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HTML and CSS

Web Programming

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Outline

HTML

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Example of an HTML document

```
<html>
<head>
<title>This is a title</title>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
<body>
<!-- a simple example of a website -->
<h1>This is a heading</h1>
<a href="http://ostfalia.de">Link to Ostfalia</a>
</body>
</html>
```

HTML element, attribute, start tag, end tag, empty element,
comment, markup, link, separation of layout and content

Elements

```html
<html>
<head>
<title>This is a title</title>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
<body>
<!-- a simple example of a website -->
<h1>This is a heading</h1>
<a href="http://ostfalia.de">Link to Ostfalia</a>
</body>
</html>
```

Head and body

```
<html>
<head>
<title>This is a title</title>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
<body>
<!-- a simple example of a website -->
<h1>This is a heading</h1>
<a href="http://ostfalia.de">Link to Ostfalia</a>
</body>
<html>
```

Attributes

```
<html>
<head>
<title>This is a title</title>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
<body>
<!-- a simple example of a website -->
<h1>This is a heading</h1>
<a href="http://ostfalia.de">Link to Ostfalia</a>
</body>
</html>
```

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Empty element

```
<html>
<head>
<title>This is a title</title>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
<body>
<!-- a simple example of a website -->
<h1>This is a heading</h1>
<a href="http://ostfalia.de">Link to Ostfalia</a>
</body>
</html>
```

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Comment

```
<html>
<head>
<title>This is a title</title>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
<body>
<!-- a simple example of a website -->
<h1>This is a heading</h1>
<a href="http://ostfalia.de">Link to Ostfalia</a>
</body>
</html>
```

Link

```
<html>
<head>
<title>This is a title</title>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
<body>
<!-- a simple example of a website -->
<h1>This is a heading</h1>
<a href="http://ostfalia.de">Link to Ostfalia</a>
</body>
</html>
```

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How to open a linked page in a new tab/window:

```
<a href="url" target="_blank">
```

Email link:

```
<a href="mailto:someone@somewhere">
```

An image:

```
<img src="image.jpg" alt="description">
```

Special characters, for example:

```
&uuml;
```

Which of these is not correct HTML?

```
<link type='text/css' rel="stylesheet" href="fn.css" />

<img src="image.jpg" alt="description"></img>

<html><h3>Heading</h3></html>

<a href="image.gif">Picture</a>
```

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History of HTML

Who? When? Where? Why?

History of HTML

- ▶ HTML: Hyper Text Markup Language
- ▶ Tim Berners-Lee at CERN (1989)
- ▶ based on SGML
- ▶ November 1995: HTML 2.0
- ▶ World Wide Web Consortium (W3C): 1994
- ▶ in 1997: HTML 3.2 and HTML 4.0
- ▶ in 2000: XHTML
- ▶ 2008-2011: HTML5

- browser incompatibilities
- how to edit: source code editors or WYSIWYG editors
- testing for standards

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Layout versus content/meaning

- ▶ How is layout represented in other formats: txt, pdf, Word documents, databases, xml, LaTeX?
- ▶ What are advantages/disadvantages of separating layout and content?
- ▶ What are typical layout features?

Advantages

- ▶ separation of layout and content
- ▶ consistency across pages of the same site
- ▶ bandwidth
- ▶ useful for accessibility

Embedding CSS into an HTML file

```
<style type="text/css">
body {
color: red;
background-color: #FFFFAA; }
</style>
```

How to invoke a css file

```
<head>
<link rel="stylesheet" type="text/css" href="fn.css" />
</head>
```

Example of a CSS file

```
a{text-decoration:underline}
a.blank{text-decoration:none; color:green}
h3 {color:#008888; text-align: center; margin-top: 0.3in;
margin-bottom: 0.3in}
hr {color:#002600; background-color:#002600; height: 3px;}
div.bold {color:#008800; font-weight:bold}
body {background-color: #FFFFAA;}
```

Used with:

```
<a class="blank" ... >link</a>
<div class="bold">this is bold</div>
```

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Background

- CSS: Cascading Style Sheets
- Stylesheet language
- Can be applied to any kind of XML document