First steps in SVG

SVG comes from "Scalable Vector Graphics", and its used to define graphics with vectors in XML, with simple forms. We can include SVG graphics directly into our HTML pages, using the `<svg>` tag and inside it we define some parameters like **height** y **width** and the namespace with the attribute **xmlns** .

Let's see some SVG tag examples:

Rectangles | Circles | Ellipses | Lines | Polygons

Rectangles

The element `<rect>` is used to create a rectangles and variations from a rectangular shape. It has six basic attributes to give it shape and position, which are:

Attribute	Description
Width	Required. The width of the rectangle.
Height	Required. The height of the rectangle.
X	The x-position for the top-left corner of the rectangle.
Y	The y-position for the top-left corner of the rectangle.
rx	The x radius of the corners of the rectangle (used to round the corners). Default is 0.
ry	The y radius of the corners of the rectangle (used to round the corners). Default is 0.

Example of a rectangle filled with blue color (attribute **fill**):

```
<h2>Rectángulo SVG</h2>

<svg width="300" height="130" xmlns="http://www.w3.org/2000/svg">
  <rect width="200" height="100" x="10" y="10" rx="20" ry="20"
fill="blue" />
</svg>
```

Learn more about this in the section Rectangles in SVG from w3schools.

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Circles

The element `<circle>` is used to create a circle, and has three basic attributes:

Attribute	Description
r	Required. The radius of the circle.
cx	The x-axis center of the circle. Default is 0.
cy	The y-axis center of the circle. Default is 0.

Example of a red-filled circle (attribute **fill**):

```
<h2>Círculo en SVG</h2>

<svg height="100" width="100" xmlns="http://www.w3.org/2000/svg">
  <circle r="45" cx="50" cy="50" fill="red" />
  Sorry, your browser does not support inline SVG.
</svg>
```

Learn more about this in the section Circles in SVG from w3schools.

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Ellipses

Ellipses are closely related to circles; they are defined by `<ellipse>`. They have 4 basic attributes:

Attribute	Description
rx	Required. The x radius of the ellipse.
ry	Required. The y radius of the ellipse.
cx	The x-axis center of the ellipse. Default is 0.
cy	The y-axis center of the ellipse. Default is 0.

Example of a yellow-filled ellipse (attribute **fill**):

```
<h2>Elipse en SVG</h2>

<svg height="140" width="500" xmlns="http://www.w3.org/2000/svg">
  <ellipse cx="120" cy="80" rx="100" ry="50" fill="yellow" />
</svg>
```

Learn more about this in the section Ellipses in SVG from w3schools.

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Lines

The `<line>` tag allows the user to create a line from the start point (x1, y1) to the point (x2, y2). It has 4 basic attributes:

Attribute	Description
x1	Required.The start of the line on the x-axis.
y1	Required.The start of the line on the y-axis.
x2	Required.The end of the line on the x-axis
y2	Required.The end of the line on the y-axis.

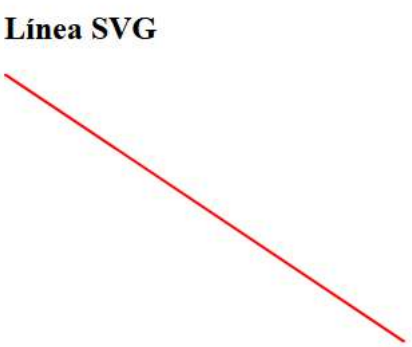
Also, we must define the line width and the line color with an attribute (**style**="stroke:*color*;stroke-width:*desired width*)

Example of a red line (attribute **fill**):

```
<h2>Línea SVG</h2>

<svg height="200" width="300" xmlns="http://www.w3.org/2000/svg">
  <line x1="0" y1="0" x2="300" y2="200" style="stroke:red;stroke-width:2" />

</svg>
```



Learn more about this in the section Lines in SVG from w3schools.

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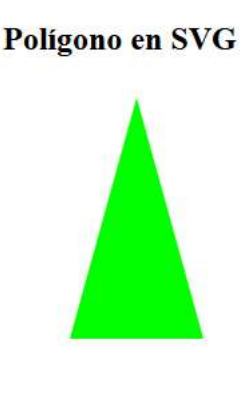
Polygons

The `<polygon>` tag allows us to create a polygon, defining its points, which close automatically (the last point with the first). It only has one basic atribute, **points**, which lists the points that made the polygon. Each points needs to have a coordinate x and a coordinate y. We also need to define the line width and color with an attribute (**style**="stroke:*color*;stroke-width:*desired width*).

Let's see an example:

```
<h2>Polígono en SVG</h2>

<svg height="220" width="500" xmlns="http://www.w3.org/2000/svg">
  <polygon points="100,10 150,190 50,190" style="fill:lime;stroke-width:3" />
</svg>
```



Learn more about this in the section Polygons in SVG from w3schools.

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