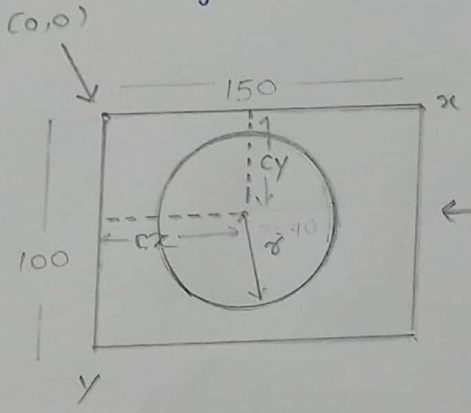
Using SVG to create images using code

SVG circle:

The <circle> element is used to create a circle

Example:

```
<svg height = "100" width = "150" >
    <circle cx = "50" cy = "50" r= "40" fill = "red"/>
</svg>
```



← svg with height = 100 and width=150

Here cx and cy defines x and y coordinates of the center of the circle. If cx and cy are omitted then circle is set to (0,0)

The r attribute defines radius of circle.

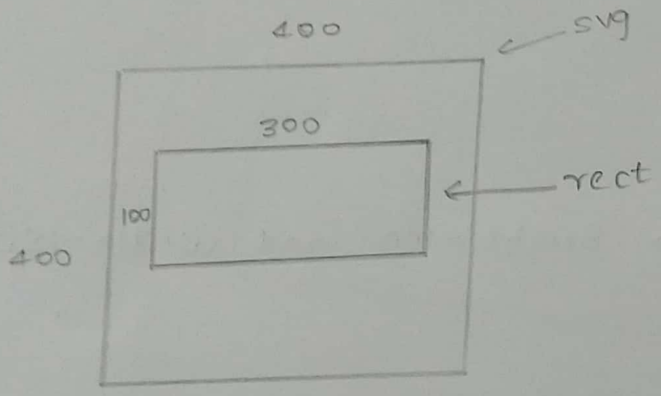
SVG Rectangle

The <rect> element is used to create a rectangle and variations of a rectangle shape.

Ex: <svg width = "400" height = "400">

<rect width = "300" height = "100" style = "fill:red"/>

</svg>

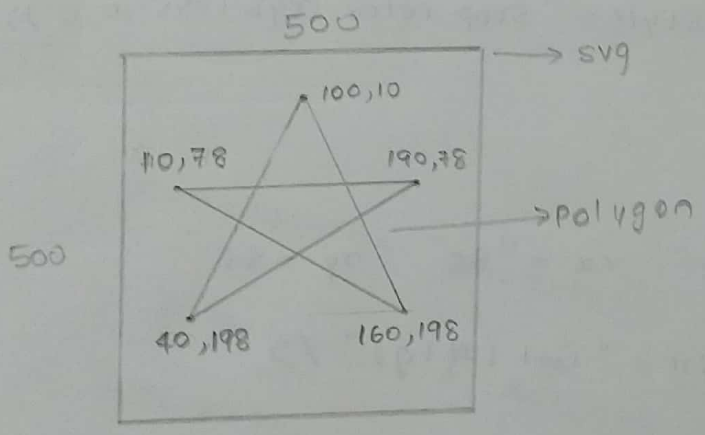


Here the width and height attributes of <rect> defines the height and width of the rectangle, in the image we can see the rectangle with width = 300 and height = 100 inside svg of length and width 400.

SVG Polygon

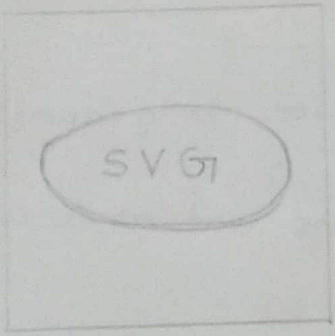
The <polygon> ellment is used to create a graphic that contains atleast three sides. Polygons are made of Straight lines and shape is "closed".

```
<svg  height = "500"  width = "500" >

 <polygon  points = " 100,10  40,198  190,78 , 10 ,78 , 160 198 "

       style = " fill :lime " >

</svg>
```



points is used to determine the coordinates of the points which we want to specify.

Creating logo using svg ellipse and gradient



Example:

```
<svg height ="500" width = "500" >
  <defs>
   <linearGradient id = "lg" x1 = "0%" y1 = "0%"
                 x2 = "100%" y2 = "0%" >
    <stop offset = "0%" style = "stop-color : rgb(255,255,0);"/>
    <stop offset = "100%" style = "stop-color: rgb(255,0,0);"/>
   </linearGradient>
  </defs>
  <ellipse cx = "100" cy = "70" rx = "85" ry = "55"
                              fill = "url(#lg)" />
  <text fill = "#ffffff" font-size = "45" x="50" y = "86" >
     SVG
   </text>
</svg>
```

Scanned by CamScanner

Difference between canvas and svg

	Canvas	SVG
1.	canvas draws 2D graphics, on the fly (with a Javascript)	SVG is a language for describing 2D graphics in XML
2.	Canvas is rendered pixel by pixel . Once graphic is drawn it is forgotten by brauser If position is changed entire Screen should be redrawn.	In SVG each shape is remembered as objects. If attributes of SVG object are changed, the browser automatically re-renders the shape
3.	Resolution dependent	Resolution independent
4	NO support for event handlers	Support for event handlers
5	Poor rendering capabilities	Best suited for applications with large rendering areas
6	Well suited for graphic-intensive games	Not suited for game applications