



# SVG

scalable vector graphics

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## About the Tutorial

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Scalable Vector Graphics commonly known as SVG is a XML based format to draw vector images. It is used to draw twodimensional vector images.

This tutorial will teach you basics of SVG. Also, this training material contains chapters discussing all the basic components of SVG with suitable examples.

## Audience

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This tutorial has been prepared for beginners to help them understand the basic concepts related to SVG. Also, it will give you enough understanding on SVG from where you can take yourself to a higher level of expertise.

## Prerequisites

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Before proceeding with this tutorial, it is advisable to have some basic knowledge of XML, HTML, and JavaScript.

## Disclaimer & Copyright

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# 1. SVG – OVERVIEW

## What is SVG?

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- SVG, Scalable Vector Graphics is an XML based language to define vector based graphics.
- SVG is expected to display images over the web.
- As these are vector images, SVG images never drops on quality no matter how they are zoomed out or resized.
- SVG images supports interactivity and animation.
- SVG is a W3C standard.
- Other image formats like raster images can also be clubbed with SVG images.
- SVG integrates well with XSLT and DOM of HTML.

## Advantages

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- Use any text editor to create and edit SVG images.
- Being XML based, SVG images are searchable, indexable and can be scripted and compressed.
- SVG images are highly scalable as they never loses quality no matter how they are zoomed out or resized
- Good printing quality at any resolution
- SVG is an Open Standard

## Disadvantages

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- Since text format size is larger, it is generally compared to binary formatted raster images.
- Size can be big even for a smaller image.

## Example

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Following XML snippet can be used to draw a circle in web browser.

```
<svg width="100" height="100">
  <circle cx="50" cy="50" r="40" stroke="red" stroke-width="2" fill="green" />
</svg>
```

Embed the SVG XML directly in an HTML page.

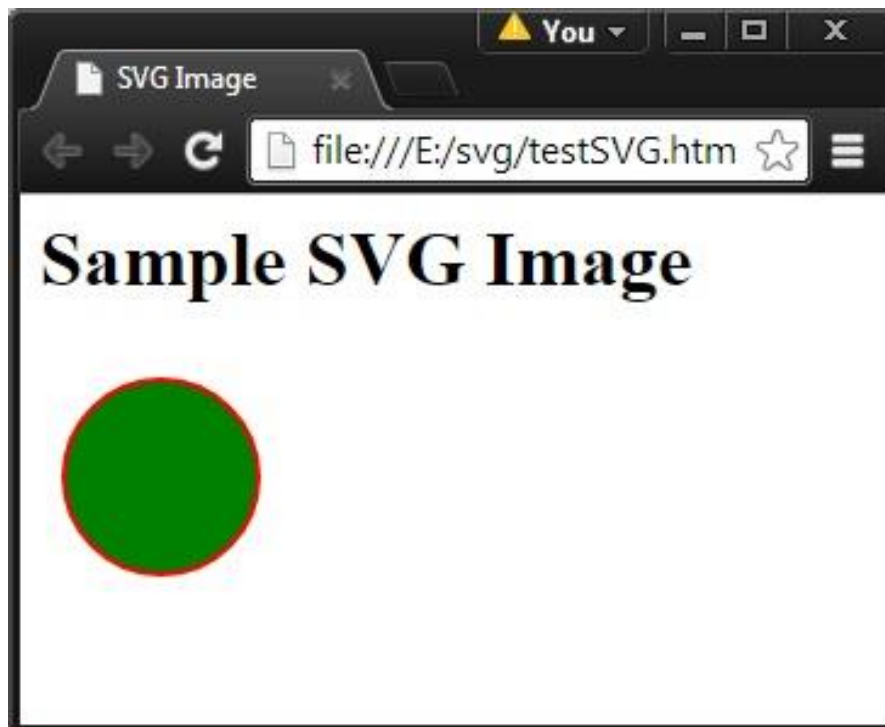
### testSVG.htm

```
<html>
<title>SVG Image</title>
```

```
<body>
<h1>Sample SVG Image</h1>
<svg width="100" height="100">
  <circle cx="50" cy="50" r="40" stroke="red" stroke-width="2" fill="green" />
</svg>
</body>
</html>
```

## Output

Open textSVG.htm in Chrome web browser. You can use Chrome/Firefox/Opera to view SVG image directly without any plugin. In Internet Explorer, activeX controls are required to view SVG images.



## How SVG Integrates with HTML

- `<svg>` element indicates the start of SVG image.
- `<svg>` element's width and height attributes defines the height and width of the SVG image.
- In the above example, we've used a `<circle>` element to draw a circle.
- **cx** and **cy** attribute represents center of the circle. Default value is (0,0).
- **r** attribute represents radius of circle.
- Other attributes stroke and stroke-width controls the outlining of the circle.

- fill attributes defines the fill color of the circle.
- Closing</svg> tag indicates the end of SVG image.

End of ebook preview

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