

# HTML basics

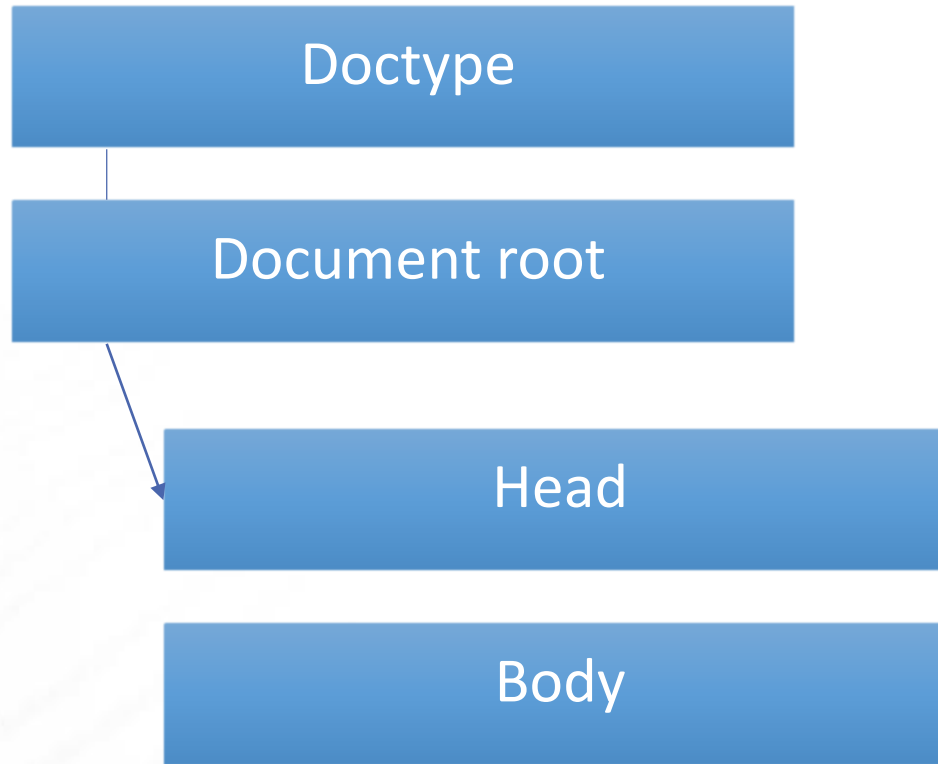
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# HTML history

- ARPANET – The first network to implement TCP/IP
- The World Wide Web – Sir Tim Berners Lee (1989)
- Berners-Lee wrote a proposal in March 1989 for "a large hypertext database with typed links"
- HTML – HyperText Markup Language
- URI/URL – Universal Resource Identifier/Locator
- HTTP – HyperText Transfer Protocol

# Anatomy of a HTML document



- Standard declaration
- HTML root element (XML standard)
- Document metadata
- Document data/content

# <!DOCTYPE>

- Defines the version of the HTML standard we are using
- Inferred from browser if not explicitly named

## HTML 5

```
<!DOCTYPE html>
```

## HTML 4.01 Strict

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

## HTML 4.01 Transitional

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

# <head>

- Container for non-presentational / metadata

**<title>**

- The title of the document

**<meta>**

- includes metadata such as keywords

**<script>**

- includes script for interactive pages

**<style>**

- define styles to apply to body elements

**<link>**

- Directive indicating related documents

**<base>**

- defines the base address for all relative links on the page

# <body>

- Container for presentational data / content

Headings

Text

Lists

Links

Tables

Images / objects

# Headings <h1>...<h6>

- Pretty important semantically – search engines love them (especially h1)
- Should follow a clear, logical structure.
- Block vs inline:
  - Block - can contain block or inline elements - used for grouping - h1, div, p
  - Inline - can only contain inline - span, b, i, a, etc.
- Note: browsers swallow anything, ignoring whitespaces, closing tags etc.
- <http://validator.w3.org/>



# Text (1/2)

- Ways to keep whitespace/breaks:
  - `<pre>`, `<br/>`, `<hr/>`,
  - Character entities - `$nbsp;`;
- Block vs inline:
  - Block - can contain block or inline elements - used for grouping - `<h1>`, `<div>`, `<p>`
  - Inline - can only contain inline - `<span>`, `<a>`, `<b>`, `<i>`, (`strong` and `em` preferred), etc.
- Note: browsers swallow anything, ignoring whitespaces, closing tags etc.
- <http://validator.w3.org/>

## BLOCK:



## INLINE:





## Text (2/2)

- `<sup>`, `<sub>` - superscript/subscript
- `<abbr>`, `<acronym>` - abbreviation, title property is being used
- `<em>`, `<strong>` and `<b>`, `<i>` (deprecated)
- `<code>` - for displaying code
- `<cite>` - used to wrap the name of the person you are citing
- `<blockquote>`, `<q>` - block/inline quotes with link to the source, using cite property

# Navigation and sections – Semantic web

- The Semantic Web is an idea that the Web as a whole can be made more intelligent and perhaps even intuitive about how to serve a user's needs.
- Thus, there are a bunch of tags to use to show intent, instead of <div>:
  - <nav>
  - <header>
  - <footer>
  - <article>
  - <section>
- These are only the start, the Semantic web is so much more

# Lists

- `<ul>`, `<ol>`
- Attribute type - circle, disc, square for ul, and type=A,a etc. for ol
- This way of styling is deprecated - use CSS! - list-style-type
- Another type of lists: definition lists - `<dl>`, `<dt>` definition term, `<dd>` - definition definition - used for glossary, or vocabulary for example

# Links - Anchor

- `<a>` tag
- Important attributes: `href` and `target`
- Target options: `_self` (default), `_blank`, deprecated: `_parent`, `_top`
- Absolute and relative routes
- `#` to link to ids/names in document. This can use wrapping the target with `<a name>` to be more explicit.
- Base path (`<base>` in `<head>`) impacts relative links

# Tables

## Caption

- Table title

## Header

- Single row (usually) for column headers

## Body

- Multiple rows presenting data

## Footer

- Single row (usually) for totals, summary, etc.

List Elements	
List Type	Tags
Unordered list	<ul>, <li>
Ordered list	<ol>, <li>
Definition list	<dl>, <dt>, <dd>
Lists can be styled in many different ways	

```
<table>
  <caption>List Elements</caption>
  <thead>
    <tr>
      <th>List Type</th>
      <th>Tags</th>
    </tr>
  </thead>
  <tfoot>
    <tr><td>Lists can ... </td></tr>
  </tfoot>
  <tbody>... </tbody>
</table>
```

# Images

- `<img>` tag
- Important attributes: `src` and `alt`
- `alt` attribute is being used when no image is loaded
- Absolute and relative routes (same as anchors)
- Base path (`<base>` in `<head>`) impacts relative links
- `onerror` event – trigger js logic when image is not loaded

# Forms

- `<label>`
- `<input>` type: text, email, number, checkbox, radio, date, time etc.
- Attrs: maxlength, pattern, max, min, placeholder, novalidate, formnovalidate
- `<fieldset>` - use instead of div in a form (semantic html!)
- `<legend>` - descriptive of a fieldset
- `<select>` and `<options>` - value and display



# Other HTML5 standards

- Drag and Drop API
- Web Storage - Local and Session
- Geolocation
- Canvas and drawing
- Web workers
- Web sockets
- SVG
- Web Components - reusable user interface widgets that are created using open Web technology. They are part of the browser, and so they do not need external libraries
- ARIA - Accessible Rich Internet Applications defines ways to make Web content and Web applications more accessible to people with disabilities.
- WebRTC - a free, open project that enables web browsers with Real-Time Communications (RTC) capabilities via simple JavaScript APIs

# Pitanja?

## Kontakt

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