What is SVG image ?

SVG image is XML based vector image used for rendering two dimensional images in XML code.

What is xml based image ?

Xml image allows one to define collections of geolocated images (and also shapefiles).

Unlike raster images formats (such as jpeg, png , jpg)

Which store image as a grid of pexels , svg images describes shape using mathematical equations make them resolution-independent and infinitely scalable without losing quality .
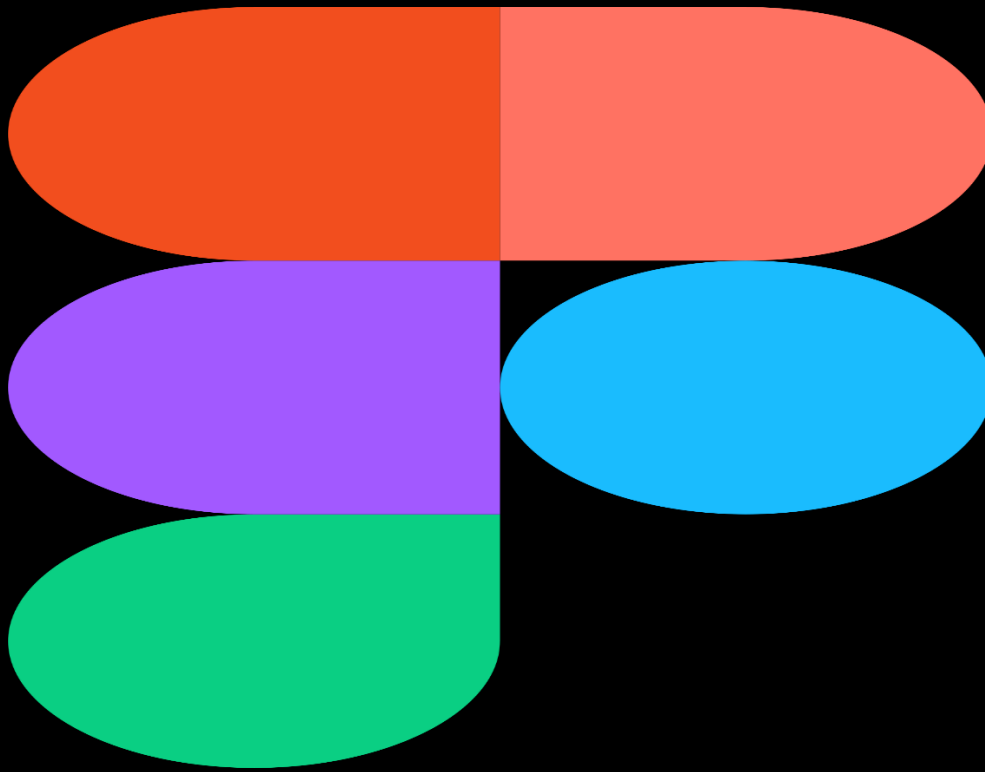
How one can create svg image ?

1. START BY CREATING A FILE WITH THE ".SVG" EXTENSION, FOR EXAMPLE, "ICON.SVG".

2. USE THE `<SVG>` TAG TO DEFINE THE SVG CONTAINER:
```
<SVG VIEWBOX="0 0 100 100">

  <!-- SVG SHAPES WILL GO HERE -->

</SVG>
```

3. INSIDE THE `<SVG>` TAG, YOU CAN DEFINE VARIOUS SHAPES LIKE `<RECT>` FOR RECTANGLES, `<CIRCLE>`, `<POLYGON>`, ETC.
```
<RECT X="10" Y="10" WIDTH="30%" HEIGHT="45%" FILL="RED" STROKE="YELLOW" />
```

4. You can position shapes by defining the `x` and `y` attributes, and give them a size using `width` and `height`.

5. Use the `fill` attribute to change the color of the shape.

6. Use the `stroke` attribute to define the outline of the shape.

7. You can define styles for SVG shapes using CSS:
```css
.svg-shape {
  fill: blue;
  stroke: green;
}
```

8. You can apply the class to your SVG elements:

```
<rect x="10" y="10" width="30%" height="45%"
class="svg-shape" />
```

9. For more complex structures, use the `<path>` element and define its `d` attribute, which stands for "draw". You can use commands like `M` for move, `L` for line, `C` for cubic Bezier, `Q` for quadratic Bezier, etc.

```
<path d="M 10 20 L 25 23" />
```

Remember, SVG is a powerful tool for creating scalable vector graphics on the web, and it offers a wide range of possibilities for design and interactivity. If you need further assistance or want to explore more SVG features, feel free to ask!