

# Software Technik

HTWG Konstanz

Anforderungsanalyse

Teil II Prototyping mit HTML und CSS



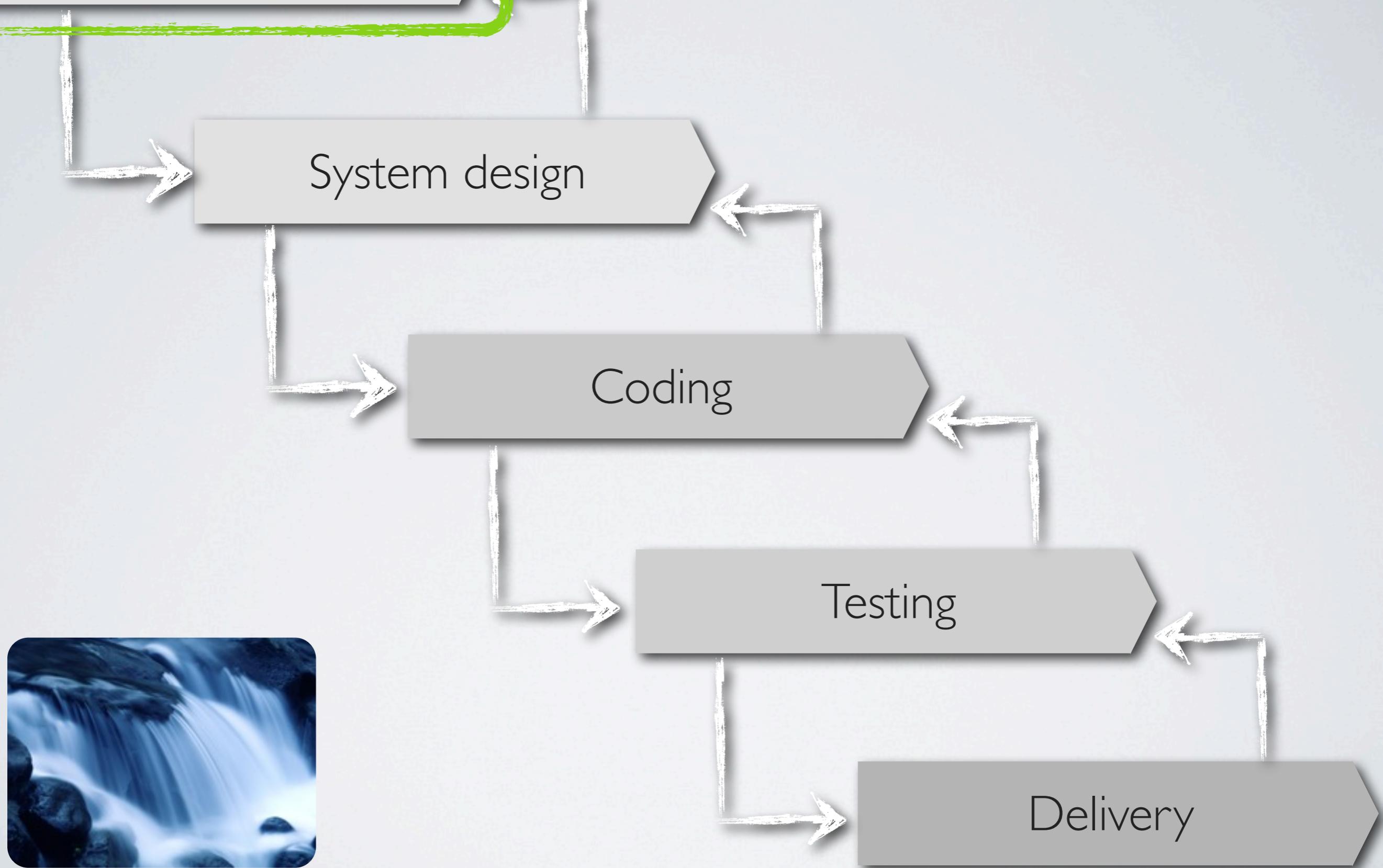
Christian Baranowski

# Prozess Wasserfallmodell



Requirement analysis

# Wasserfallmodell





Funktionale Anforderungen  
erfassen mittels **Prototyping**

# HTML

## HYPertext Markup Language

Einführung in die HTML

# MARKUP LANGUAGE ML

„Eine Auszeichnungssprache dient zur Beschreibung des Inhalts eines Dokumentenformats“

- Quelle Wikipedia

# MARKUP

## MARKUP LANGUAGE ML

Beispiel für ...	HTML	LaTeX	Wikitext
Überschrift	<pre>&lt;h1&gt;   Überschrift &lt;/h1&gt;</pre>	<pre>\section{   Überschrift }</pre>	= Überschrift =
Aufzählung	<pre>&lt;ul&gt;   &lt;li&gt;Punkt 1&lt;/li&gt;   &lt;li&gt;Punkt 2&lt;/li&gt;   &lt;li&gt;Punkt 3&lt;/li&gt; &lt;/ul&gt;</pre>	<pre>\begin{itemize} \item Punkt 1 \item Punkt 2 \item Punkt 3 \end{itemize}</pre>	* Punkt 1 * Punkt 2 * Punkt 3
fetten Text	<pre>&lt;b&gt;fett&lt;/b&gt;</pre>	<pre>\textbf{fett}</pre>	' ' fett ' '

# Auszeichnungssprache

Descriptive Markup  
Language (DML)

- SGML / XML
- HTML
- DocBook
- SVG
- ...

Procedural Markup  
Language (PML)

- LaTeX
- PostScript
- ...

# HTML Historie

- **1967** William Tunnicliffe stellt generic coding – Konzept vor (Trennung Information von Darstellung.) Buch-Designer Stanley Rice veröffentlicht Idee der editorial structure tags.
- **1969** Generalized Markup Language (GML): Konzept eines formal definierten Dokumententyps mit einer verschachtelten Struktur.
- **1986** GML wird zu ISO 8879: Standard Generalized Markup Language (SGML) „Vater“ ist Charles Goldschwab, IBM
- **1989** Tim Berners-Lee (CERN) beschreibt Grundzüge des WWW
- **1992** Tim Berners-Lee stellt ersten Entwurf zu HTML vor
- **1993** Alpha-Version des "Mosaic for X"-Browser (Netscape Browser)
- **1994** MIT und CERN vereinbaren Gründung der W3 Organisation
- **1996** Erste Recommendation der Cascading Style Sheets, level 1
- **1996** Working Draft zur XML, 1998 erste Recommendation
- **2001** W3C verabschiedet den XML Schema-Standard

Dokumente bestehen aus

### **Struktur**

(Kapitel, Abschnitte,  
Aufzählungen ...)

### **Format/Darstellung**

(Schriftarten, -größen, -  
formate, Farben, Positionen...)

### **Inhalt / Daten**

(Text, Bilder, Video ...)

# Grundgerüst einer XHTML-Datei

```
<?xml version="1.0" ?>
<!DOCTYPE html PUBLIC
  "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-
  transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>Beschreibung der Seite</title>
  </head>
  <body>

  </body>
</html>
```

## HTML

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

```
<html lang="en">
```

```
<body>  
  <h1>Überschrift1</h1>  
  <p>Paragraph</p>  
  Zeilenumbruch<br>  
  <ul>  
    <li> Erstes Listen Element  
    <li> Zweites Element  
  </ul>  
</body>
```

## XHTML

```
<!DOCTYPE html PUBLIC "-//W3C//  
DTD XHTML 1.0 Strict//EN"  
  "http://www.w3.org/TR/xhtml1/  
DTD/xhtml1-strict.dtd">
```

```
<html xmlns="http://www.w3.org/  
1999/xhtml" xml:lang="en"  
lang="en">
```

```
<body>  
  <h1>Überschrift1</h1>  
  <p>Paragraph</p>  
  <p>Zeilenumbruch<br /></p>  
  <ul>  
    <li>  
      Erstes Listen Element  
    </li>  
    <li>  
      Zweites Element  
    </li>  
  </ul>  
</body>
```

# DOCTYPE - Document Type Definition

DOCTYPE	Beschreibung
strict	Schließt aus, dass die Darstellung des Dokuments Elemente und Attribute benutzt, die das W3C als Aufgabe von Stylesheets ansieht.
transitional	Kennzeichnet ein Dokument, in dem Elemente und Attribute benutzt werden, die als unerwünscht gelten. (Dokumente für Browser ohne CSS)
frameset	Kennzeichnet ein Dokument, das Frames (nicht iframe) benutzt.

# XHTML DOCTYPE Definition

XHTML 1.0 - Strict, Transitional, Frameset

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Frameset//EN"  
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-frameset.dtd">
```

# HTML Grundelemente

Überschriften <h1><h1>

Textabsätze <p></p>

Zeilenumbruch <br/>

Zitate <blockquote>

Präformatiertem Text <pre></pre>

Block-Elemente <div><div> <span>

Trennlinien <hr/>

# Listen

Aufzählungsliste <ul> ... </ul>

Nummerierte Liste <ol> ... </ol>

Definitionsliste <dl><dt><dd>...</dl>

# Tabellen

einfache Tabellen mit <th> <td>

Tabellen mit Kopf und Fuß <thead><tbody> . . .

# Links und Grafiken

...

# Formulare

...

# Anti Pattern

„Anti-Pattern (deutsch: Antimuster) bezeichnet in der Softwareentwicklung einen häufig anzutreffenden schlechten Lösungsansatz für ein bestimmtes Problem.“ - Wikipedia

# HTML - Anti Pattern

Attribute zur Formatierung

font, font-size

text-align, valign

bgcolor, color

padding, margin

width, height

Frames / iFrames

Tabellen zum Positionieren

# Trennung Darstellung und Inhalt



## Css Zen Garden

*the beauty of css design.*

A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.

[DOWNLOAD THE SAMPLE HTML FILE AND CSS FILE](#)

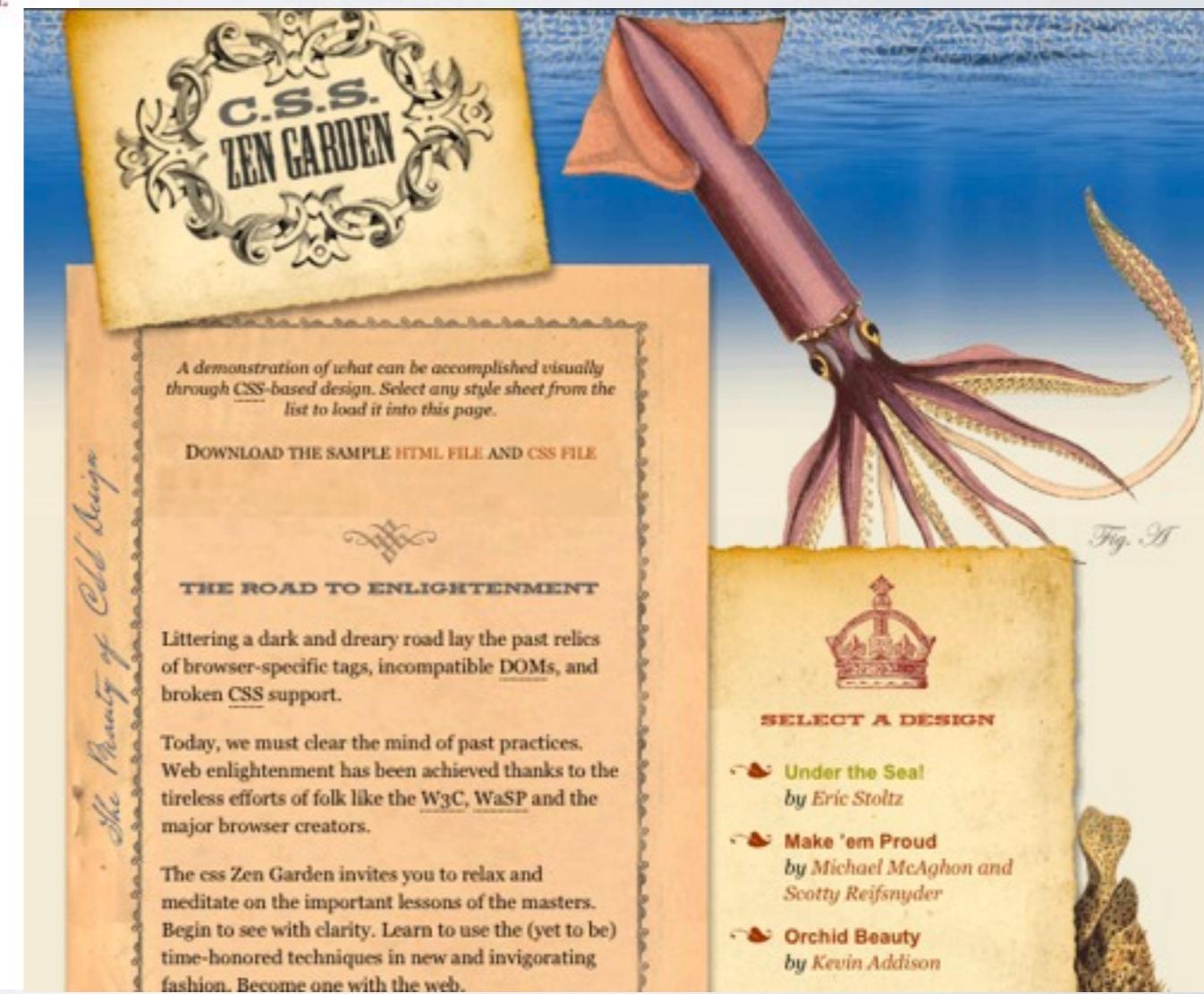
### The Road To Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.

### Orchid Beauty



## C.S.S. ZEN GARDEN

*the beauty of old design*

A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.

[DOWNLOAD THE SAMPLE HTML FILE AND CSS FILE](#)

### THE ROAD TO ENLIGHTENMENT

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### Under the Seal

by Eric Stoltz

### Make 'em Proud

by Michael McAgan and Scotty Reifsnyder

### Orchid Beauty

by Kevin Addison

### Oceanscape

by Justin Gray

### CSS Co., Ltd.

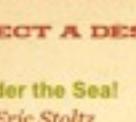
by Benjamin Klemm

### Sakura

by Tatsuya Uchida

### SELECT A DESIGN

 **Under the Seal**  
by Eric Stoltz

 **Make 'em Proud**  
by Michael McAgan and Scotty Reifsnyder

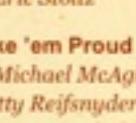
 **Orchid Beauty**  
by Kevin Addison

Fig. 3

# Separation of Concerns (SoC)

„Verschiedene Elemente der Aufgabe sollten möglichst in verschiedenen Elementen der Lösung repräsentiert werden.“

- Wikipedia

# CSS

## CASCADING STYLE SHEETS

Einführung in die Grundlagen von CSS

# Syntax von CSS-Angaben

## Syntax

```
selector {css-element:wertangabe;}
```

## Beispiele

```
h1 {font:arial; color:green;}
```

```
p {font-weight:bold;}
```

# CSS Selektoren

Elemente (p, h1, ul, div, body, table...)

Stylesheet

```
p {font:arial; color:green;}
```

HTML

```
<p>Dieser Text ist grün</p>
```

# CSS Selektoren

## Klassen

### Stylesheet

```
.fett {font-weight:bold;}
```

### HTML

```
<p class=„fett“>Text ist fett </p>
```

# CSS Selektoren

IDs

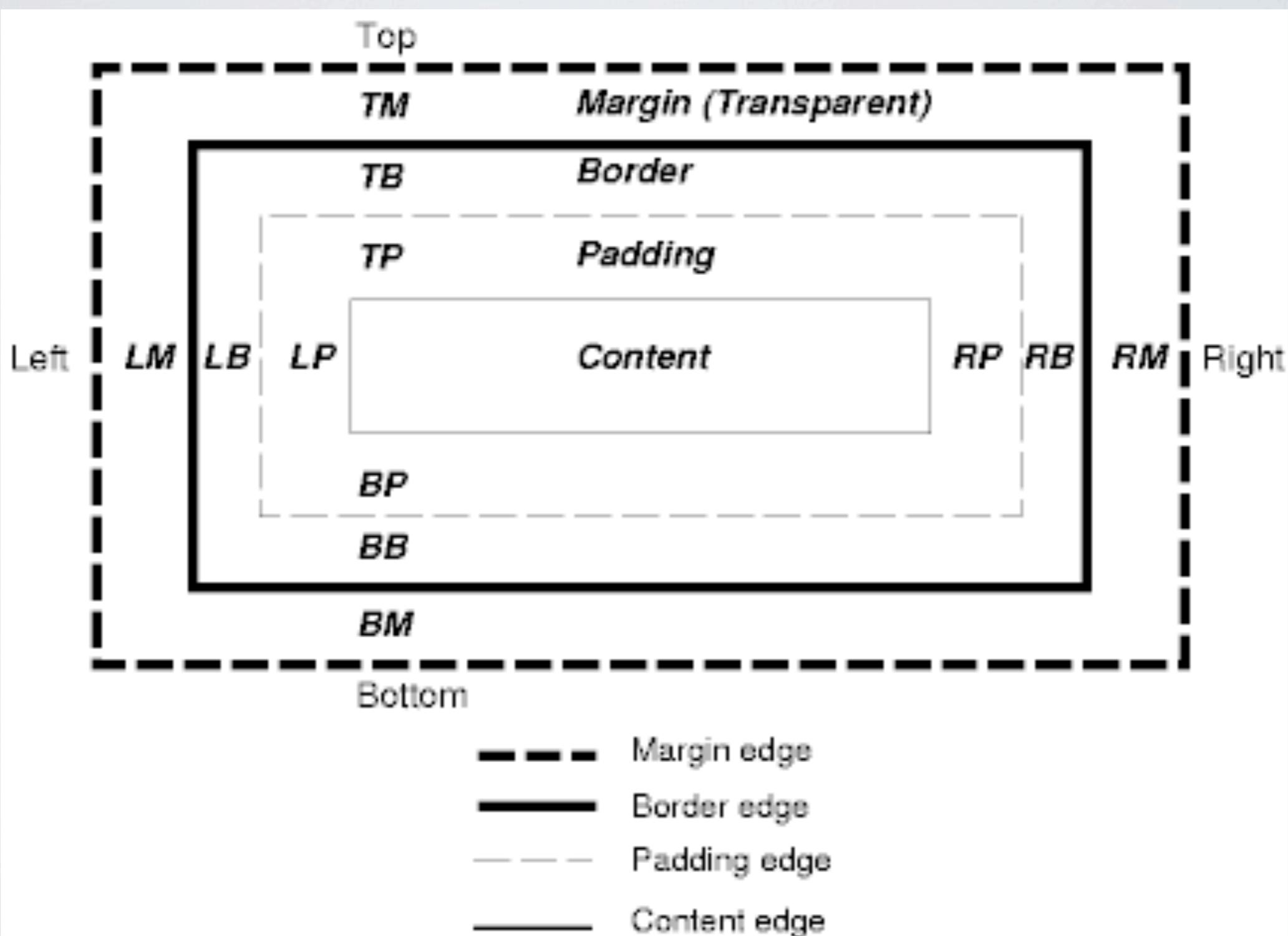
Stylesheet

```
#box1 {top:50px;}
```

HTML

```
<div id=„box1“>Dieser Text wäre  
positioniert (s.u.)</div>
```

# Margin und Padding



# Zusammenfassung HTML CSS

HTML geht auf Tim Berner-Lee (CERN) zurück ('92)

Ist eine (nicht erweiterbare) Markup-Sprache

Beschreibt die Struktur (nicht Semantik) von Dokumenten

Sollte CSS zur Formatierung/Layouten nutzen

Kann mit dem Tutorial von Stefan Münz ([http://  
de.selfhtml.org](http://de.selfhtml.org)) erlernt werden

# HTML UND CSS

## PATTERNS

Einführung in grundlegende HTML und CSS  
Pattern

# Box Models

The screenshot shows a web browser window titled "Column Layout". The address bar displays the URL: "file:///Users/developer/Develop/workspace-st-html/software-technik-html/03%20html%20css%20pattern/column%20layout/index.html". The page content is organized into three main sections:

- Left Column:** Contains a section titled "Beispiel Text" followed by a paragraph of Lorem Ipsum text.
- Right Column:** Contains a section titled "Menü" followed by three links: "Home", "Links", and "Kontakt".
- Bottom Column:** Contains a section titled "Beispiel Text" followed by a paragraph of Lorem Ipsum text.

The browser interface includes standard navigation buttons (back, forward, search) and a title bar with the window name.

## Beispiel Text

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has survived not only five centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in the 1960s with the release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like Aldus PageMaker including versions of Lorem Ipsum.

## Menü

[Home](#)

[Links](#)

[Kontakt](#)

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# Column Layout

## Example: Website Left Nav With Submenus Built From Markup (YUI Library)

Communication



Shopping



Entertainment



Information



**NOTE:** This example demonstrates how to add submenus to a menu using existing markup.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat dolor, id aliquam leo tortor eget odio. Pellentesque orci arcu, eleifend at, iaculis sit amet, posuere eu, lorem. Aliquam erat volutpat. Phasellus vulputate. Vivamus id erat. Nulla facilisi. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Nunc gravida. Ut euismod, tortor eget convallis ullamcorper, arcu odio egestas pede, ut ornare urna elit vitae mauris. Aenean ullamcorper eros a lacus. Curabitur egestas tempus lectus. Donec et lectus et purus dapibus feugiat. Sed sit amet diam. Etiam ipsum leo, facilisis ac, rutrum nec, dignissim quis, tellus. Sed eleifend.

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat dolor, id aliquam leo tortor eget odio. Pellentesque orci arcu, eleifend at, iaculis sit amet, posuere eu, lorem. Aliquam erat volutpat. Phasellus vulputate. Vivamus id erat. Nulla facilisi. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Nunc gravida. Ut euismod, tortor eget convallis ullamcorper, arcu odio egestas pede, ut ornare urna elit vitae mauris. Aenean ullamcorper eros a lacus. Curabitur egestas tempus lectus. Donec et lectus et purus dapibus feugiat. Sed sit amet diam. Etiam ipsum leo, facilisis ac, rutrum nec, dignissim quis, tellus. Sed eleifend.

FOOTER: Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat.

# CSS Grids

The screenshot displays the homepage of the 5by5 website, which uses CSS Grids for its layout. The page features a header with navigation links like HOME, LIVE, BROADCASTS, ABOUT, CONTACT, BLOG, STORE, ADVERTISE, DONATE, ITUNES, and SUBSCRIBE. Below the header, there's a section for BROADCASTS with a "More →" link. The main content area is organized into a grid of 12 columns. It includes sections for "LATEST EPISODES" with episode thumbnails and titles like "THE DEV SHOW #25", "THE RUBY SHOW #134", and "INTERNET SUPERHERO #2". There are also sections for "THE CONVERSATION #32", "THE TALK SHOW #8", and "THE DEV SHOW #24". The footer contains social media links for Twitter, Facebook, YouTube, and RSS.

**BROADCASTS** More →

← →

**LATEST EPISODES** More →

THE DEV SHOW #25  
Legen. Wait for it. Dary

THE RUBY SHOW #134  
MongoDB has it

INTERNET SUPERHERO #2  
Dave takes on tweeting while driving. All of this data can wait until later -- and much of it can wait until never.

THE CONVERSATION #32  
Dan and Christina talk about the new Twitter API -- how mobile is changing web apps

THE TALK SHOW #8  
John Gruber, Dan Benjamin, and special guest Adam Lister discuss the new Twitter API, Apple's fighting over it in Metro, and In this episode you

THE DEV SHOW #24  
Dan flies solo this week while Jason is out fighting or -- in Metro. In this episode you

Twitter Facebook YouTube RSS

# Wireframes - Demo

Kasse

Summe: 5,50 Euro

Basar Nummer  
10001

Betrag  
10,5      1 Euro      0,5 Euro

Beschreibung  
10,5

Hinzu

Nr.	Basar Nummer	Betrag	
2	1001	2,50	<a href="#">Storno</a>
1	1002	2	<a href="#">Storno</a>

Bezahlen      Gesamt Storno

Gewinn: 100 Euro

Umsatz: 500 Euro

↓

Verwalten

Basar Nummer	Nachname	
1001	Baranowski	<a href="#">Bearbeiten</a>
1002	Mustermann	<a href="#">Bearbeiten</a>

[Neuen Verkäufer](#)

↓

New / Edit

Basar Nummer:  
1001

Nachname:  
1001

OK      Abbrechen

# Übungen II

- Erstellen Sie ein HTML / CSS Grundlayout für Ihre Anwendung
- Setzen die Wireframes in HTML um



# Software Technik

HTWG Konstanz

Anforderungsanalyse

Teil III Prototyping mit JavaScript  
22.10.2010 um 14Uhr



Christian Baranowski