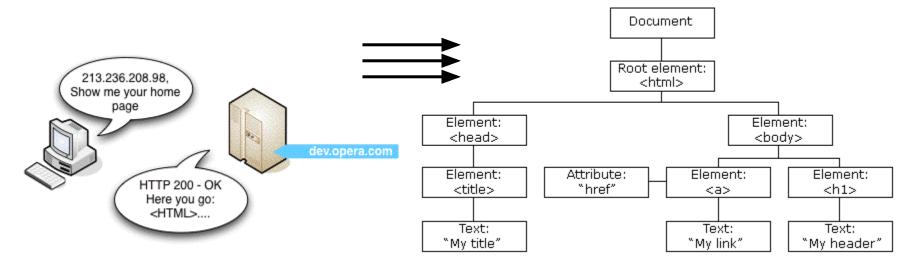# Web Development

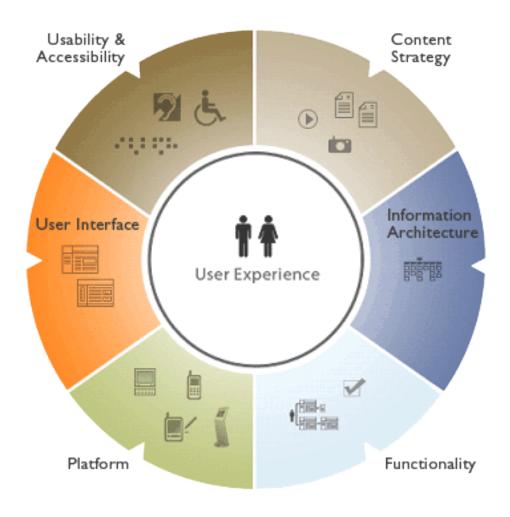## HTML Structure, Layouts & Introduction to CSS

What's a Document?

- It's a piece of hierarchically arranged information

- Something that has a URI and can return representations

- Can be available in many different formats and languages
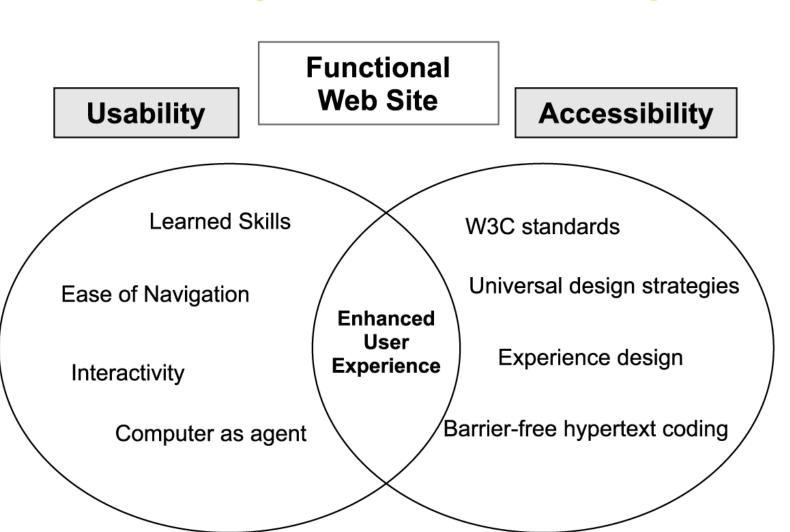
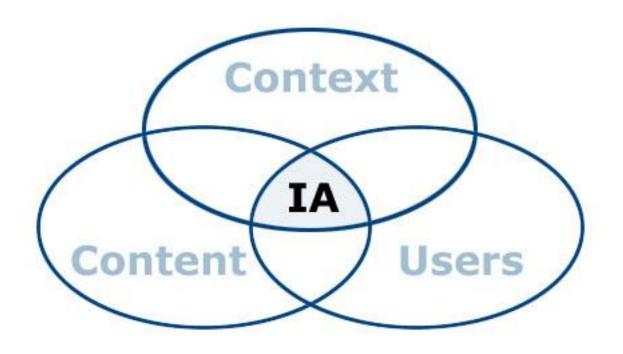- It's rendered by a web browser

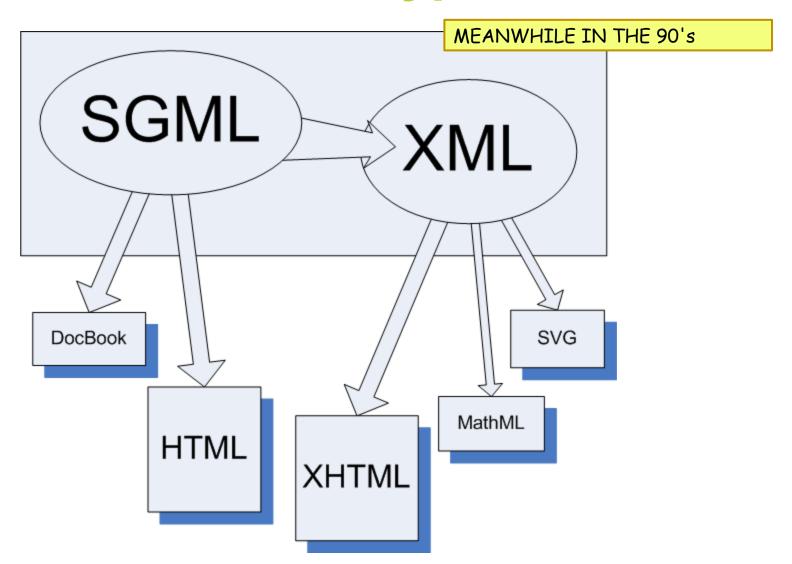# What's a Document for Users?

Usability & Accessibility

Functional Web Site

Usability

Accessibility

Learned Skills

Ease of Navigation

Interactivity

Computer as agent

Enhanced User Experience

W3C standards

Universal design strategies

Experience design

Barrier-free hypertext coding

Information Architecture

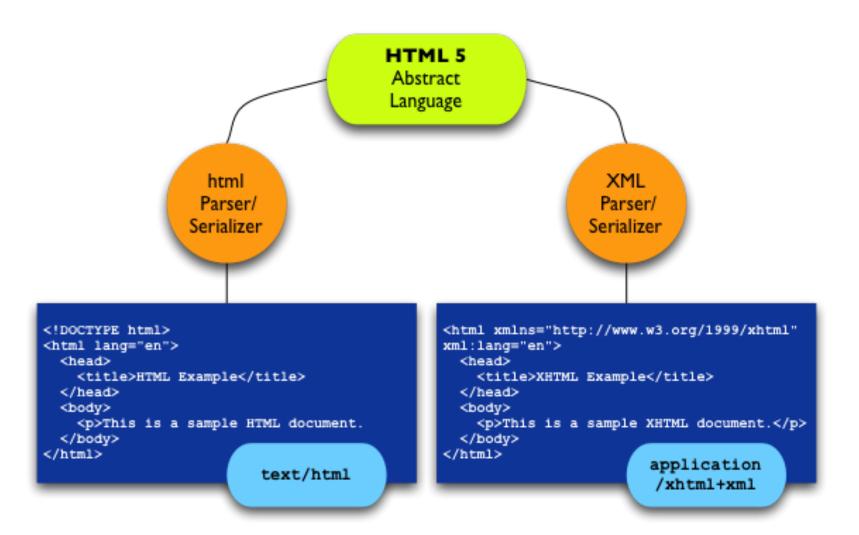# Document Types

Document Types

Document Type Definition (DTD)

```html
<!DOCTYPE html>
<html>
<head>
    <meta charset="UTF-8"/>
    <title>HTML5 Works in IE, Sort of</title>
```
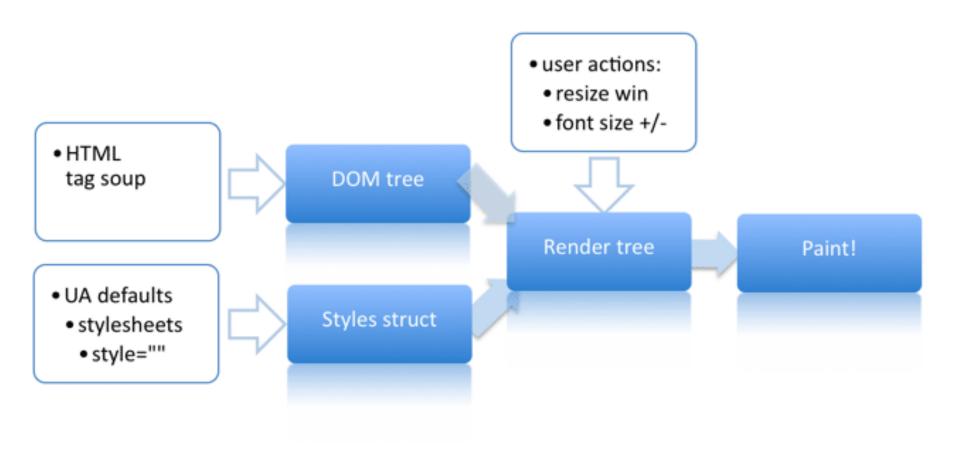
HTML 4.01 STRICT, TRANSITIONAL, FRAMESET

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
```

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitio
"http://www.w3.org/TR/html4/loose.dtd">
```
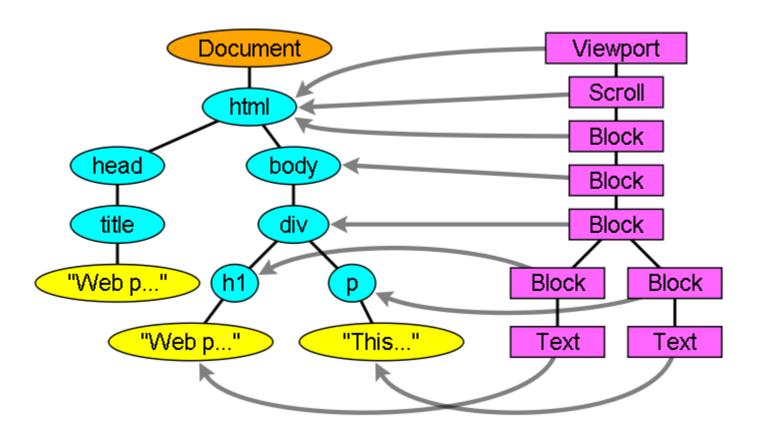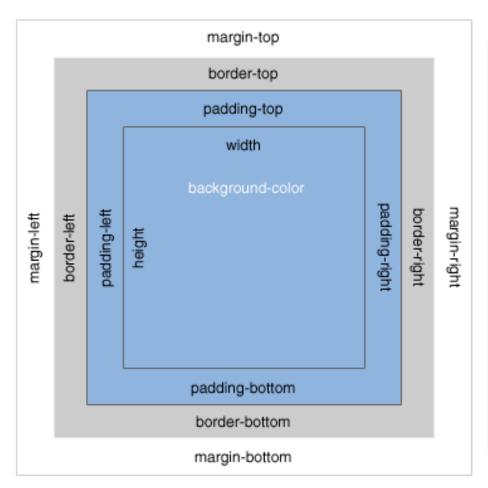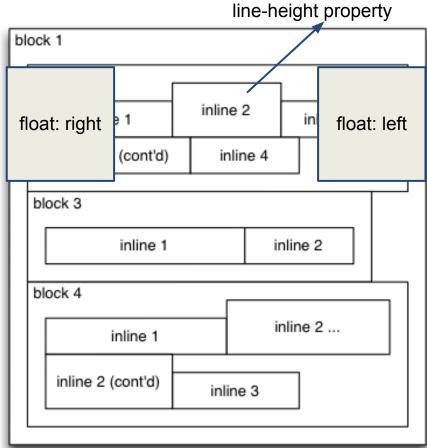
Browser Rendering Process
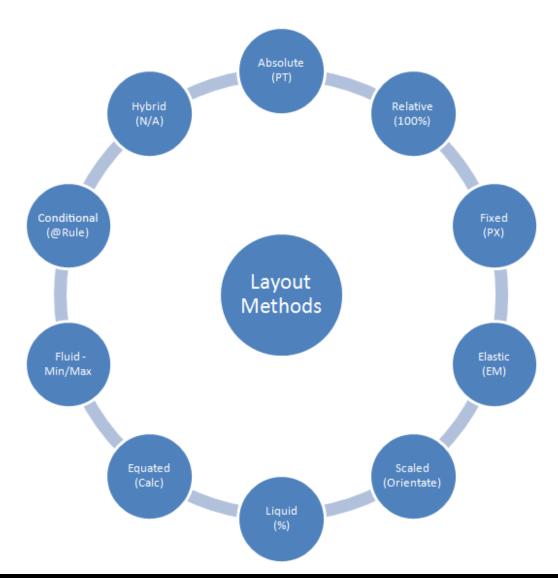
CSS Box Model

CSS Box Model

Float vs Block

Header in normal document flow

Main Content
Floated left

Sidebar
Floated Left
or Right

Footer with clear both applied

Layouts

Layouts

- **Fixed**

  A fixed website layout has a wrapper that is a fixed width, and the components inside it have either percentage widths or fixed widths.
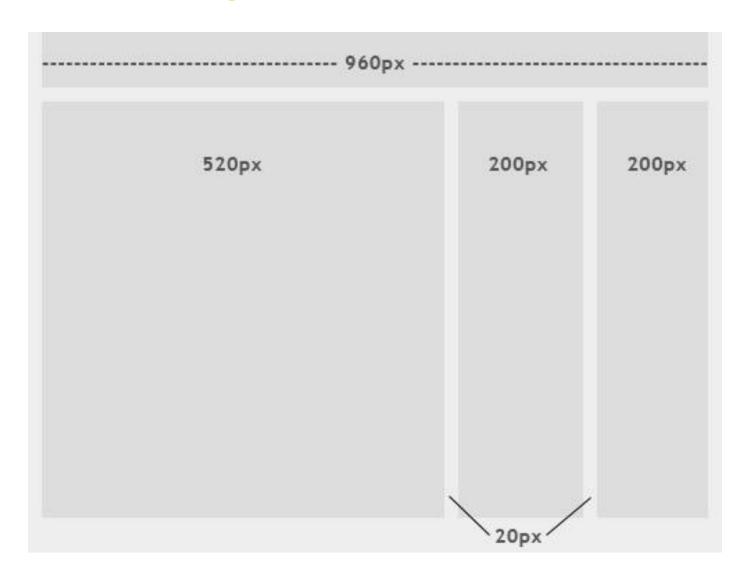
- **Liquid/Fluid**

  The majority of the components inside have percentage widths, and thus adjust to the user's screen resolution

- **Elastic**

  It mixes the two other main layout types and it works by sizing all elements with *em's*.

Layouts: Fixed

Layouts: Fixed

- **Pros**

  - Fixed-width layouts are much easier to use and easier to customize in terms of design.

  - Widths are the same for every browser, so there is less hassle with images, forms, video and other content that are fixed-width.

  - Even if a website is designed to be compatible with the smallest screen resolution, 800×600, the content will still be wide enough at a larger resolution to be easily legible.
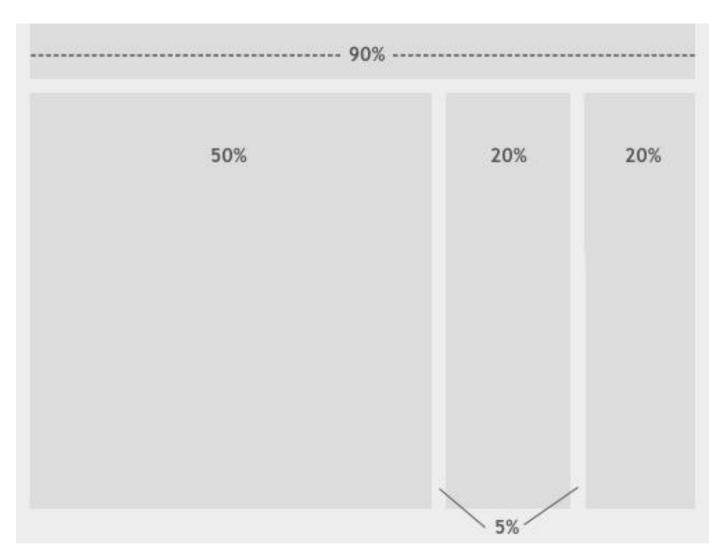
Layouts: Fixed

- **Cons**

  - A fixed-width layout may create excessive white space for users with larger screen resolutions, thus upsetting "divine proportion," the "Rule of Thirds," overall balance and other design principles.

  - Smaller screen resolutions may require a horizontal scroll bar, depending the fixed layout's width.

  - Seamless textures, patterns and image continuation are needed to accommodate those with larger resolutions.

Layouts: Fluid

Layouts: Fluid

- **Pros**

  - Fluid web page design can be more user-friendly, because it adjusts to the user's set up.

  - The amount of extra white space is similar between all browsers and screen resolutions, which can be more visually appealing.

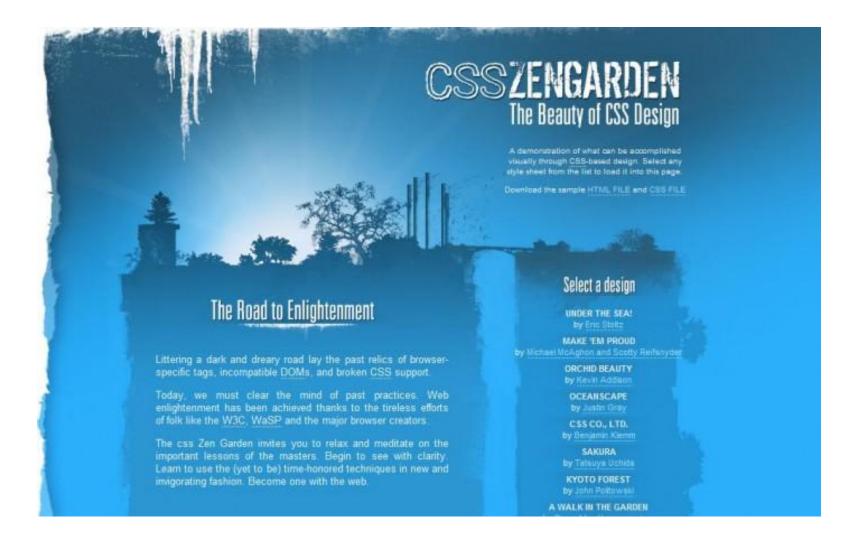 - If designed well, a fluid layout can eliminate horizontal scroll bars in smaller screen resolutions.

Layouts: Fluid

- **Cons**

  - Images, video and other types of content with set widths may need to be set at multiple widths to accommodate different screen resolutions.

  - With incredibly large screen resolutions, a lack of content may create excess white space that can diminish aesthetic appeal.

  - The designer has less control over what the user sees and may overlook problems because the layout looks fine on their specific screen resolution.

Layouts: Elastic

Layouts: Elastic

"A pixel is an unscalable dot on a computer screen, whereas an em is a square of its font size. Because font sizes vary, the em is a relative unit that responds to users' text-size preferences."

- Patrick Griffiths, A List Apart
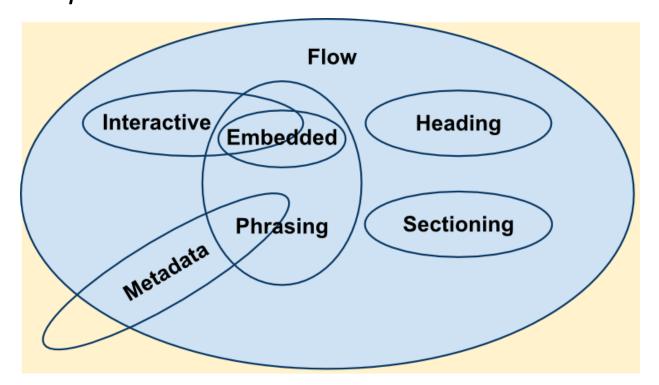
Layouts: Elastic

Layouts: Elastic

Semantic HTML

It's about the use of HTML markup to reinforce the semantics, or meaning, of the information in webpages rather than merely to define its presentation.

Semantic HTML

- **Metadata:** head, title, base, link, meta, style

- **Scripting:** script, noscript

- **Sectioning:** body, h1...6, address, **section, nav, article, aside**

- **Flow:** div, p, br, blockquote, ol, ul, **figure**

- **Phrasing:** a, span, em, strong, small, cite, code, **time**

- **Interactive:** menu, **details, summary**

- **Embedded:** img, iframe, area, map, **video, audio, canvas**

- **Tables:** table, caption, tr, td, th, thead, tbody, tfoot

- *Forms: form, fieldset, legend, label, input, datalist, progress*
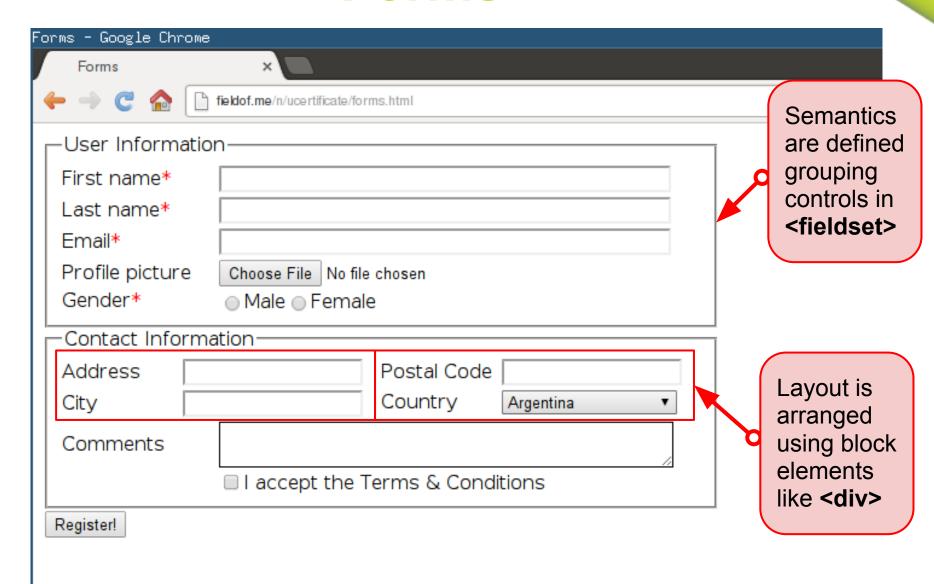
Forms

- **Buttons**
- **Checkboxes**
- **Radio buttons**
- **Menus**
- **Text input**
- **File select**
- **Hidden controls**

Text:

Password:

Select: Please Choose

Select 2: Please Choose

Radio:
- Yes
- No
- Maybe So

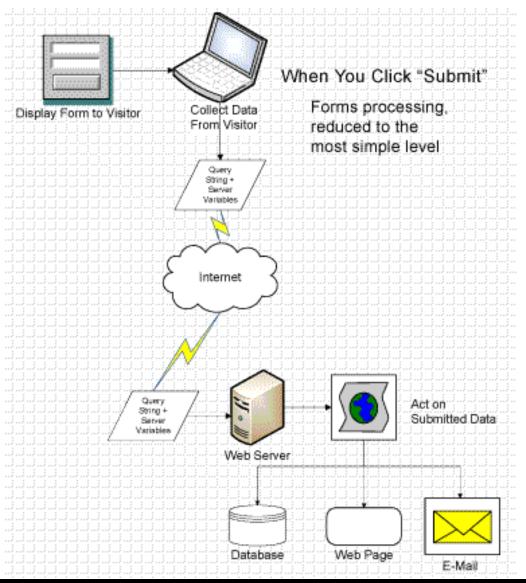Radio 2: Yes No Maybe So

Checkbox:

Checkbox 2:

Buttons: submit reset

Forms

Forms - Google Chrome

fieldof.me/n/ucertificate/forms.html

User Information

First name*

Last name*

Email*

Profile picture Choose File No file chosen

Gender* ○ Male ○ Female

Contact Information

Address   Postal Code

City   Country Argentina ▾

Comments

☐ I accept the Terms & Conditions

Register!

Semantics are defined grouping controls in **<fieldset>**

Layout is arranged using block elements like **<div>**

Forms: Sending data