

6. HTML5 – SVG

SVG stands for **S**calable **V**ector **G**raphics and it is a language for describing 2D-graphics and graphical applications in XML and the XML is then rendered by an SVG viewer.

SVG is mostly useful for vector type diagrams like Pie charts, Two-dimensional graphs in an X,Y coordinate system etc.

SVG became a W3C Recommendation 14. January 2003 and you can check latest version of SVG specification at **SVG Specification**.

Viewing SVG Files

Most of the web browsers can display SVG just like they can display PNG, GIF, and JPG. Internet Explorer users may have to install the **Adobe SVG Viewer** to be able to view SVG in the browser.

Embedding SVG in HTML5

HTML5 allows embedding SVG directly using **<svg>...</svg>** tag which has following simple syntax –

```
<svg xmlns="http://www.w3.org/2000/svg">
    ...
</svg>
```

Firefox 3.7 has also introduced a configuration option ("about:config") where you can enable HTML5 using the following steps –

- Type **about:config** in your Firefox address bar.
- Click the "I'll be careful, I promise!" button on the warning message that appears (and make sure you adhere to it!).
- Type **html5.enable** into the filter bar at the top of the page.
- Currently it would be disabled, so click it to toggle the value to true.

Now your Firefox HTML5 parser should be enabled and you should be able to experiment with the following examples.

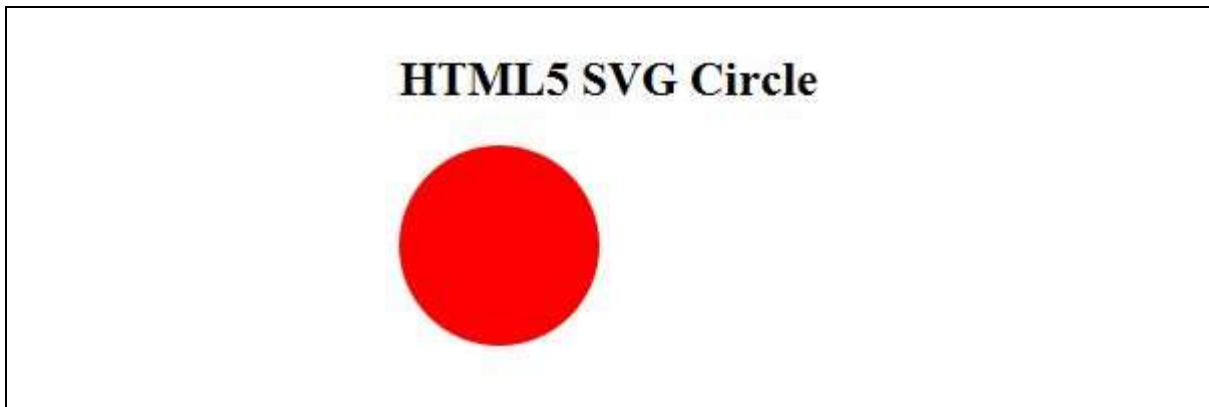
HTML5 – SVG Circle

Following is the HTML5 version of an SVG example which would draw a circle using `<circle>` tag –

```
<!DOCTYPE html>
<html>
  <head>
    <title>SVG</title>
    <meta charset="utf-8" />
  </head>

  <body>
    <h2>HTML5 SVG Circle</h2>
    <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
      <circle id="redcircle" cx="50" cy="50" r="50" fill="red" />
    </svg>
  </body>
</html>
```

This would produce the following result in HTML5 enabled latest version of Firefox.



HTML5 – SVG Rectangle

Following is the HTML5 version of an SVG example which would draw a rectangle using `<rect>` tag –

```
<!DOCTYPE html>
<html>

  <head>
    <title>SVG</title>
```

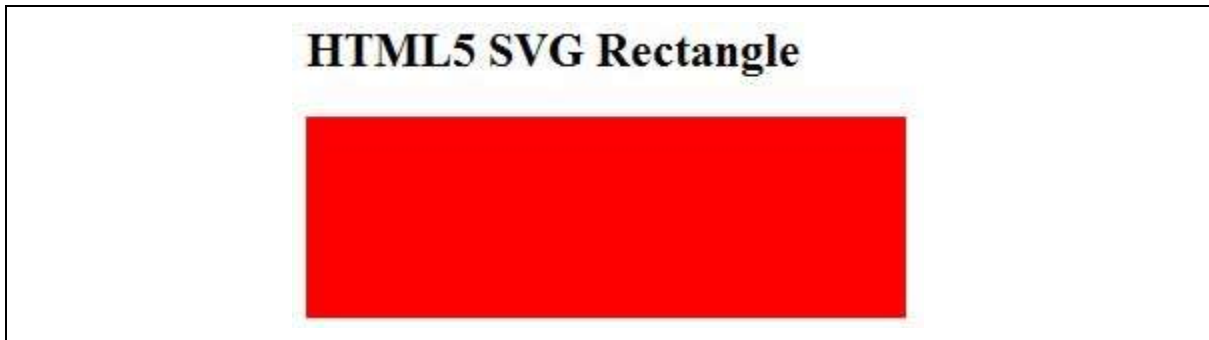
```

    <meta charset="utf-8" />
</head>

<body>
    <h2>HTML5 SVG Rectangle</h2>
    <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
        <rect id="redrect" width="300" height="100" fill="red" />
    </svg>
</body>
</html>

```

This would produce the following result in HTML5 enabled latest version of Firefox.



HTML5 – SVG Line

Following is the HTML5 version of an SVG example which would draw a line using <line> tag –

```

<!DOCTYPE html>
<html>

    <head>
        <title>SVG</title>
        <meta charset="utf-8" />
    </head>

    <body>

        <h2>HTML5 SVG Line</h2>

        <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
            <line x1="0" y1="0" x2="200" y2="100" style="stroke:red;stroke-width:2"/>

```

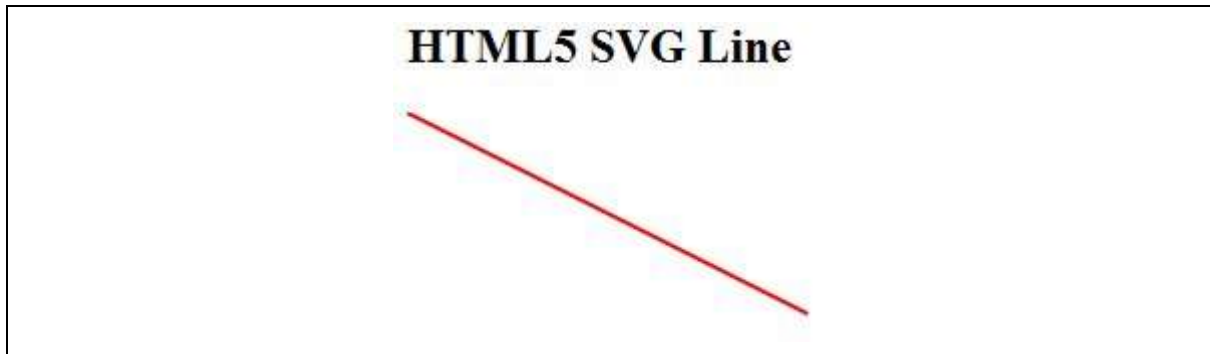
```

    </svg>
  </body>
</html>

```

You can use the **style** attribute which allows you to set additional style information like stroke and fill colors, width of the stroke, etc.

This would produce the following result in HTML5 enabled latest version of Firefox.



HTML5 – SVG Ellipse

Following is the HTML5 version of an SVG example which would draw an ellipse using `<ellipse>` tag –

```

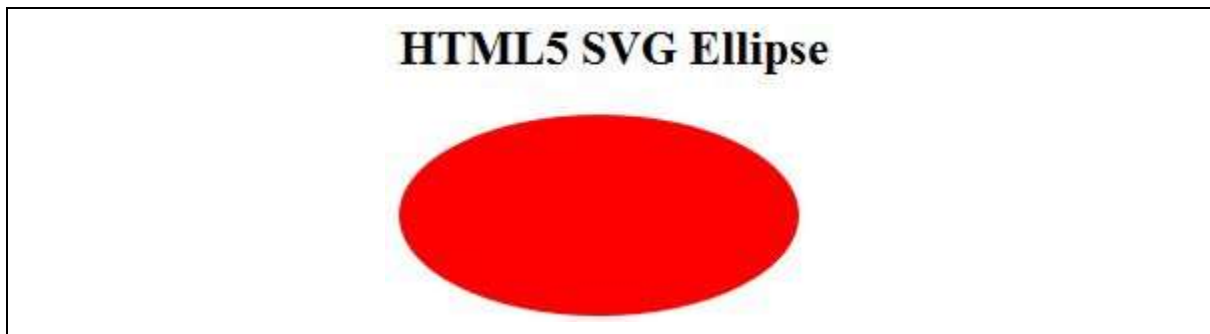
<!DOCTYPE html>
<html>
  <head>
    <title>SVG</title>
    <meta charset="utf-8" />
  </head>

  <body>
    <h2>HTML5 SVG Ellipse</h2>
    <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
      <ellipse cx="100" cy="50" rx="100" ry="50" fill="red" />
    </svg>

  </body>
</html>

```

This would produce the following result in HTML5 enabled latest version of Firefox.

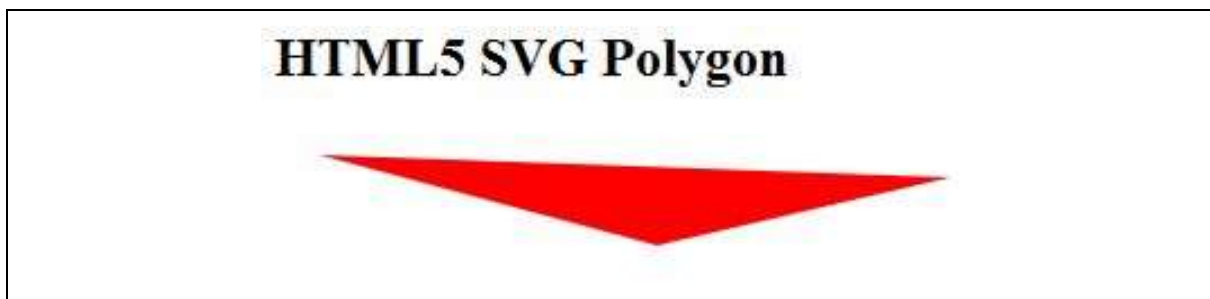


HTML5 – SVG Polygon

Following is the HTML5 version of an SVG example which would draw a polygon using `<polygon>` tag –

```
<!DOCTYPE html>
<html>
  <head>
    <title>SVG</title>
    <meta charset="utf-8" />
  </head>
  <body>
    <h2>HTML5 SVG Polygon</h2>
    <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
      <polygon points="20,10 300,20, 170,50" fill="red" />
    </svg>
  </body>
</html>
```

This would produce the following result in HTML5 enabled latest version of Firefox.



HTML5 – SVG Polyline

Following is the HTML5 version of an SVG example which would draw a polyline using `<polyline>` tag –

```
<!DOCTYPE html>
<html>

  <head>
    <title>SVG</title>
    <meta charset="utf-8" />
  </head>

  <body>

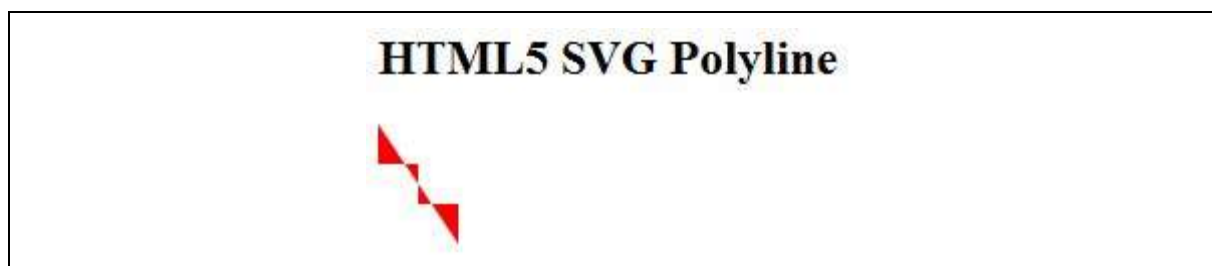
    <h2>HTML5 SVG Polyline</h2>

    <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
      <polyline points="0,0 0,20 20,20 20,40 40,40 40,60" fill="red" />
    </svg>

  </body>

</html>
```

This would produce the following result in HTML5 enabled latest version of Firefox.



HTML5 – SVG Gradients

Following is the HTML5 version of an SVG example which would draw an ellipse using `<ellipse>` tag and would use `<radialGradient>` tag to define an SVG radial gradient.

Similarly, you can use `<linearGradient>` tag to create SVG linear gradient.

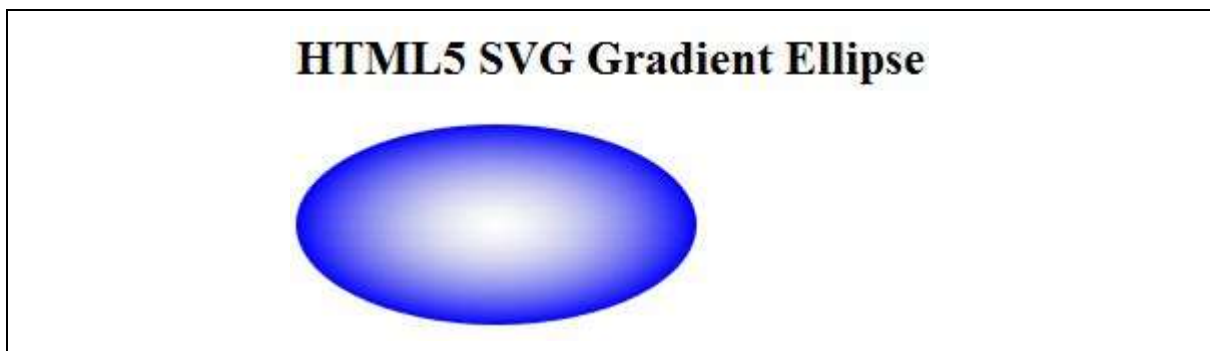
```

<!DOCTYPE html>
<html>
  <head>
    <title>SVG</title>
    <meta charset="utf-8" />
  </head>

  <body>
    <h2>HTML5 SVG Gradient Ellipse</h2>
    <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
      <defs>
        <radialGradient id="gradient" cx="50%" cy="50%" r="50%" fx="50%"
fy="50%">
          <stop offset="0%" style="stop-color:rgb(200,200,200); stop-
opacity:0"/>
          <stop offset="100%" style="stop-color:rgb(0,0,255); stop-
opacity:1"/>
        </radialGradient>
      </defs>
      <ellipse cx="100" cy="50" rx="100" ry="50" style="fill:url(#gradient)" />
    </svg>
  </body>
</html>

```

This would produce the following result in HTML5 enabled latest version of Firefox.



HTML5 – SVG Star

Following is the HTML5 version of an SVG example which would draw a star using `<polygon>` tag.

```
<html>

  <head>

    <style>
      #svgelem{
        position: relative;
        left: 50%;
        -webkit-transform: translateX(-40%);
        -ms-transform: translateX(-40%);
        transform: translateX(-40%);
      }
    </style>

    <title>SVG</title>
    <meta charset="utf-8" />
  </head>
  <body>
    <h2 align="center">HTML5 SVG Star</h2>
    <svg id="svgelem" height="200" xmlns="http://www.w3.org/2000/svg">
      <polygon points="100,10 40,180 190,60 10,60 160,180" fill="red"/>
    </svg>

  </body>
</html>
```

This would produce the following result in HTML5 enabled latest version of Firefox.

HTML5 SVG Star

