags with different audio sources. The browser will choose the first source it supports.

The text between the `<audio>` and `</audio>` tags will only be displayed in browsers that do not support the `<audio>` element.

There are three supported audio formats in HTML: MP3, WAV, and OGG.

# Attributes

Attribute	Value	Description
<u>autoplay</u>	autoplay	Specifies that the audio will start playing as soon as it is ready
<u>controls</u>	controls	Specifies that audio controls should be displayed (such as a play/pause button etc)
<u>loop</u>	loop	Specifies that the audio will start over again, every time it is finished
<u>muted</u>	muted	Specifies that the audio output should be muted
<u>preload</u>	auto metadata none	Specifies if and how the author thinks the audio should be loaded when the page loads
<u>src</u>	URL	Specifies the URL of the audio file



```
<html>
<body>

<h1>The audio element</h1>

<p>Click on the play button to play a sound:</p>

<audio controls>
  <source src="horse.ogg" type="audio/ogg">
  <source src="horse.mp3" type="audio/mpeg">
  Your browser does not support the audio element.
</audio>

</body>
</html>
```

# The audio element

Click on the play button to play a sound:



# How it Works

The `controls` attribute adds video controls, like play, pause, and volume.

It is a good idea to always include `width` and `height` attributes. If height and width are not set, the page might flicker while the video loads.

The `<source>` element allows you to specify alternative video files which the browser may choose from. The browser will use the first recognized format.

The text between the `<video>` and `</video>` tags will only be displayed in browsers that do not support the `<video>` element.

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## HTML `<video>` Autoplay

To start a video automatically, use the `autoplay` attribute:

```
<html>
<body>

<video width="320" height="240" autoplay>
  <source src="movie.mp4" type="video/mp4">
  <source src="movie.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>

</body>
</html>
```

