

Drawing Elements

● HTML <canvas> Tag

Example

Draw a red square, on the fly, and show it inside the <canvas> element:

```
<canvas id="myCanvas"></canvas>

<script>
var canvas = document.getElementById("myCanvas");
var ctx = canvas.getContext("2d");
ctx.fillStyle = "#FF0000";
ctx.fillRect(0, 0, 80, 80);
</script>
```

What is HTML Canvas?

The HTML <canvas> element is used to draw graphics, on the fly, via scripting (usually JavaScript).

The <canvas> element is only a container for graphics. You must use a script to actually draw the graphics.

Canvas has several methods for drawing paths, boxes, circles, text, and adding images.

Definition and Usage

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• HTML <svg> Tag

Example

Draw a circle:

```
<svg width="100" height="100">  
  <circle cx="50" cy="50" r="40" stroke="green" stroke-  
width="4" fill="yellow" />  
</svg>
```

What is SVG?

- SVG stands for Scalable Vector Graphics
- SVG is used to define vector-based graphics for the Web
- SVG defines the graphics in XML format
- Every element and every attribute in SVG files can be animated
- SVG is a W3C recommendation
- SVG integrates with other W3C standards such as the DOM and XSL

Definition and Usage

The <svg> tag defines a container for SVG graphics.

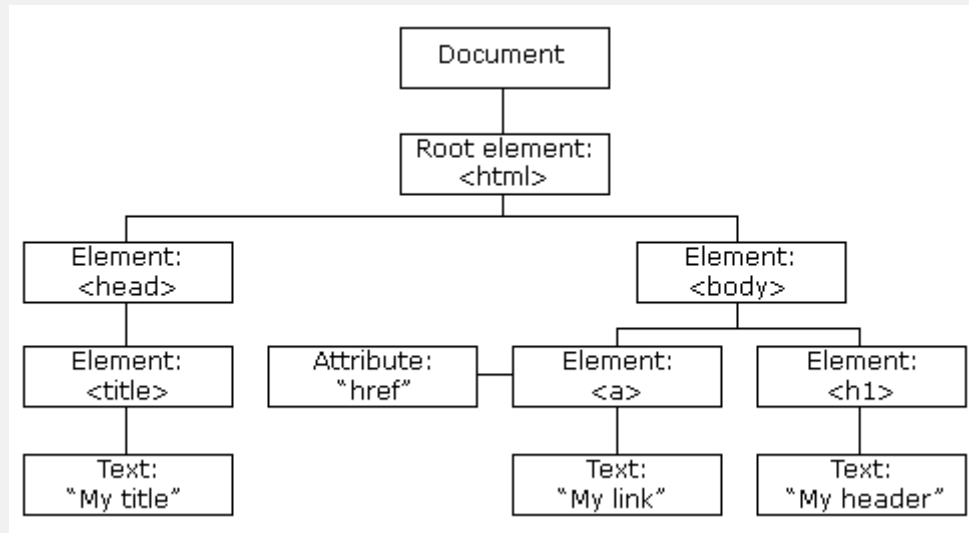
SVG has several methods for drawing paths, boxes, circles, text, and graphic images.

• The HTML DOM (Document Object Model)

When a web page is loaded, the browser creates a **D**ocument **O**bject **M**odel of the page.

The **HTML DOM** model is constructed as a tree of **Objects**:

The HTML DOM Tree of Objects



With the object model, JavaScript gets all the power it needs to create dynamic HTML:

- JavaScript can change all the HTML elements in the page
- JavaScript can change all the HTML attributes in the page
- JavaScript can change all the CSS styles in the page
- JavaScript can remove existing HTML elements and attributes
- JavaScript can add new HTML elements and attributes
- JavaScript can react to all existing HTML events in the page
- JavaScript can create new HTML events in the page

What is the DOM?

The DOM is a W3C (World Wide Web Consortium) standard.

The DOM defines a standard for accessing documents:

"The W3C Document Object Model (DOM) is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure, and style of a document."

The W3C DOM standard is separated into 3 different parts:

- Core DOM - standard model for all document types

- XML DOM - standard model for XML documents
- HTML DOM - standard model for HTML documents

What is the HTML DOM?

The HTML DOM is a standard **object** model and **programming interface** for HTML. It defines:

- The HTML elements as **objects**
- The **properties** of all HTML elements
- The **methods** to access all HTML elements
- The **events** for all HTML elements

Blog Writing

How to Write a Blog Post

- Understand your audience. ...
- Create your **blog** domain. ...
- Customize your **blog's** theme. ...
- Identify your first **blog** post's topic. ...
- Come up with a working title. ...
- **Write** an intro (and make it captivating). ...
- Organize your content in an outline. ...
- **Write** your **blog** post!