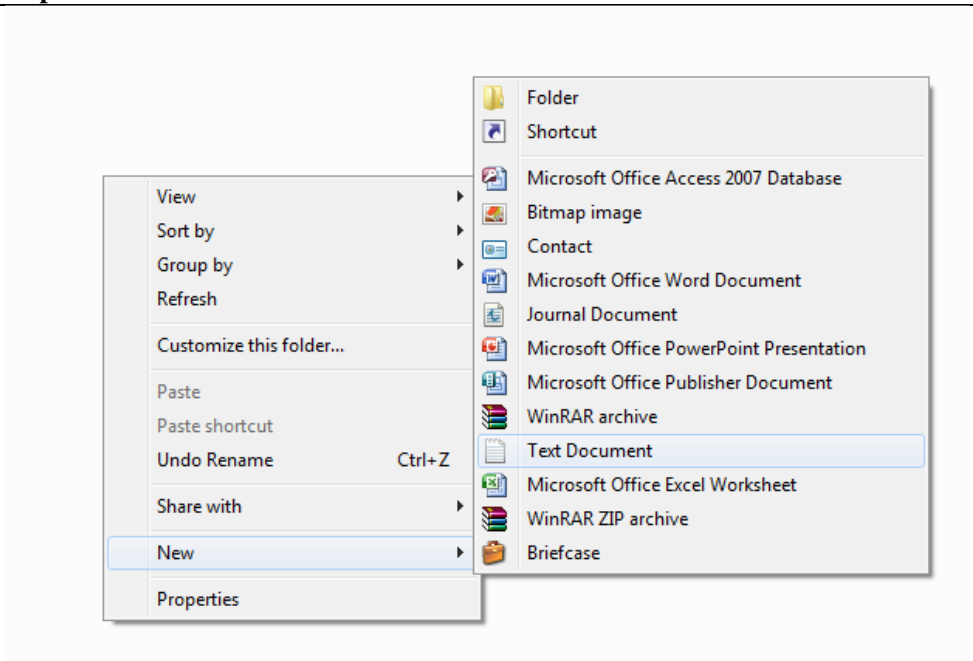
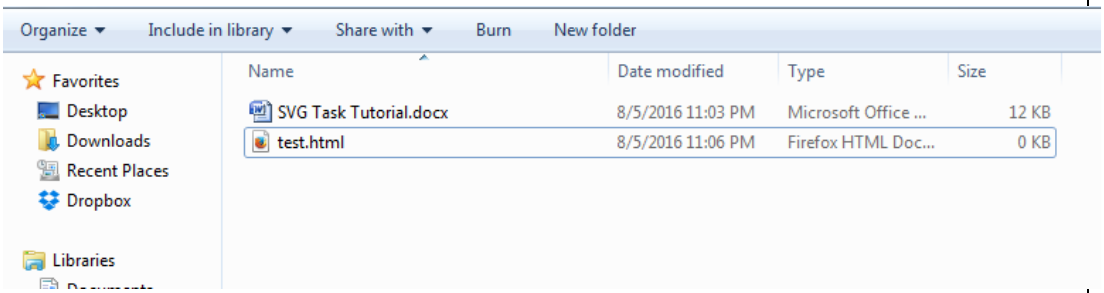
SVG Tutorial

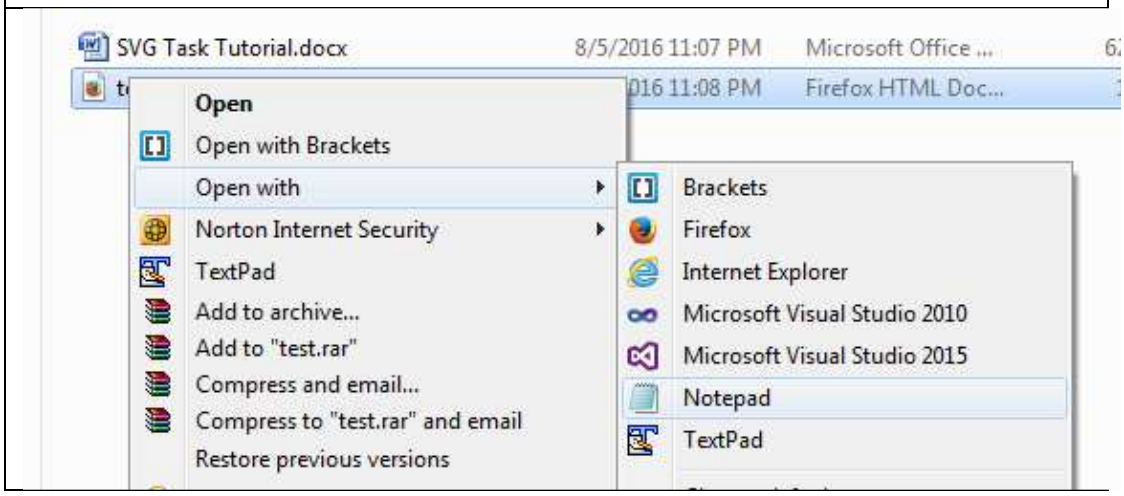
- SVG stands for Scalable Vector Graphics. Please follow the tutorial and do the steps below

Step1 : Create a file with name **test.html**





Step 2: Right click on the file and Edit the file with any editor eg: Notepad



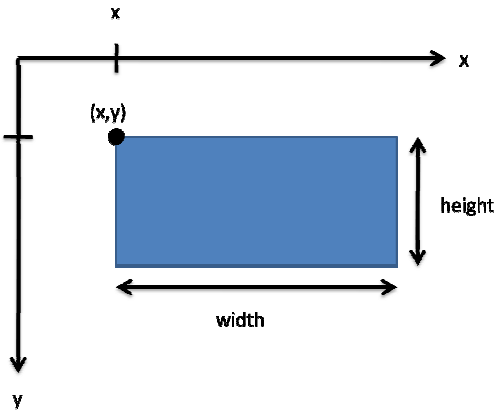
Step 3: Type the following Code

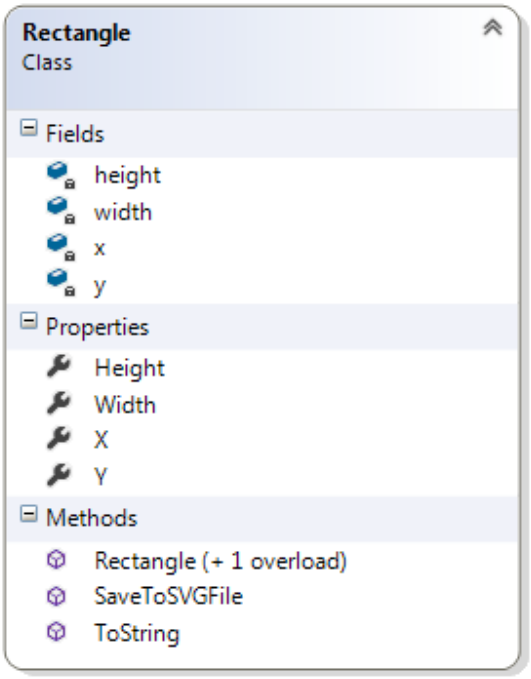
```
<html>
  <body>
    <svg width='600' height='600'>
        <rect x='50' y='20' width='300' height='100'/>
     </svg>
  </body>
</html>
```

Task 1 (Solved Task)

Drawing a SVG Rectangle With C#

Draw a class diagram for a C# class called Rectangle as shown in the following Shape





The SVG used to draw a rectangle is

```
<html>
   <body>
       <svg width='600' height='600'>
         <rect x='50' y='20' width='300' height='100'/>
       </svg>
   </body>
</html>
```

The class code should be like this

```
using System;
namespace SVG_Library
{
    public class Rectangle
    {
        private int width;
        private int height;
        private int x;
        private int y;
```

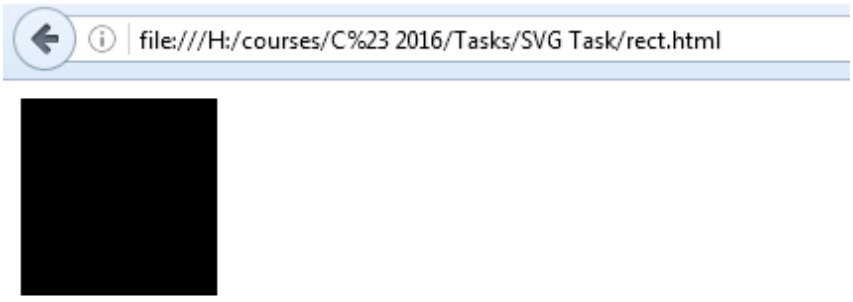
```
        public Rectangle() : this(0,0,0,0)
        {
        }
        public Rectangle(int x, int y, int width, int height)
        {
            this.x = x;
            this.y = y;
            this.width = width;
            this.height = height;
        }
        public int Width
        {
            get{
                return width;
            }
            set{
                this.width = value;
            }
        }
        public int Height{
            get{
                return height;
            }
            set{
                this.height = value;
            }
        }

        public int X
        {
            get{
                return x;
            }

            set{
                this.x = value;
            }
        }

        public int Y
        {
            get{
                return y;
            }
            set{
                this.y = value;
            }
        }

        public virtual void SaveToSVGFile(string filename)
        {
            string text = string.Format(@"<html>
                                          <body>
                                            <svg width='600' height='600'>
                                              {0}
                                            </svg>
                                          </body>
```

```
                                        </html> ",
            ToString());
            System.IO.File.WriteAllText(filename, text);
        }

        public override string ToString()
        {
          return string.Format("<rect x='{0}' y='{1}' width='{2}'height='{3}' />",
                               x,y,width,height);
        }
    }
}
```

Test your code by creating an object in the Main method as follows

```
using System;

namespace SVG_Library
{
    class Program
    {
        static void Main(string[] args)
        {
            Rectangle rect = new Rectangle(1, 1, 100, 100);
            rect.SaveToSVGFile(@"d:\test.html");
        }
    }
}
```

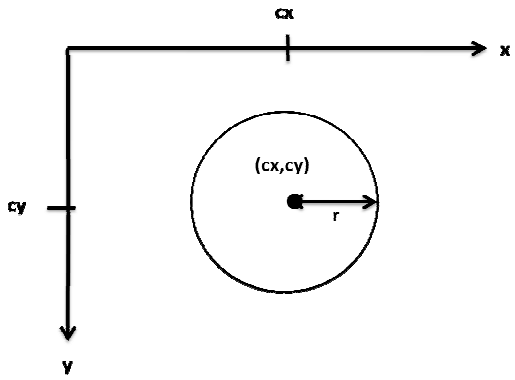
When you run the code and open the generated test file it should be look like this

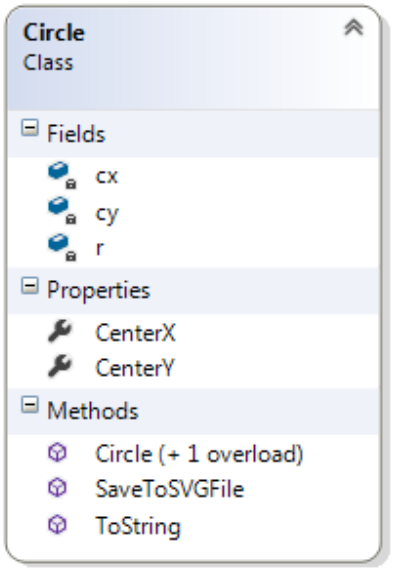


Task 2

Drawing a SVG Circle With C#

Draw a class diagram for a C# class called Circle as shown in the following Shape





The SVG code used to draw a Circle is

```
<html>
  <body>
    <svg width='600' height='600'>
      <circle cx='100' cy='100' r='50'/>
    </svg>
  </body>
</html>
```

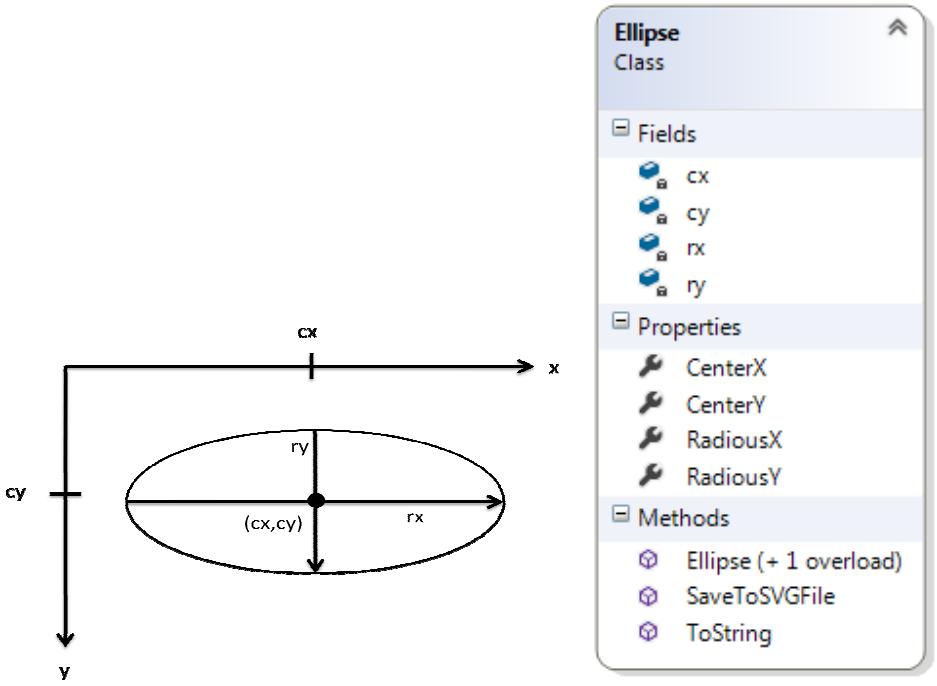
Test your code by creating an object in the Main method as follows

```
using System;

namespace SVG_Library
{
    class Program
    {
        static void Main(string[] args)
        {
            Circle c = new Circle(50,50,100);
            c.SaveToSVGFile(@"d:\circle.html");
        }
    }
}
```

Task 3

Drawing a SVG Ellipse With C#

Draw a class diagram for a C# class called Ellipse as shown in the following Shape



The SVG code used to draw an Ellipse is

```
<html>
  <body>
    <svg width='600' height='600'>
      <ellipse cx="200" cy="80" rx="100" ry="50"/>
    </svg>
  </body>
</html>
```

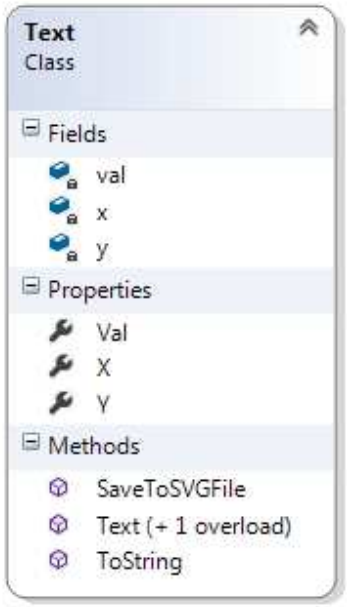
Test your class with the following Main method

```
static void Main(string[] args)
{
   Ellipse e = new Ellipse(100,200,50,100);
   e.SaveToSVGFile(@"H:\ellipse.html");
}
```

Task 4

Drawing a SVG Text With C#

Draw a class diagram for a C# class called Text as shown in the following Shape



The SVG code used to draw a Text is

```
<html>
  <body>
    <svg width='600' height='600'>
       <text x='10' y='100'>This is a test</text>
    </svg>
  </body>
</html>
```

Test your class with the following Main method

```
static void Main(string[] args)
{
   Text t = new Text(100,200,"This is a test");
   t.SaveToSVGFile(@"H:\text.html");
}
```