Web Development Course

What really happens when a website is rendered on browser

DNS Server

Frontend

Backend

Database

HTML & CSS

- HTML – Content
- CSS – Appearance of that Content

Common HTML Terms

- Elements
- Tags
- Attributes

HTML Document Structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <title>Hello World</title>
  </head>
  <body>
    <h1>Hello World</h1>
    <p>This is a web page.</p>
  </body>
</html>
```

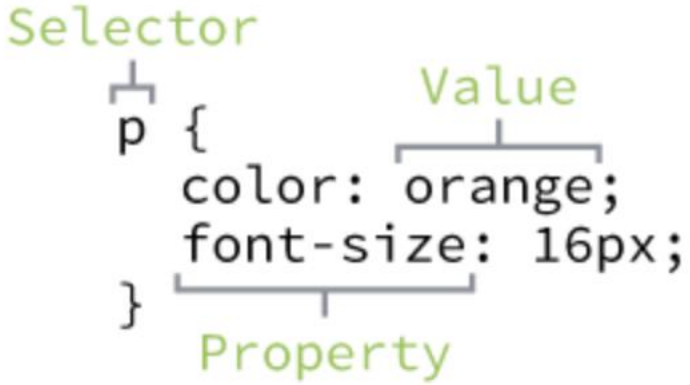
Required HTML Elements

All HTML elements have to follow a required structure, that includes the following Elements:

- <!DOCTYPE html> - informs the version of html being used
- <html> - signifies beginning of the document
- <head> - includes metadata, content is not displayed
- <body> - all visible content fall within this elment

Common CSS Terms

- Selectors
- Properties
- Values



CSS Selectors

- Type Selectors

```
div { ... }
```

- Class Selectors

```
.awesome { ... }
```

- Id Selectors
- Advanced Selectors

Referencing CSS

```
<head>
  <link rel="stylesheet" href="main.css">
</head>
```

Using CSS Resets

https://meyerweb.com/eric/tools/css/reset/

Blocks Vs Inline Elements

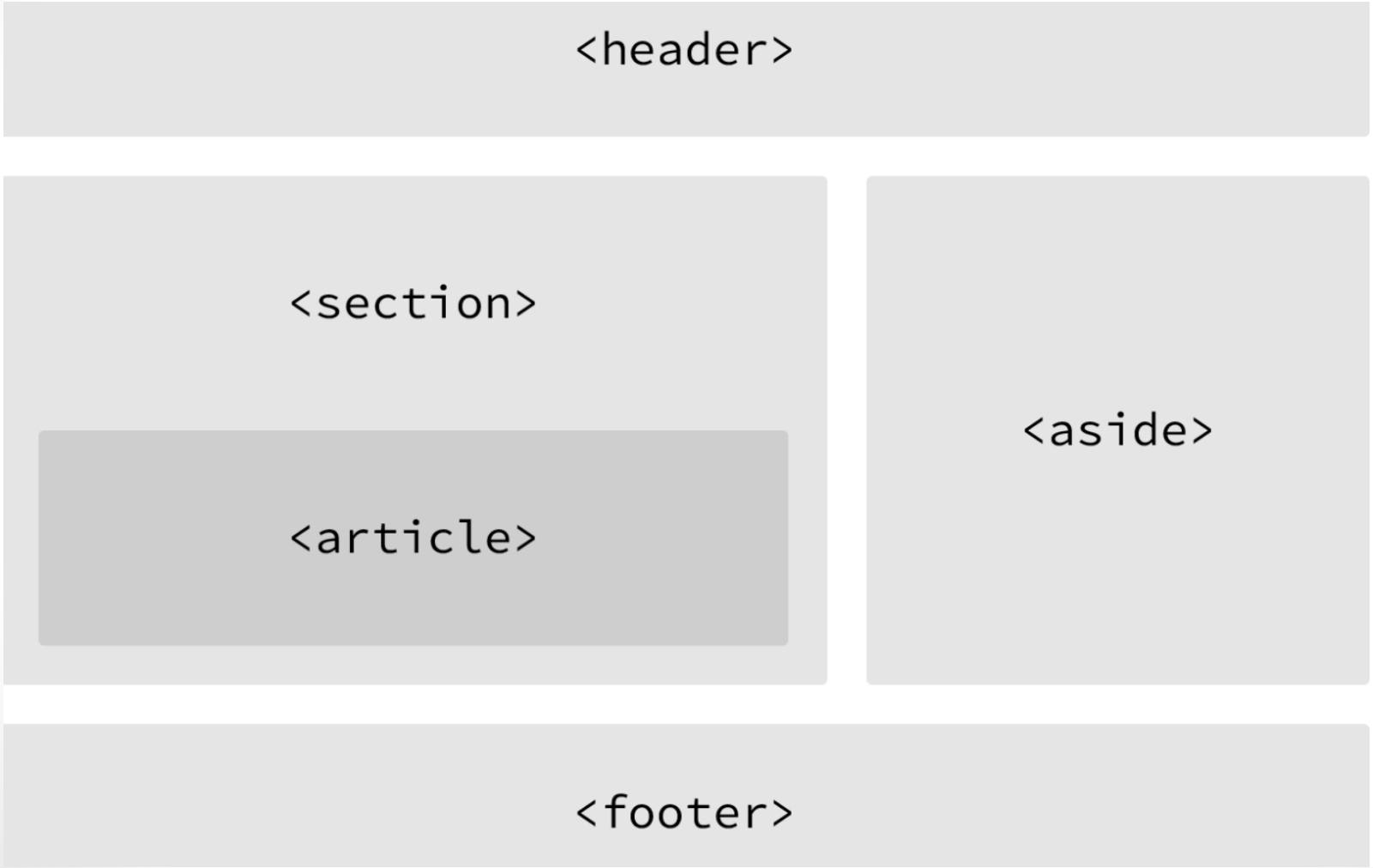
- Block-level elements begin on a new line, stacking one on top of the other, and occupy any available width. Block-level elements may be nested inside one another and may wrap inline-level elements. We'll most commonly see block-level elements used for larger pieces of content, such as paragraphs.

- Inline-level elements do not begin on a new line. They fall into the normal flow of a document, lining up one after the other, and only maintain the width of their content. Inline-level elements may be nested inside one another; however, they cannot wrap block-level elements. We'll usually see inline-level elements with smaller pieces of content, such as a few words.

Most Crucial HTML Elements

- Divs
- Spans
- Headings
- Paragraphs
- Bold Text
- Italicize Text

Structure of Webpage



HTML Elements Cont…

- Hyperlinks
- Relative and Absolute Paths
- Linking to an Email Address
- Opening Link in a New Window
- Linking to Parts of the same page

CSS Cascading

- Specificity
- Combining Selectors
- Specificity Within Combined Selectors

Common CSS Property Values

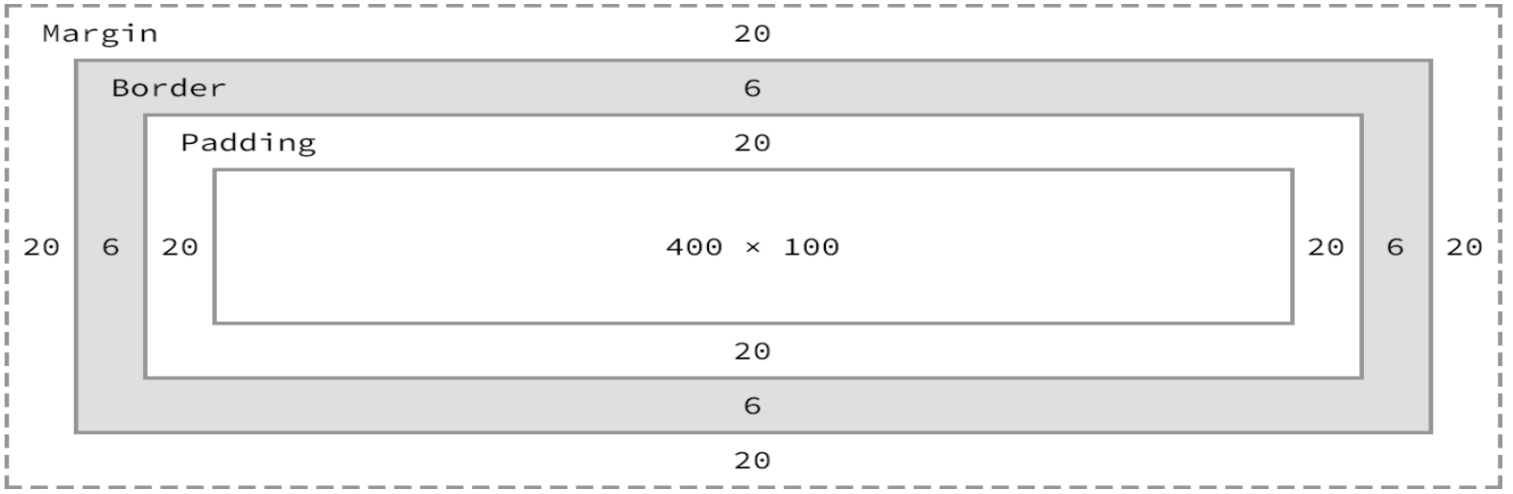
- Colors
  - Keyword Colors
  - Hexadecimal colors
  - RGB and RGBa colors
- Lengths
  - Absolute lengths
  - Relative lengths

Display Property

- Block
- Inline
- Inline-block
- None

The Box Model

- Every element on a page is a rectangular box.
- How do you calculate the height and width of this rectangular box.
- Width, height, padding, border, margin
- Total width : margin-right + border-right + padding-right + width + padding-left + border-left + margin-left



Width & Height

- Inline level elements will not honor height and width properties. They will always take the height and width which is required for the content within them to be visible.
- Block level and inline-block level elements will honor the height and width properties.

Margin

- Margin for an element always falls outside of the border.
- Inline level elements don’t honor vertical margins i.e. top and bottom margins. Whereas that is not the case with block level elements or inline-block level elements.
- Color : Transparent property, background color of the parent element.

Padding

- Padding it falls inside of the element’s border.
- Vertical and horizontal paddings both gets applied even for inline level elements. Unlike margin property.
- Color : transparent property, background color of the element to which it is applied to.

Border

- Width, style and color.
- Border-radius
- Box-sizing – content-box, padding-box, border-box

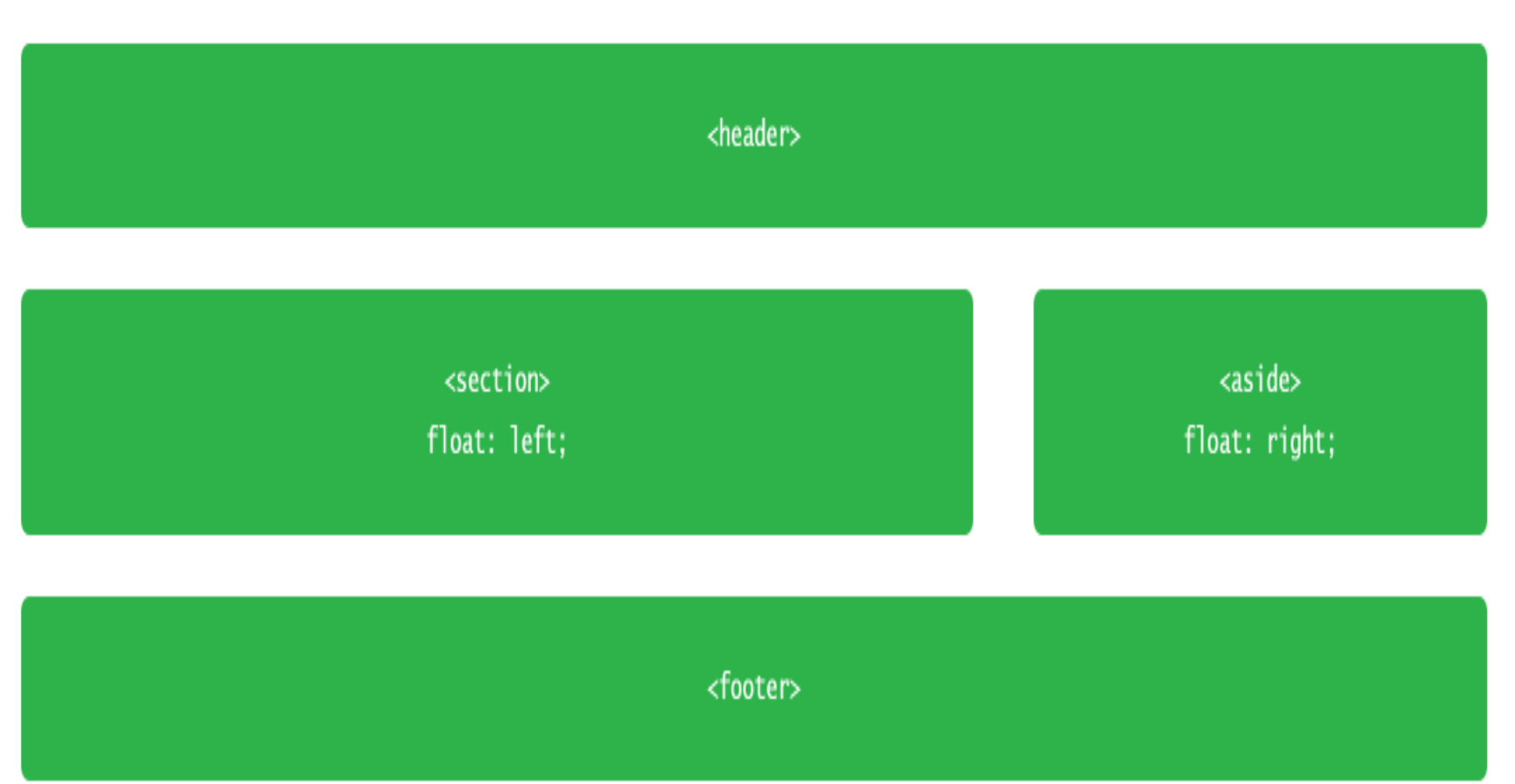
Positioning Content

Vertical Positioning

Positioning With Float

- Width of element defaults to the width of content within it. Fix it by adding a fixed width property.
- Floated elements often touch each other. Fix it by using the margin property.
- Display value may change to block for non block level elements.

Positioning Content



Floats for Positioning

Problems with using Floats

Element after the cleared elements may acquire the remaining space called “gutter”

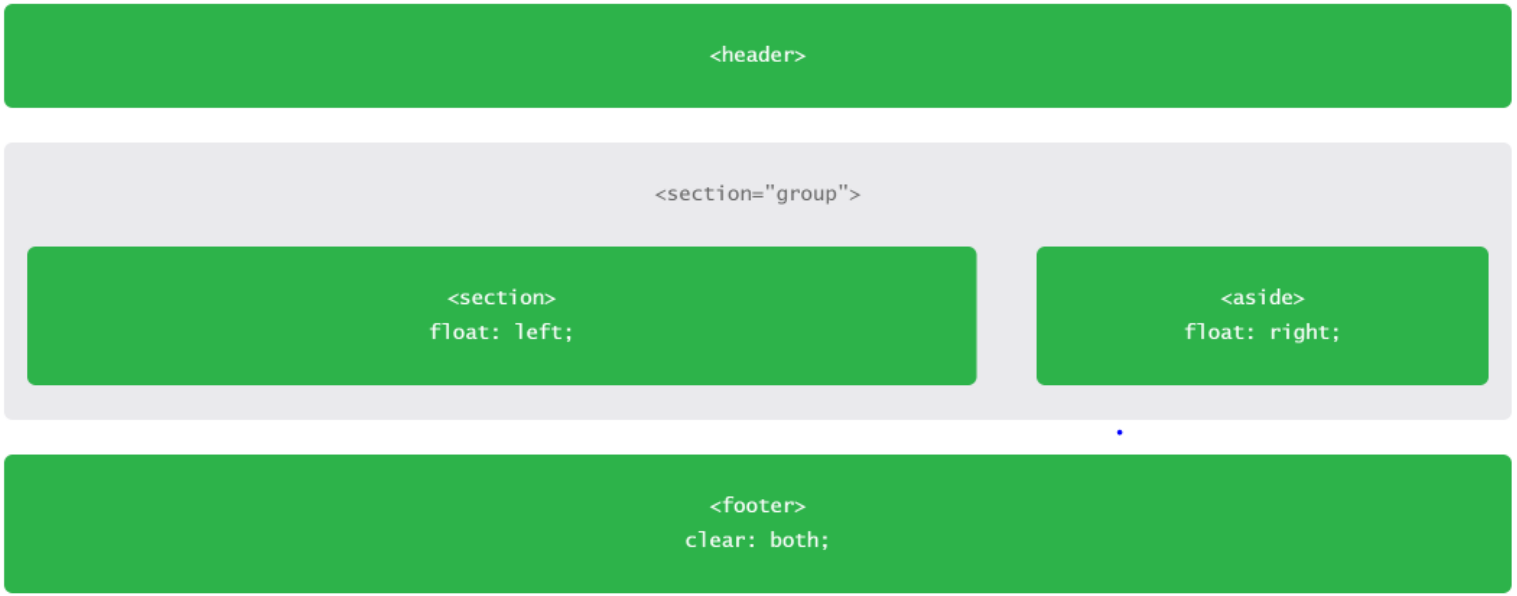
Clearing and Containing Floats

- Proper styles are not rendered properly on elements around floated elements. These can be either elements sitting next to the floated element or parent element of a floated element.
- Unwanted elements consume any space available around floated elements.
- Apply clear property to elements appearing after the floated element, not before, to return the page to its normal flow.
- Contain float by applying clearfix styling to parent element of the floated element.

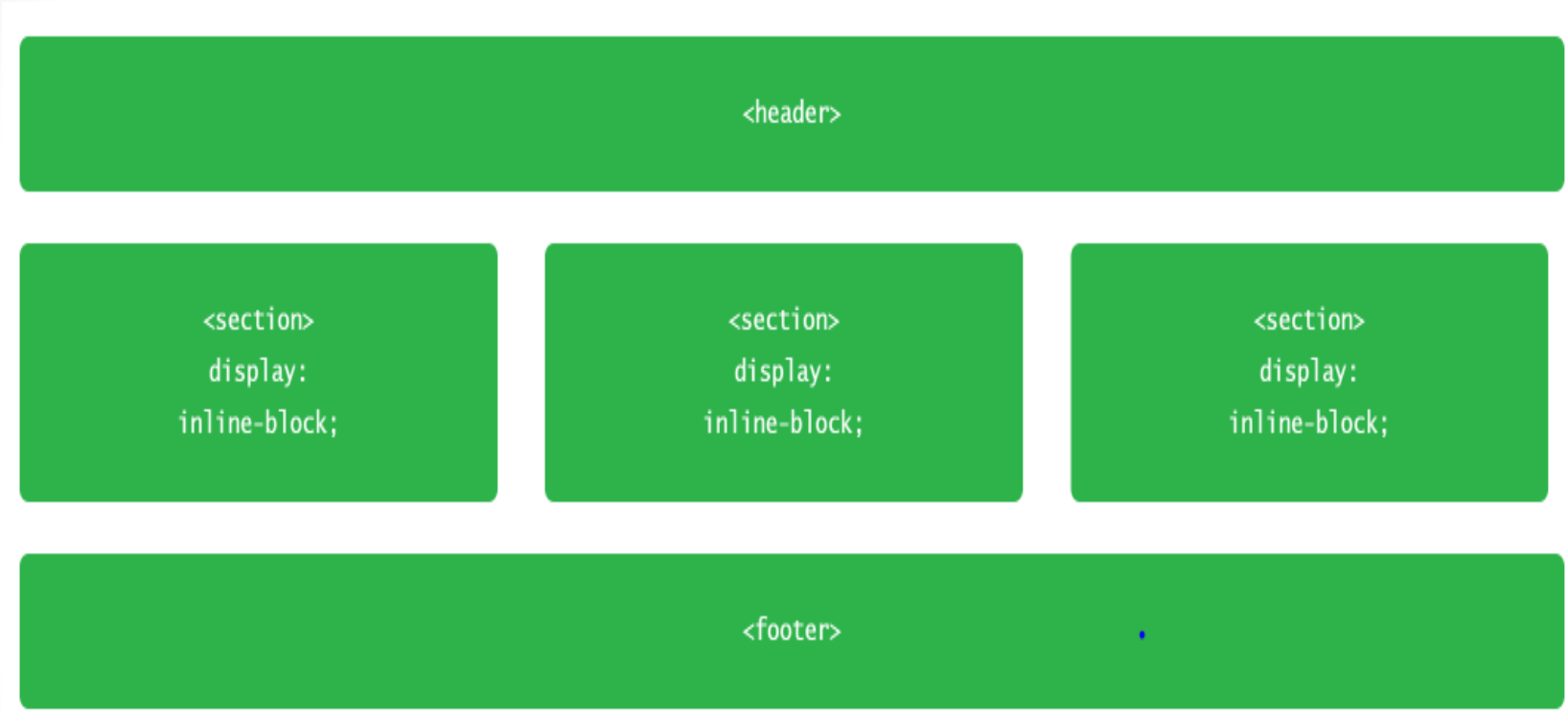
Clearfix Code

```
.group:before,
.group:after {
  content: "";
  display: table;
}
.group:after {
  clear: both;
}
.group {
  clear: both;
  *zoom: 1;
}
```

Clearfix for containing Floats



Positioning with Inline-Block



Remember to take care of whitespaces between inline block elements

Tip

Use Inline-Block to create reusable grid layout for the page.

Use floats to wrap content around an element

Typography – Font based Props

- Color
- Font-family
- Font-size
- Font-style
- Font-weight
- Line-height
- Font

Typography – Text based Props

- Text-align
- Text-transform
- Letter-spacing
- Text-Decoration

Background

- Background-color
- Background-image – background-repeat
- Background-position – by default background images are positioned at left top corner of an element.
- Background

Forms

- Input element

```
<input type="date" name="birthday">
<input type="time" name="game-time">
<input type="email" name="email-address">
<input type="url" name="website">
<input type="number" name="cost">
<input type="tel" name="phone-number">
```

- Textarea

- Radio Buttons

```
<input type="radio" name="day" value="Friday" checked> Friday
<input type="radio" name="day" value="Saturday"> Saturday
<input type="radio" name="day" value="Sunday"> Sunday
```

- Checkboxes
- Drop-down lists

```
<select name="day" multiple>
  <option value="Friday" selected>Friday</option>
  <option value="Saturday">Saturday</option>
  <option value="Sunday">Sunday</option>
</select>
```

Forms continued…

- Submit Input
- Submit Button
- Label
- Fieldset
- Placeholder
- Required