Lecture_4

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HTML5 Tags AND HTML5 Semantics

Introduction to HTML5

- The fifth and current version of HTML.
- In 2008, the first HTML5 public draft was released.
- Has improved the markup available for documents

HTML 5 features

- Introduced new multimedia features which supports audio and video controls by using <audio> and <video> tags.
- There are new graphics elements including vector graphics and tags.
- Enrich semantic content by including <header> <footer>, <article>, <section> and <figure> are added.
- Web storage facility which provides web application methods to store data on web browser.
- Uses SQL database to store data offline
- Allows to draw various shapes like triangle, rectangle, circle, etc.
- Capable of handling incorrect syntax.
- Easy character encoding i.e. <meta charset=”UTF-8″>

<article> Tag

- Acts as a container for any section of a page that could stand alone and potentially be syndicated.
- This could be an individual article or blog entry, a comment or forum post, or any other independent piece of content.
- Used to represent an article. More specifically, the content within the <article> tag is independent from the other content of the site.
- The <article> elements can even be nested inside each other. The <article> element can include:
  - blog entry
  - forum post
  - news
  - comment

```
CTYPE html>
l>
ead>
<title>Title of the document</title>
head>
ody>
<section>
  <h1>Articles about flowers</h1>
  <article>
    <h2>Roses</h2>
    <p>Rose - the queen of flowers - is the object of worship and ardent love.
  </article>
  <article>
    <h2>Lilies</h2>
    <p> Lily - an amazing beauty flower, one of the most ancient among a varie
  </article>
</section>
body>
ml>
```

Articles about flowers

Roses

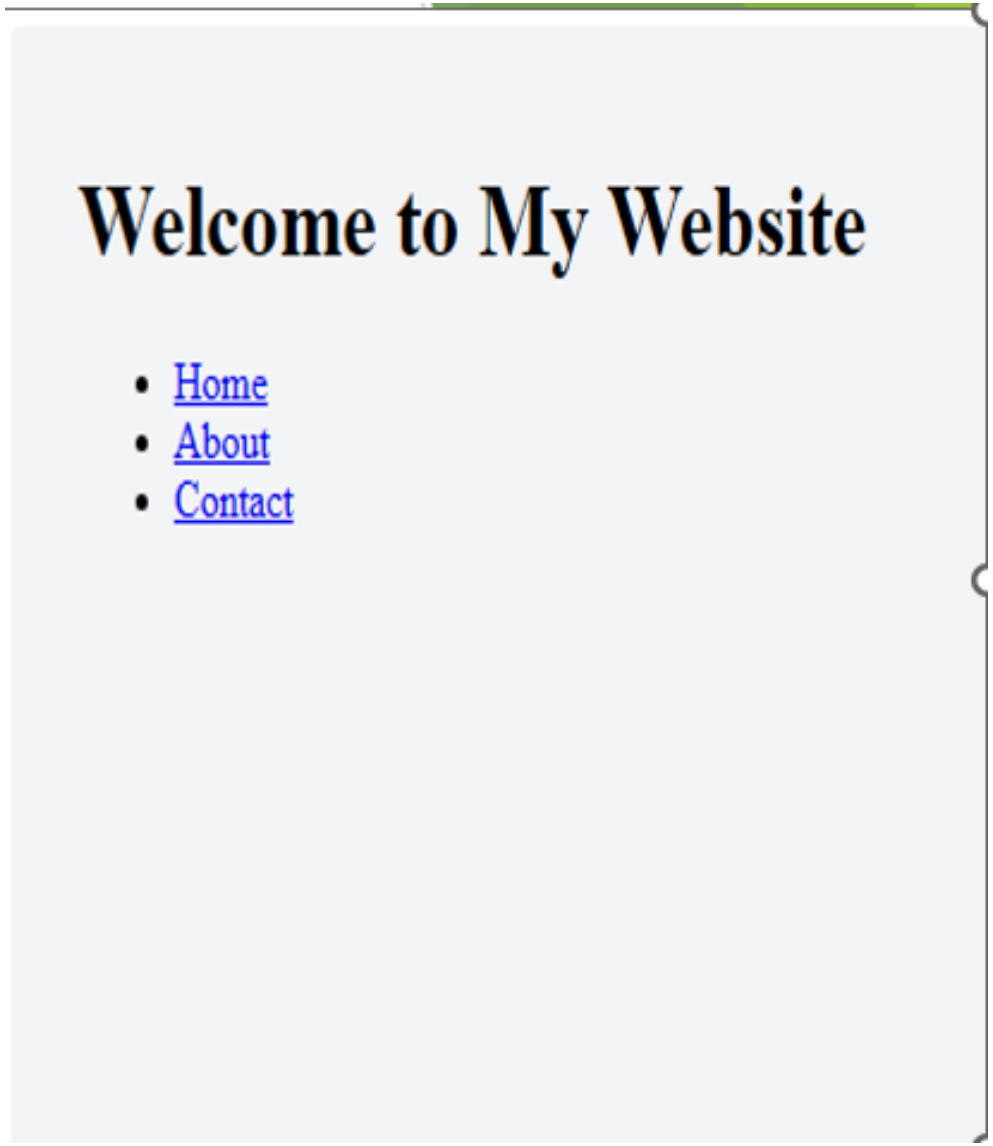
Rose – the queen of flowers - is the object of worship and ardent love. Since ti
immemorial, the rose has been the object of worship and admiration.

Lilies

Lily - an amazing beauty flower, one of the most ancient among a variety of bu
plants.

<header> Tag

- A container for introductory content or a set of navigational links.
- A <header> element may contain:
  - one or more heading elements (<h1> - <h6>)
  - logo or icon
  - authorship information
- You can have several <header> elements in one document.
- A <header> tag cannot be placed within a <footer>, <address> or another <header> element.




```
<!DOCTYPE html>
<html>
  <head>
    <title>Title of the document</title>
  </head>
  <body>
   <header>
<h1>Welcome to My Website</h1>
<nav>
<ul>
<li><a href="#home">Home</a></li>
<li><a href="#about">About</a></li>
<li><a href="#contact">Contact</a></li>
</ul>
</nav>
</header>
  </body>
</html>
```

<footer> Tag

- Defines a footer for a document or section.
- Should contain information about its containing element.
- A <footer> element may contain:
  - Copyright information
  - contact information
  - back to top links
  - authorship information
- You may have several <footer> elements in one document

```html
<!DOCTYPE html>
<html>
  <head>
    <title>Title of the document</title>
  </head>
  <body>
   <header>

     <!--HTML footer tag starts here-->

  <footer>
    <a href="https://www.geeksforgeeks.org/about/">
      About Us
    </a>|
    <a href="https://www.geeksforgeeks.org/privacy-policy/">
      Privacy Policy
    </a>|
    <a href="https://www.geeksforgeeks.org/careers/">
      Careers
    </a>

    <p>@geeksforgeeks, Some rights reserved</p>
  </footer>
```

About Us | Privacy Policy | Careers

@geeksforgeeks, Some rights reserved

<nav> Tag

- Used to contain the major navigational blocks on the site such as the primary site navigation.
- Websites typically have sections dedicated to navigational links, which enables user to navigate the site. These links can be placed inside a <nav> tag.
- Not all site links should be inside a <nav> element. The <nav> element is intended only for major block of navigation links.
- Screen readers for disabled users, can use <nav> element to determine whether to omit the initial rendering of this content.

```
<!DOCTYPE html>
<html>
  <head>
    <title>Title of the document</title>
  </head>
  <body>
  <nav>
<a href="/home/">home</a> |
<a href="/classes/">classes</a> |
<a href="/catering/">catering</a> |
<a href="/about/">about</a> |
<a href="/contact/">contact</a>
</nav>
 </body>
</html>
```

<section> Tag

- Defines sections in a document, such as chapters, headers, footers, or any other sections of the document.
- The <section> element groups related content together, and typically each section would have its own heading.
- For example, on a homepage there may be several <section> elements to contain different sections of the page, such as latest news, top products, and newsletter signup.
- It may contain several distinct <article> elements that have a common theme or purpose.

```
<!DOCTYPE html>
<html>
  <head>
    <title>Title of the document</title>
  </head>
  <body>
<section class="popular-recipes">
<h2>Popular Recipes</h2>
<a href="">grilled chicken</a>
<a href="">minced chicken patties</a>
<a href="">savory pancakes</a>
<a href="">chicken stew</a>
</section>
<section class="contact-details">
<h2>Contact</h2>
<p>Kitchen<br />
27 New Street<br />
London E2 7DP</p>
</section>
</body>
</html>
```

Tag

- Defines a division or a section in an HTML document.
- Often used as a container for other HTML elements to style them with CSS or to perform certain tasks with JavaScript .
- Where there is no suitable element to group a set of elements, the element will still be used.

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
    <body>
 <div width="100%" height="1000px" style="background-color:mintcream" >
<header width="100%" height="80px" style="background-color:blanchedalmond">
     for navigation bar
 </header>
    <div width="100%" height="820px" >
     <h1 align="center">How To Become a Better Writer: 11 Steps for Success</h1>
        If you're a new or seasoned writer, improving your writing skill set may help you master your craft, find
        more job opportunities and create a reputation for quality writing. Writing can take some time to master,
        but with the right steps, you can start improving your writing almost immediately. Understanding how to do
        so can be a beneficial skill for both professional writers and aspiring authors, copywriters or
        journalists.
Related jobs on Indeed
Writers Editors jobs
Part-time jobs
Full-time jobs
Remote jobs
View more jobs on Indeed
How to become a better writer
Here are just a few steps to becoming a better writer, which can begin to happen in just a few short weeks but
takes practice over time:
     </div>

  <footer  width="100%" height="80px" style="background-color:gold">

     @Copyright
 </footer>

 </div>
    </body>
</html>
```

for navigation bar

How To Become a Better Writer: 11 Steps for Success

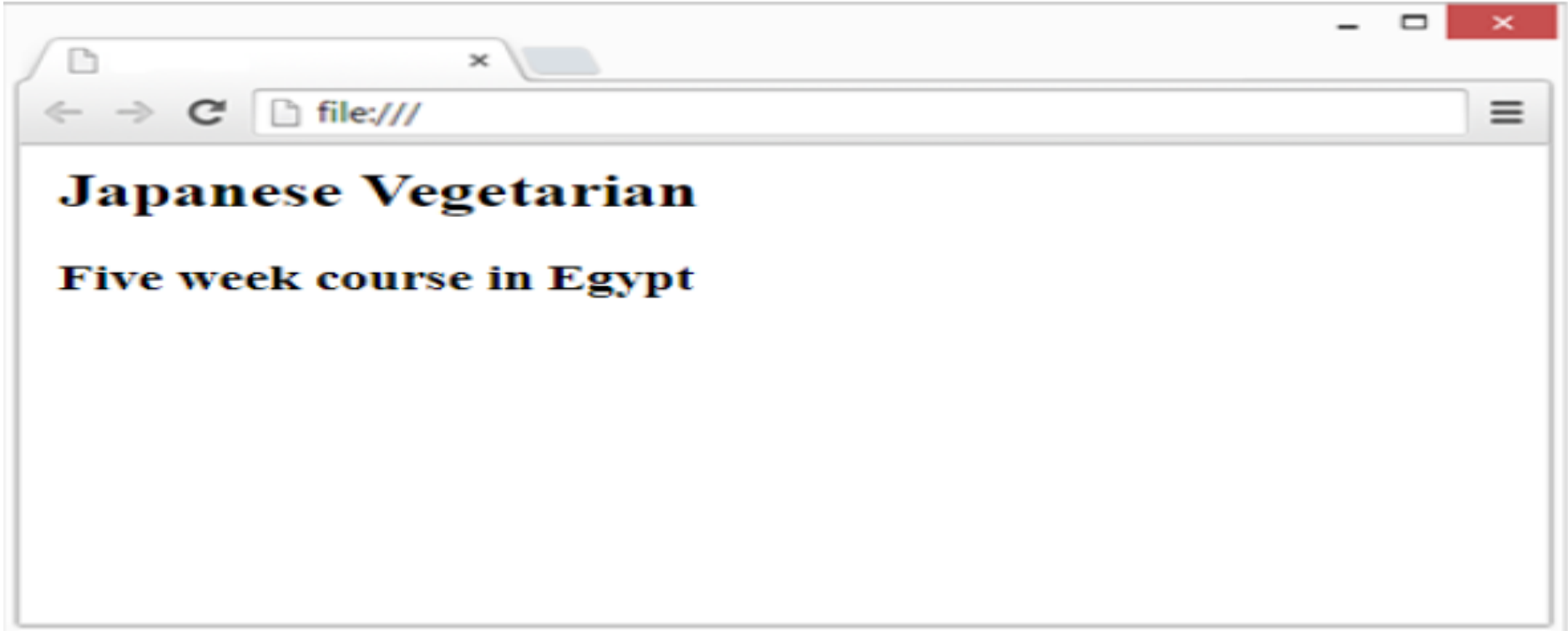
If you're a new or seasoned writer, improving your writing skill set may help you master your craft, find more job opportunities and create a reputation for quality writing. Writing can take some time to master, but with the right steps, you can start improving your writing almost immediately. Understanding how to do so can be a beneficial skill for both professional writers and aspiring authors, copywriters or journalists. Related jobs on Indeed Writers Editors jobs Part-time jobs Full-time jobs Remote jobs View more jobs on Indeed How to become a better writer Here are just a few steps to becoming a better writer, which can begin to happen in just a few short weeks but takes practice over time:

@Copyright

<hgroup> Tag

- Groups together a set of one or more <h1> through <h6> elements so that they are treated as one single heading.
- For example it could be used to contain both a title inside an <h2> element and a subtitle within an <h3> element.
- Some developers do not like the use of the <hgroup> element, and prefer to place a subtitle inside a <p> element.
- <hgroup> tag is popular with those developers who believe that it is useful to group together the primary heading and the subheading.

```
<!DOCTYPE html>
<html>
        <body>
                <hgroup>
                        <h2>Japanese Vegetarian</h2>
                        <h3>Five week course in Egypt</h3>
                </hgroup>
        </body>
</html>
```



Introduction to HTML5 SVG and Canvas

<svg> Element

- SVG is used to define various graphic object for the Webpages.
- Basic <svg> element syntax

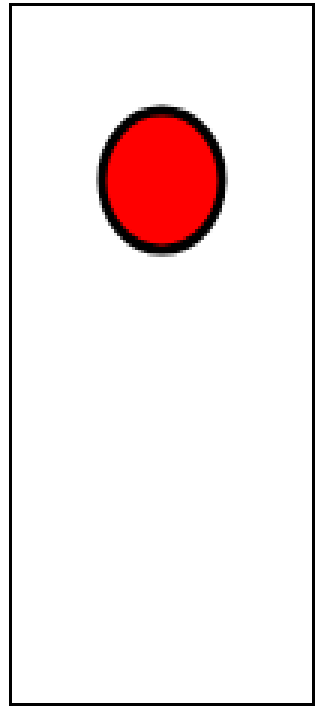
```
< svg width="100" height="200">

</ svg >
```

- There are many HTML predefined shape elements that can be used inside SVG element like:
  - <circle>: Circle
  - <rect>: Rectangle
  - <ellipse>: Ellipse
  - <line>: Line
  - <polyline>: Polyline
  - <polygon>: Polygon

Drawing SVG Circle

- To draw a circle, the <circle> element is used
- The circle center x and y coordinates are defined using cx and cy attributes.
- The radius of the circle is defined using r attribute.
- If cx and cy values are zero, the default value will be (0,0).
- Stroke and Fill attributes define the shape border and inner colors, stroke-width attribute defined the object stroke width value.

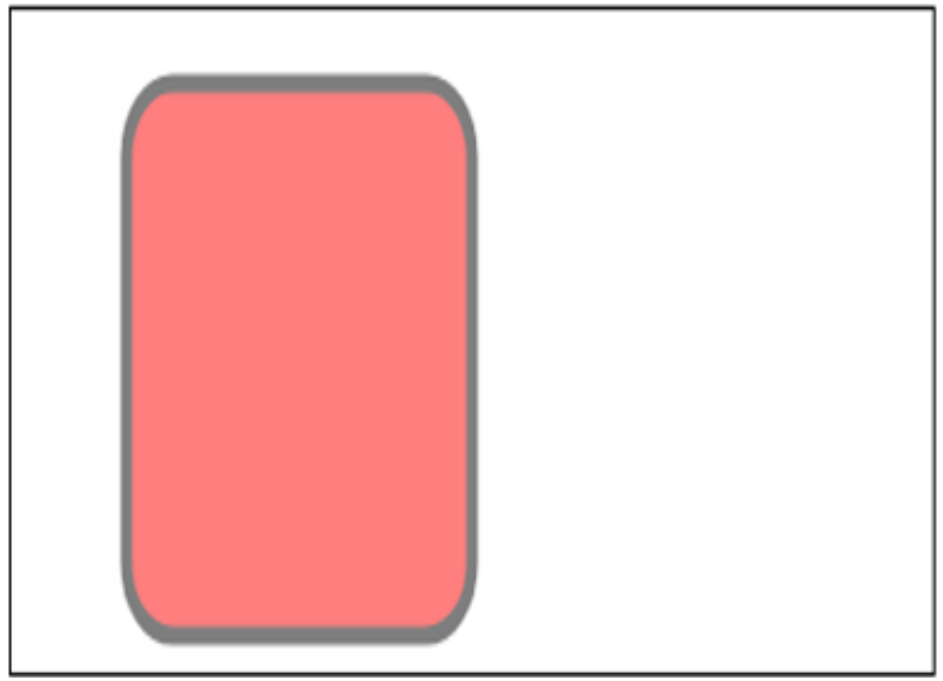
```
<!DOCTYPE html>
<html>
<head>
<title>
Cricle Element Example
</title>
</head>
<body>
<svg height="200" width="100" style="border:1px solid;">
<circle cx="50" cy="50" r="20" stroke="black" stroke-width="3" fill="red" />
</svg>
</body>
</body>
</html>
```



Drawing SVG Rectangle

- The <rect> element is used to draw a rectangle over SVG object.
- The rectangle left corner x and y coordinates are defined using x and y attributes.
- The height and the width of the rectangle shape are defined using the width and height attributes of the <rect> element.
- If x and y values are zero, the default value will be (0,0).
- **Stroke and Fill** attributes define the shape border and inner colors, stroke-width attribute defined the object stroke width value.
- the opacity of the fill color can be defined using fill-opacity property
- Also the stroke-opacity property is used to define the opacity of the stroke color.
- Rectangle rounded corners can be rounded with rx and the ry attributes.

```
<!DOCTYPE html>
<html>
<head>
<title>
Cricle Element Example
</title>
</head>
<body>
<svg width="400" height="180" style="border:1px solid;">
<rect x="50" y="20" rx="20" ry="20" width="150" height="150"
style="fill:red;stroke:black;stroke-width:5;opacity:0.5" />
</svg>
</body>
</body>
</html>
```

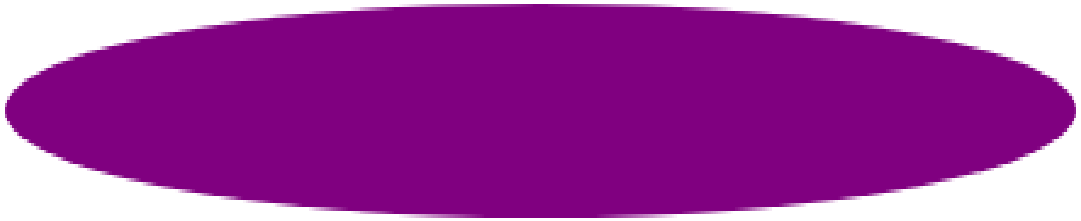


Drawing SVG Ellipse

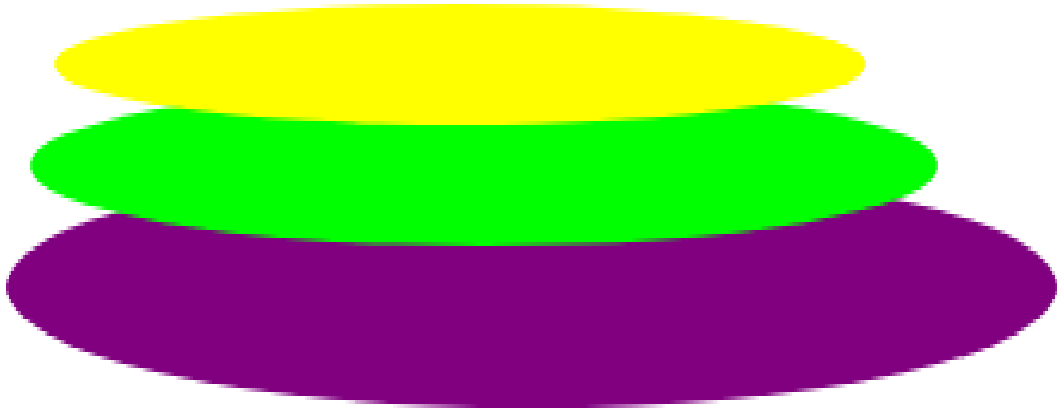
- The <ellipse> element is used to draw an ellipse over SVG object.
- An ellipse object shape looks like a circle but in ellipse the x radius (rx) attribute and y radius (ry) attribute are different from each other while the circle radius is equal.
- The remaining ellipse HTML properties are the same as the circle element properties.

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

```
<!DOCTYPE html>
<html>
<head>
<title>
Cricle Element Example
</title>
</head>
<body>

<svg height="150" width="500">
<ellipse cx="240" cy="100" rx="220" ry="30" style="fill:purple" />

</svg>



</body>
</body>
</html>
```



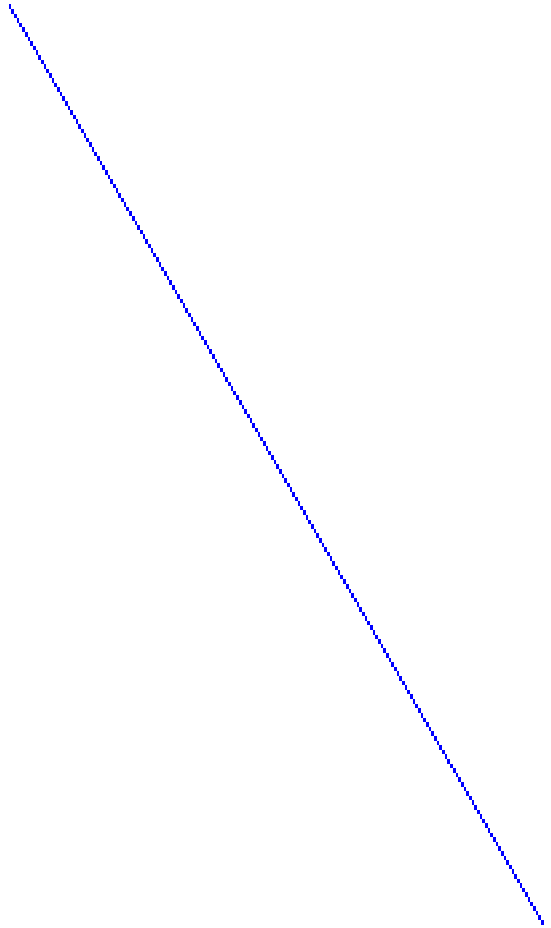
```
<!DOCTYPE html>
<html>
<head>
<title>
Cricle Element Example
</title>
</head>
<body>

<svg height="150" width="500">
<ellipse cx="240" cy="100" rx="220" ry="30" style="fill:purple" />
<ellipse cx="220" cy="70" rx="190" ry="20" style="fill:lime" />
<ellipse cx="210" cy="45" rx="170" ry="15" style="fill:yellow" />
</svg>

</body>
</body>
</html>
```



Drawing SVG Line

- The <line> element is used to draw a line over SVG object.
- The line start point is defined by x1,y1 attributes
- The line end point is defined by x2,y2 attributes
- Stroke and stroke-width attributes define the line color and the line thickness value.

```
<!DOCTYPE html>
<html>
<head>
<title>
Cricle Element Example
</title>
</head>
<body>


<svg height="300" width="400">
<line x1="0" y1="0" x2="200" y2="200" style="stroke-width:3;stroke:blue"/>
</svg>

</body>
</body>
</html>
```



Thank you