KAZAKH KBTU BRITISH
TECHNICAL
UNIVERSITY

# WEB DEVELOPMENT

Lesson 2

# Web development roadmap

https://github.com/kamranahmedse/developer-roadmap http://info.cern.ch/

World Wide Web — Tim Berners-Lee (1989)

# <**H**yper**t**ext **M**arkup **L**anguage>

http://htmlbook.ru/html

# HTML Elements

- Headings
- Paragraphs
- Links
- Images
- Buttons
- Lists
- Tables
- …

http://htmlbook.ru/html

# Element attributes

- id
- class
- style
- data-
- title

http://htmlbook.ru/

# HTML Comments

```
<!-- This is a comment -->

<p>This is a paragraph.</p>

<!-- Remember to add more information here -->
```

http://htmlbook.ru/

# HTML Forms

- Text input
- Radio button
- Checkbox
- Submit
- Select option
- Textarea
- Button
- Label

# HTML Form Input Types

- Text
- Password
- Submit
- Reset
- Radio
- Checkbox
- Button

# HTML Form Input Types

- Text
- Password
- Submit
- Reset
- Radio
- Checkbox
- Button
- File

## HTML5 Input Types

- color
- date
- datetime-local
- email
- month
- number
- range
- search
- tel
- time
- url
- week

# HTML Form Attributes

- value
- readonly
- disabled
- size

## HTML5 Attributes

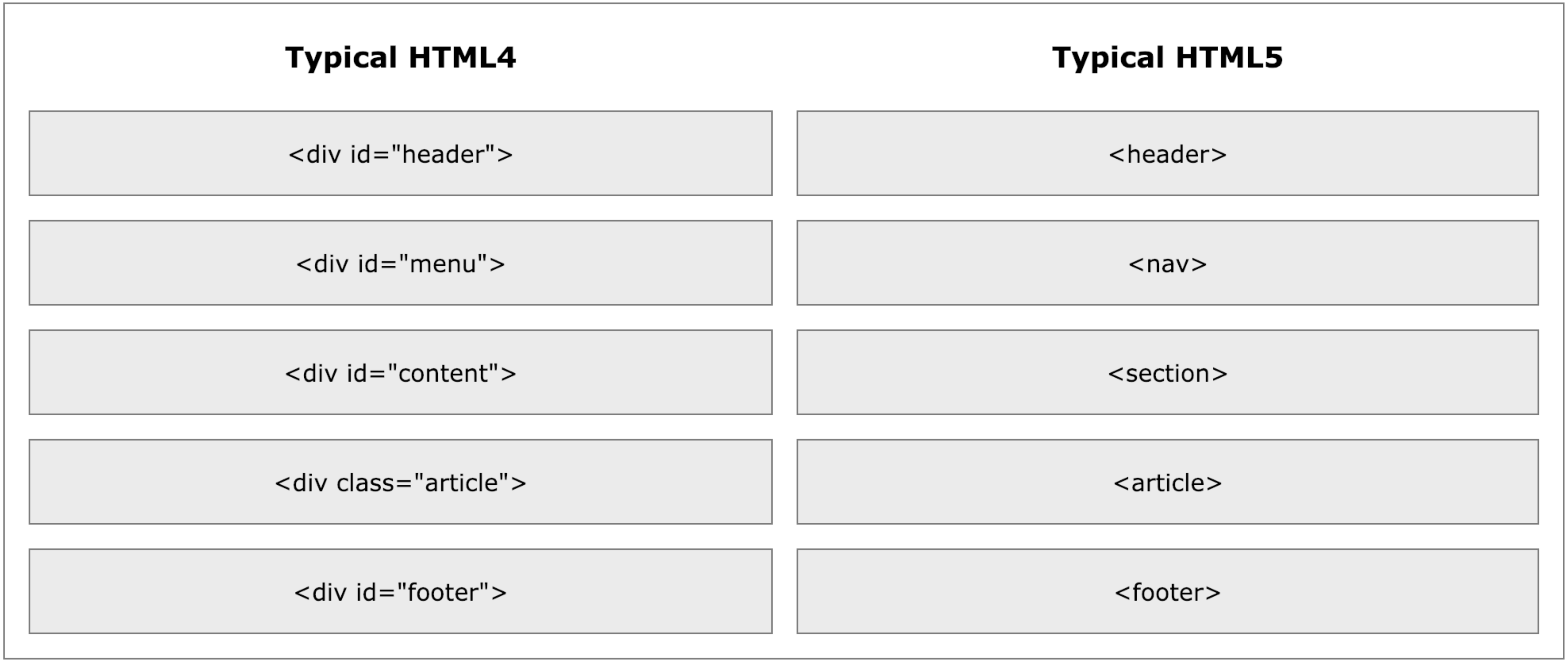
- autocomplete
- autofocus
- height and width
- min and max
- multiple
- pattern (regexp)
- placeholder
- required

# HTML5

- Semantic HTML — header, footer, article, section, nav
- Form attributes — date, number, range
- Graphical elements — svg, canvas
- Multimedia elements — audio, video

https://www.w3schools.com/html/html5_new_elements.asp

Style guide: https://www.w3schools.com/html/html5_syntax.asp



| Typical HTML4 | Typical HTML5 |
|---|---|
| <div id="header"> | <header> |
| <div id="menu"> | <nav> |
| <div id="content"> | <section> |
| <div class="article"> | <article> |
| <div id="footer"> | <footer> |

# **C**ascading **S**tyle **S**heets

http://htmlbook.ru/css

https://html5book.ru/css-css3

# CSS can be added:

1. Inline
2. Internal
3. External

http://htmlbook.ru/css

https://html5book.ru/css-css3

# CSS can be added:

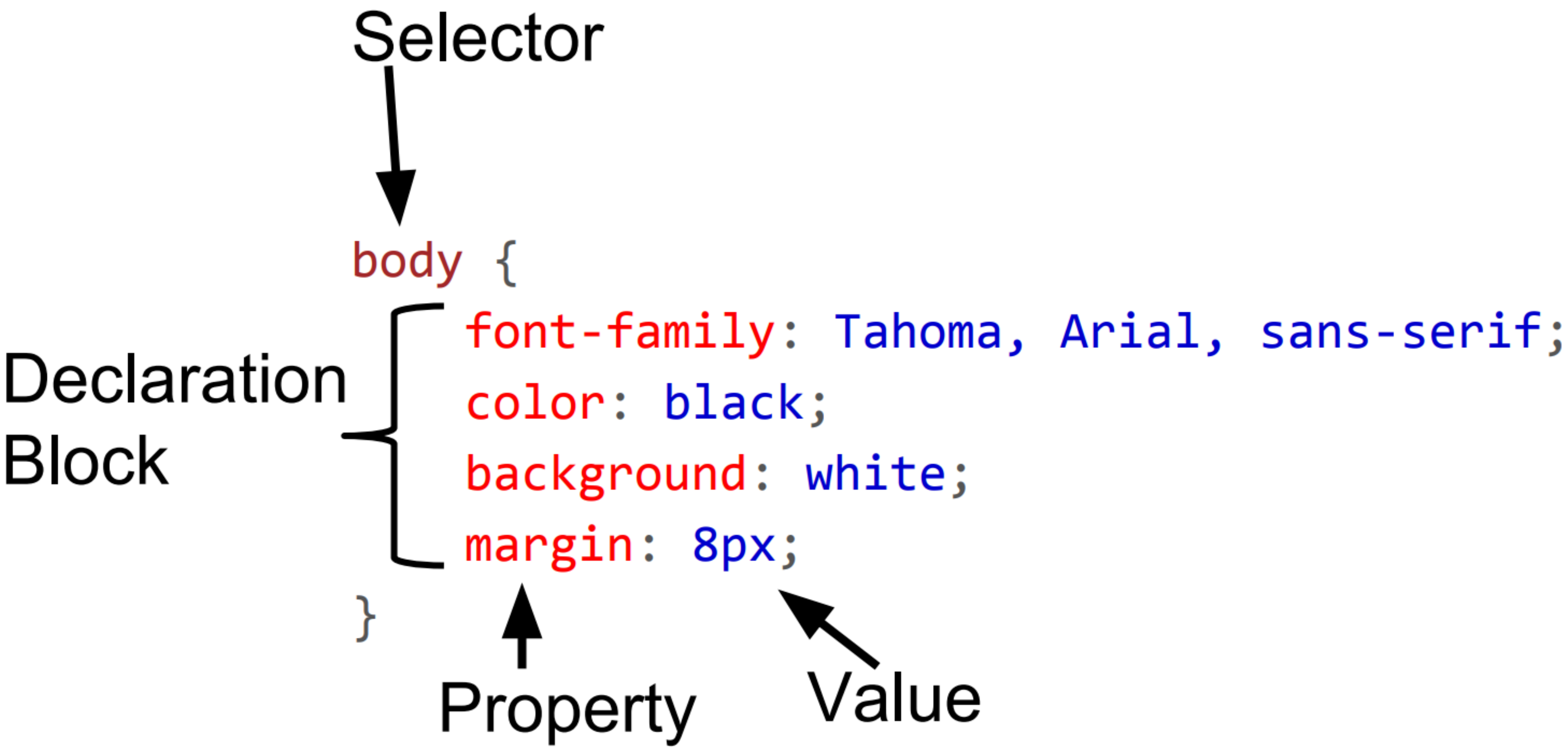
- font
- border
- padding
- margin
- with *id / class*

http://htmlbook.ru/css

https://html5book.ru/css-css3

# DRY principle: Don't Repeat Yourself

# Style sheet contain one or more CSS Rules



Selector

```
body {
  font-family: Tahoma, Arial, sans-serif;
  color: black;
  background: white;
  margin: 8px;
}
```

Declaration Block

Property

Value

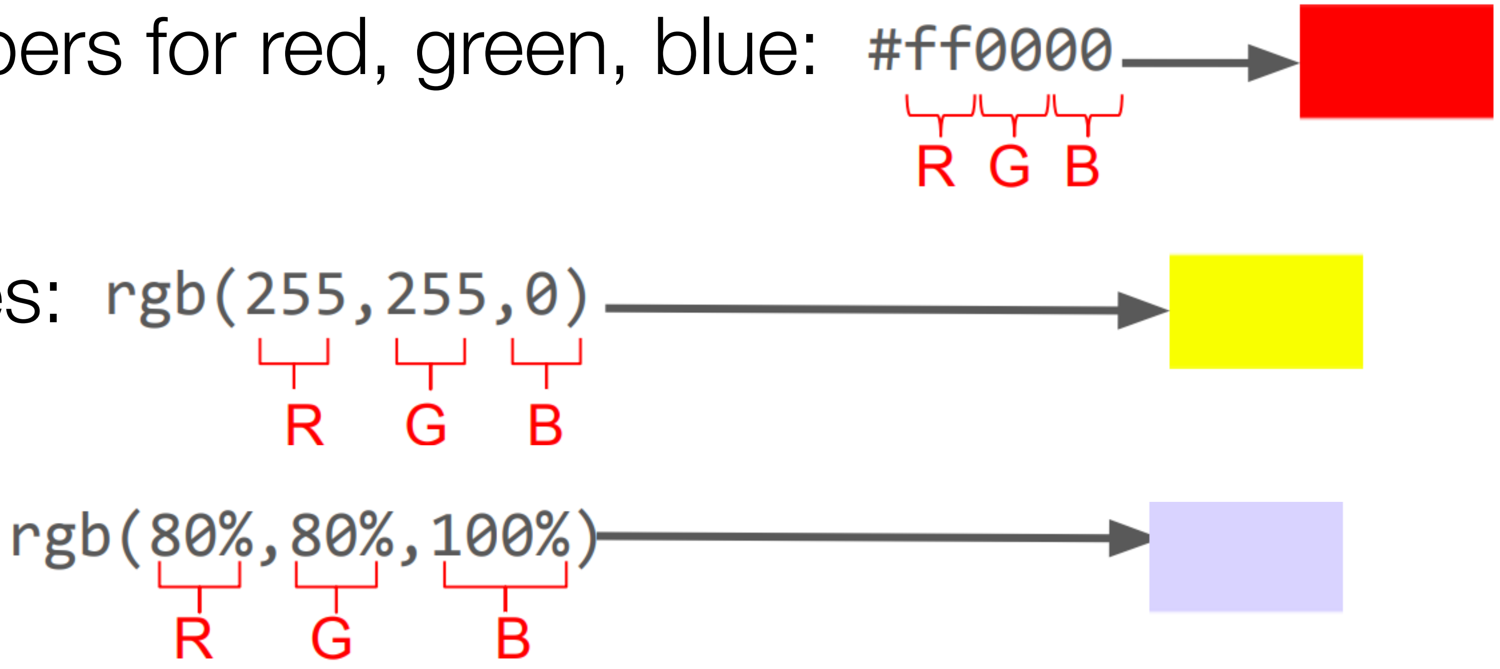
| CSS Selector | CSS | HTML |
|---|---|---|
| Tag name | `h1 {`<br>`  color: red;`<br>`}` | `<h1>Today’s Specials</h1>` |
| Class attribute | `.large {`<br>`  font-size: 16pt;`<br>`}` | `<p class="large">...` |
| Tag and Class | `p.large {...}` | `<p class="large">...` |
| Element id | `#p20 {`<br>`  font-weight: bold;`<br>`}` | `<p id="p20">...` |

# CSS Pseudo Selectors

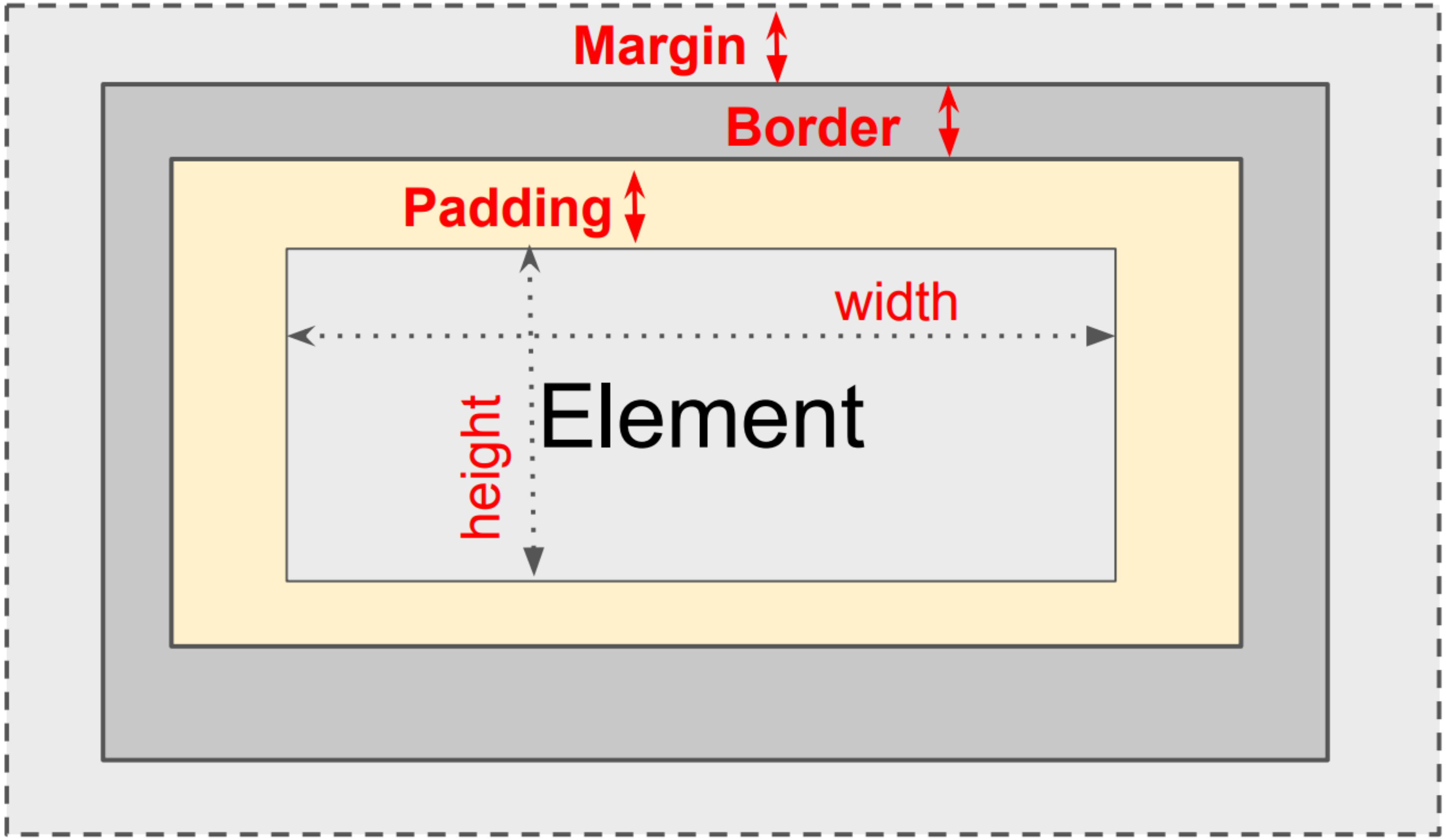
```
p:hover, a:hover {
  background-color: yellow;
}

a:visited {
  color: green;
}

a:link {
  color: blue;
}
```

# Colors

- Predefined names: **`red, blue, green, white, etc.`**
- 8-bit hexadecimal numbers for red, green, blue: `#ff0000`
- 0-255 decimal intensities: `rgb(255,255,0)`
- Percentage intensities: `rgb(80%,80%,100%)`



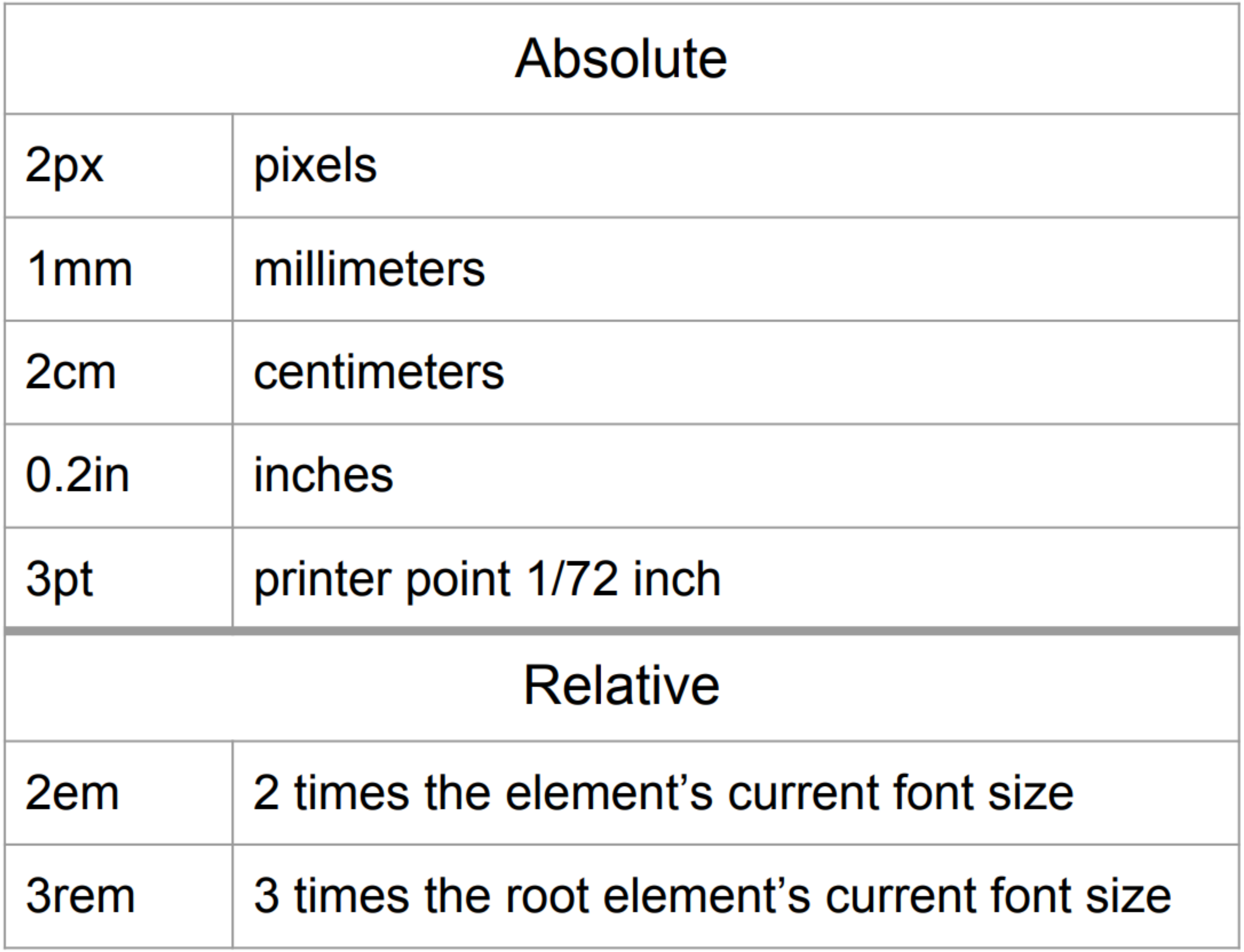
# CSS Box Model



**Total element width =**
width +
left padding +
right padding +
left border +
right border +
left margin +
right margin

Margin & Padding
Transparent

# CSS distance units



| Absolute | |
|---|---|
| 2px | pixels |
| 1mm | millimeters |
| 2cm | centimeters |
| 0.2in | inches |
| 3pt | printer point 1/72 inch |
| Relative | |
| 2em | 2 times the element’s current font size |
| 3rem | 3 times the root element’s current font size |

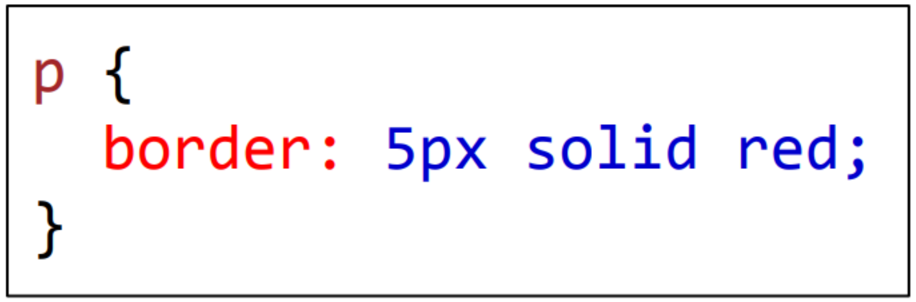
# Size Properties - Element, pad, margin, border

width - Override element defaults
height

padding-top
padding-right
padding-bottom
padding-left

margin-top
margin-right
margin-bottom
margin-left

border-bottom-color
border-bottom-style
border-bottom-width
border-left-color
border-left-style
border-left-width
border-right-color
border-right-style
border-right-width
etc.



```
p {
  border: 5px solid red;
}
```

# `position` property

`position: static;` (default) - Position in document flow

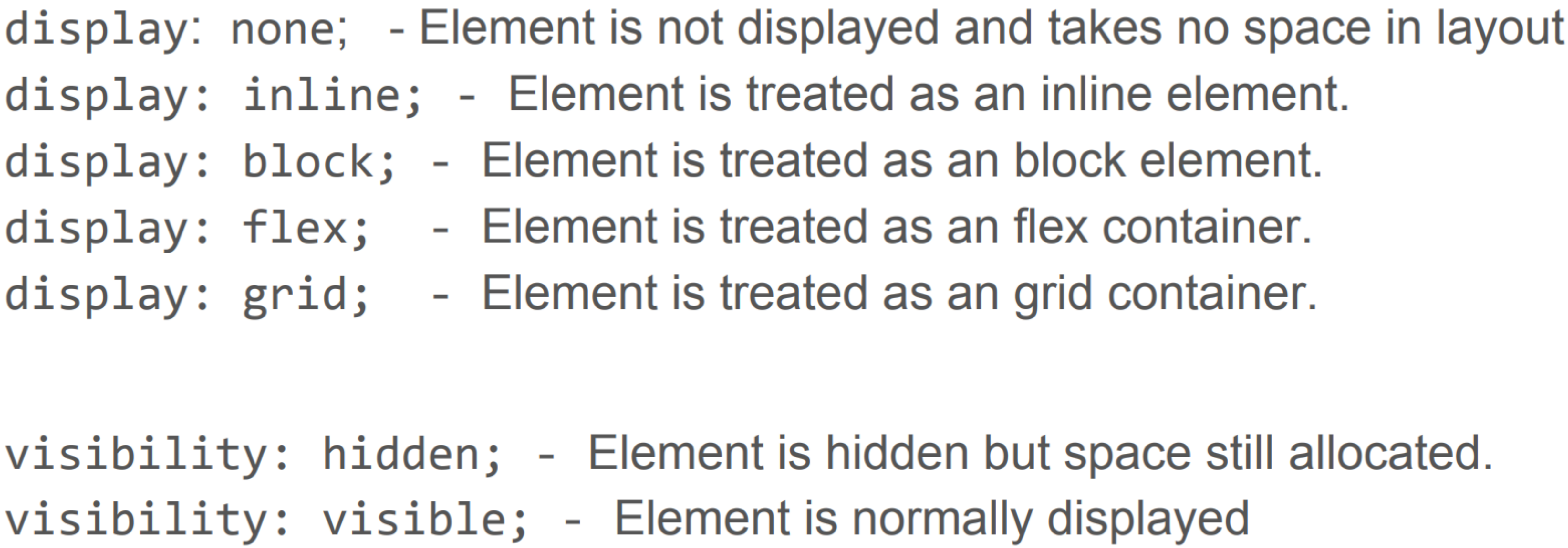
`position: relative;` Position relative to default position via `top`, `right`, `bottom`, and `left` properties

`position: fixed;` Position to a fixed location on the screen via `top`, `right`, `bottom`, and `left` properties

`position: absolute;` Position relative to ancestor `absolute` element via `top`, `right`, `bottom`, and `left` properties

Fixed position (0,0) is top left corner

# Element visibility control properties



display: none; - Element is not displayed and takes no space in layout

display: inline; - Element is treated as an inline element.

display: block; - Element is treated as an block element.

display: flex; - Element is treated as an flex container.

display: grid; - Element is treated as an grid container.

visibility: hidden; - Element is hidden but space still allocated.

visibility: visible; - Element is normally displayed

# Questions?