

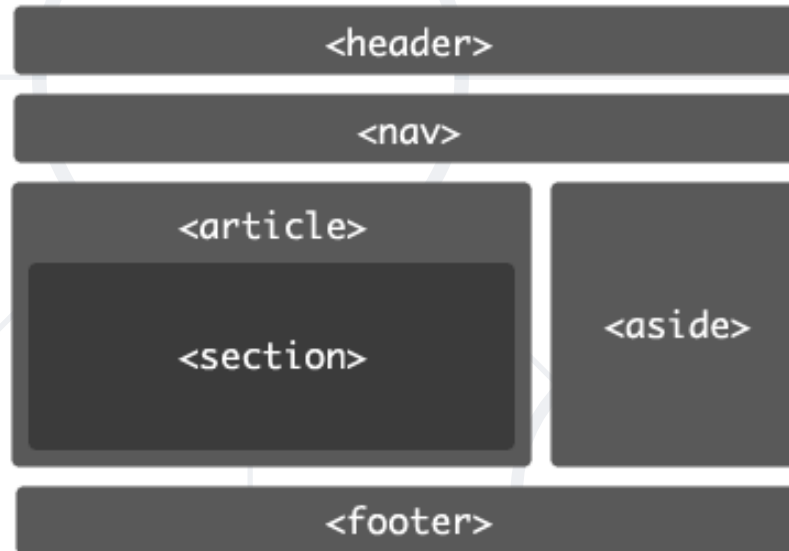
HTML STRUCTURE

Semantic Tags, Document Structure

HTML



SoftUni Team
Technical Trainers



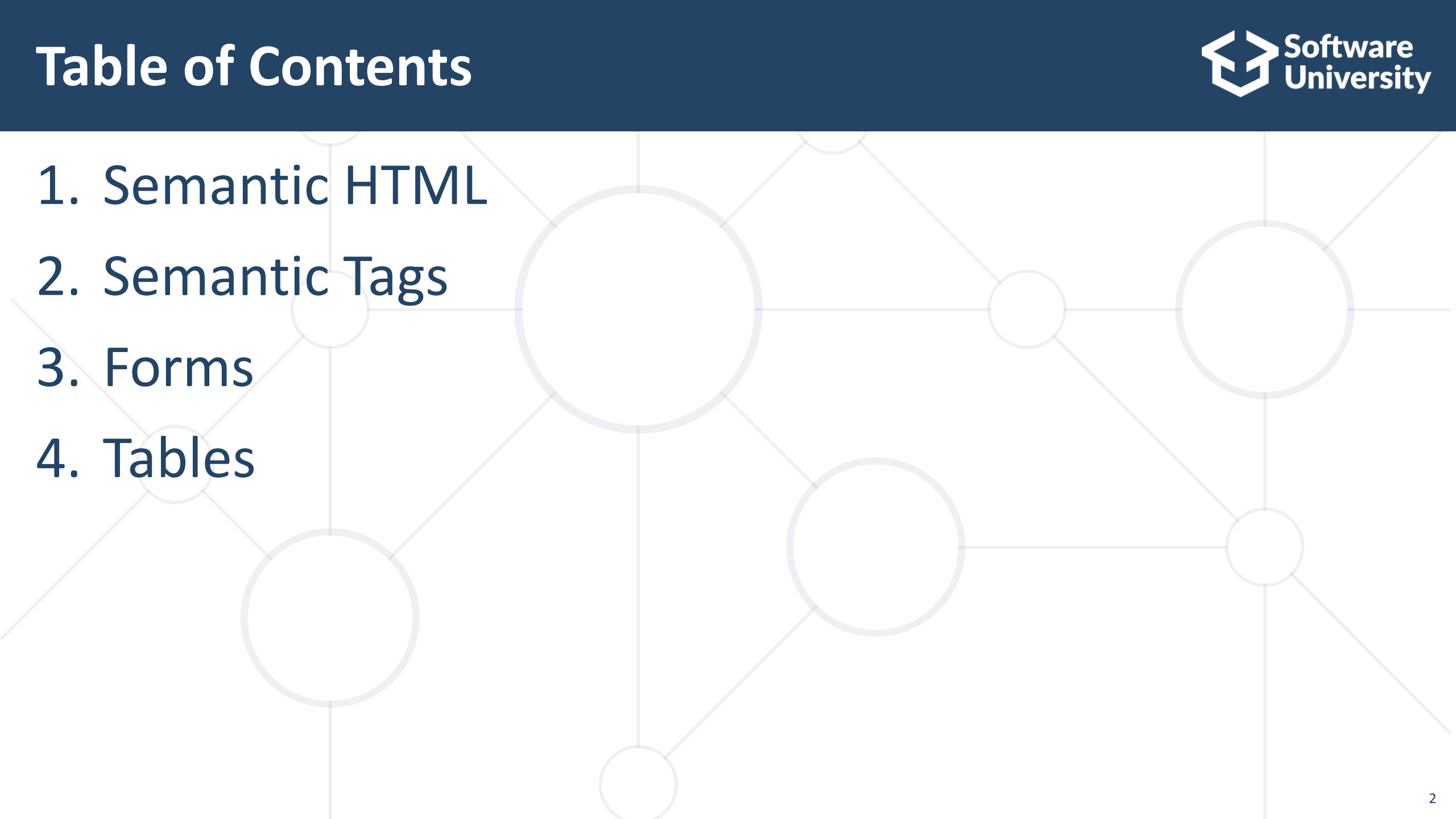
SoftUni



Software University

<https://softuni.bg>

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sli.do

#html-css



Semantic HTML

HTML Markup to Reinforce the Semantics

What is Semantic HTML?

- Semantic element clearly describes its meaning to both the **browser** and the **developer**



```
<p>Some random text...</p>
```

Indicates that the enclosed text is a **paragraph**

- This is both semantic and presentational
 - People know what paragraphs are and browsers know how to display them

```
<footer>© 2021 by ABC</footer>
```

This holds a **footer**

The Importance of Semantic HTML

- Provides an **additional information** about that document, which **aids in communication**
- Semantic tags make it **clear** to the **browser** what the **meaning** of a page and its **content** is
 - This clarity is also **communicated** with search engines





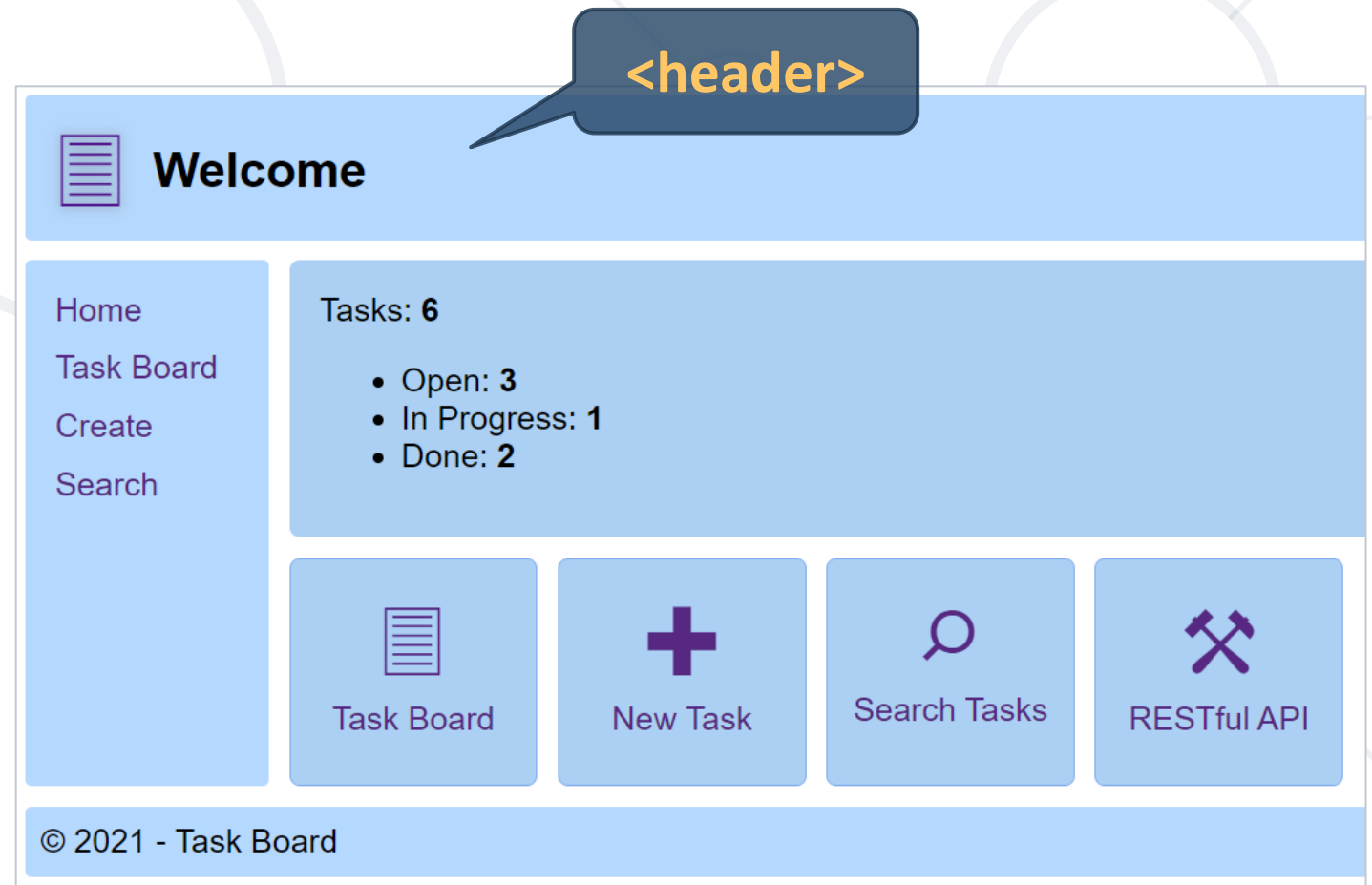
HTML Semantic Tags

<Header></header>

- Represents **introductory content**

```
<header>  
  <h1>Welcome</h1>  
</header>
```

- It may contain:
 - headings
 - logo
 - search form



- Defines a set of **navigation links**

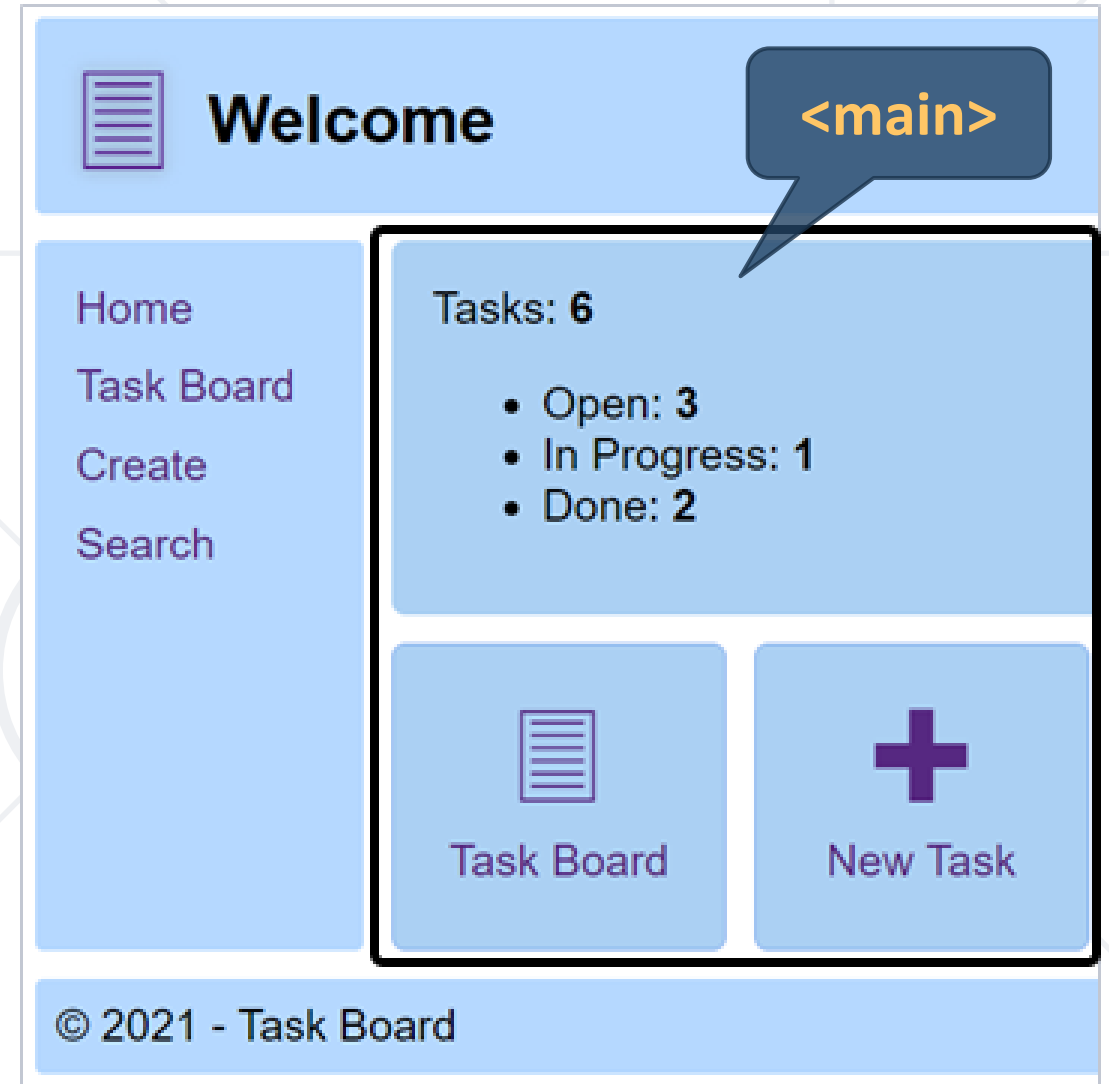
```
<nav id="leftmenu">  
  <ul>  
    <li><a href="/home">Home</a></li>  
    <li><a href="/tasks">Task Board</a></li>  
    <li><a href="/create">Create</a></li>  
    <li><a href="/search">Search</a></li>  
  </ul>  
</nav>
```

<nav>



<Main></main>

- **<main>** holds the main content of a document
 - Helps crawlers
 - There must not be more than one **<main>** element in a document
 - Wrap the most important information in the body



<Aside></aside>

- Defines a sidebar (**left / right navigation**)

```
<aside>
  <h2>Recent posts</h2>
  <ul>
    <li><a href="#">Our Response</a></li>
    <li><a href="#">Her Story</a></li>
    <li><a href="#">Greatest Challenges</a></li>
  </ul>
</aside>
```

<aside>

Creative Commons > What We Do

What We Do

Creative Commons is a nonprofit organization that helps overcome legal obstacles to the sharing of knowledge and creativity to address the world's pressing challenges.

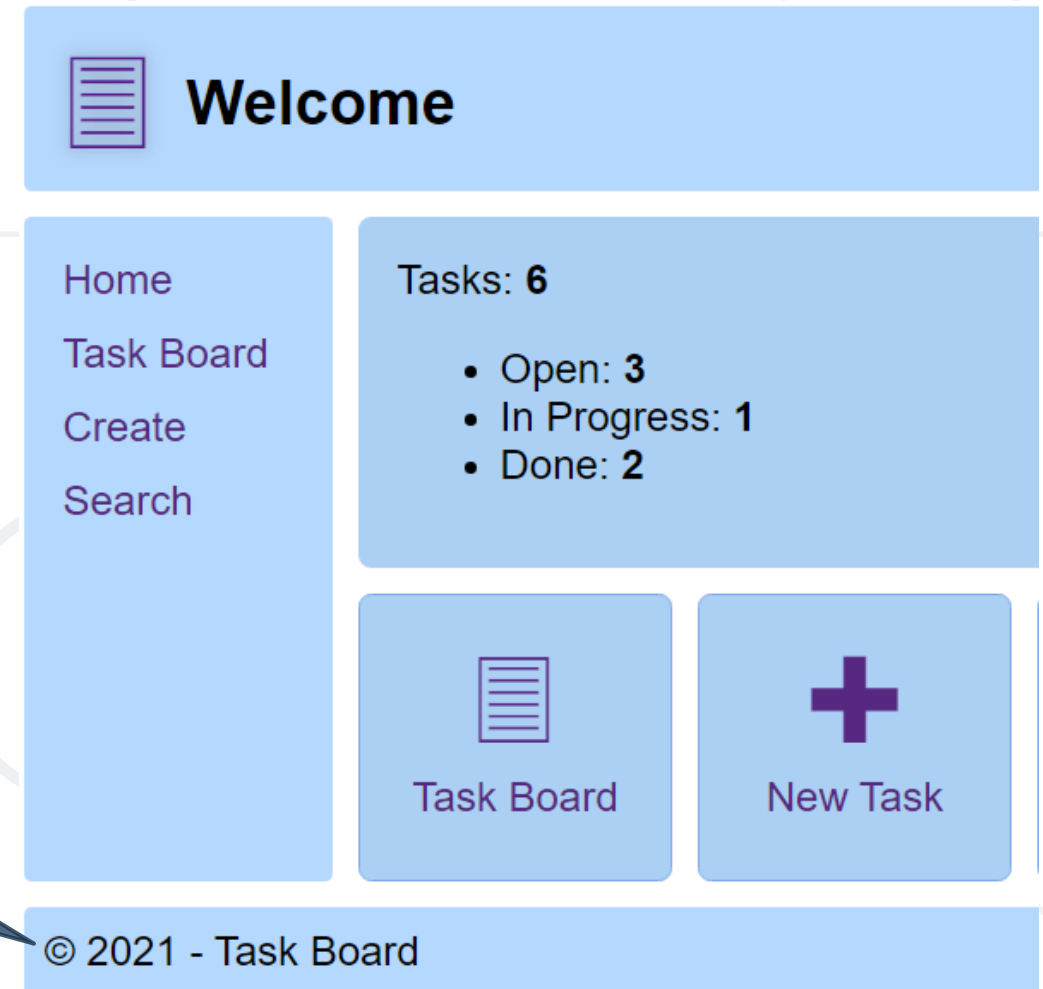
Recent Posts

- ▶ Our Response To Canada's Copyright Term Extension Consultation
- ▶ Her Story: Facing Our Greatest Challenges

- A document / section footer

```
<footer>
  <p>Posted by: Hege Refsnes</p>
  <p><a href="someone@exam.uk">
    2021 Task Board</a></p>
  <p>&copy;copyright</p>
</footer>
```

- A footer typically contains:
 - Navigation links
 - Copyright data

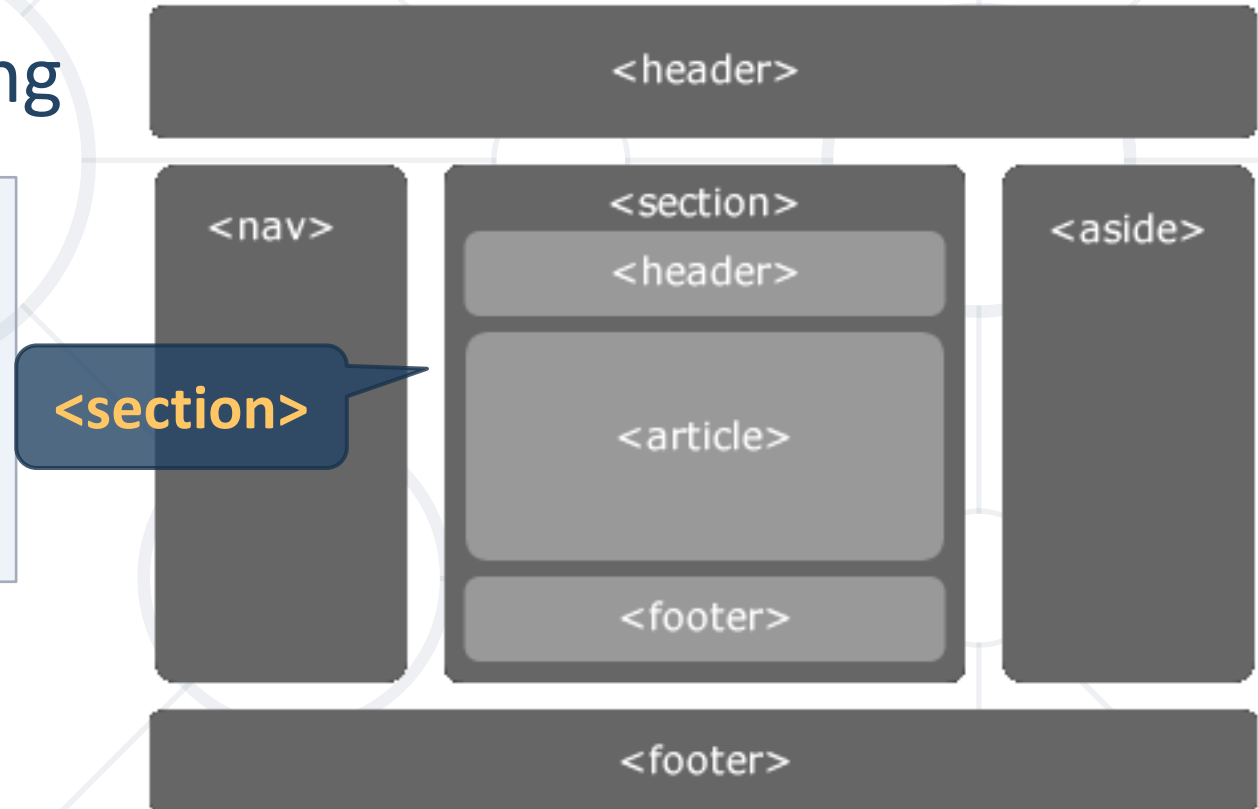


<Section></section>

- Represents a standalone section
 - Typically followed by a heading

```
<section>  
  <h2>Heading</h2>  
    
</section>
```

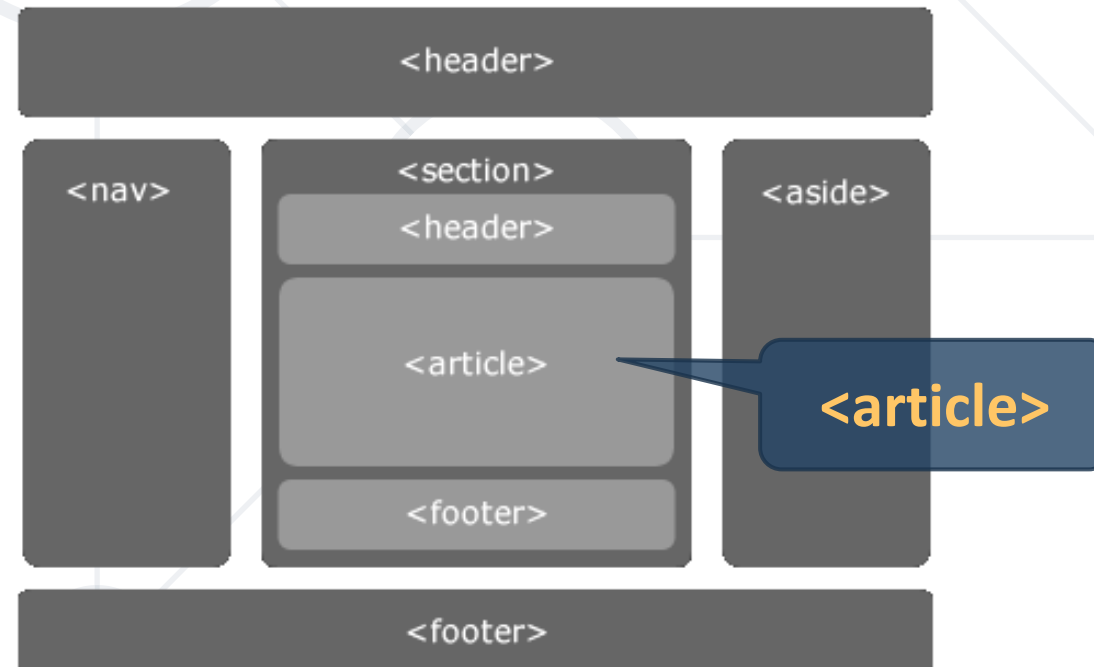
- Sections may have header, several articles, and footer



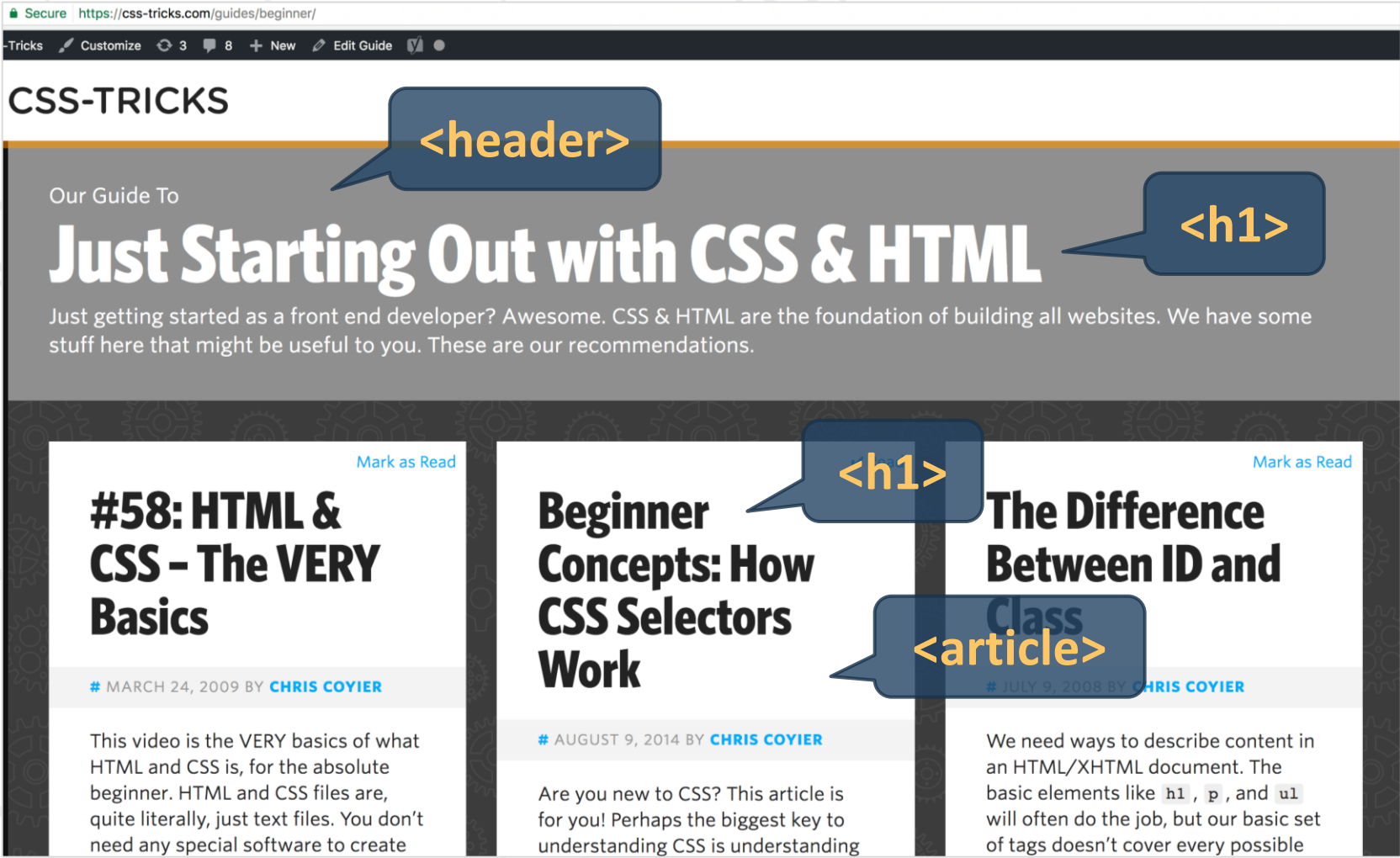
<Article></article>

- Represents a **self-contained composition** in a document, page, application, or site
- Intended to be **independently distributable** or **reusable**
- Examples:
 - Forum post
 - Magazine
 - Newspaper article
 - Blog entry

```
<article>  
  <h2>Tips</h2>  
  <p>Tip #1 ...</p>  
</article>
```



Sections and Articles – Example



The screenshot shows the CSS-Tricks website with several HTML annotations:

- <header>**: Points to the top navigation bar.
- <h1>**: Points to the main title "Just Starting Out with CSS & HTML".
- <section>**: Points to the entire content area below the header.
- <h1>**: Points to the title of the first article, "#58: HTML & CSS - The VERY Basics".
- <h1>**: Points to the title of the second article, "Beginner Concepts: How CSS Selectors Work".
- <h1>**: Points to the title of the third article, "The Difference Between ID and Class".
- <article>**: Points to the entire content area of the third article.

The website content includes:

- Our Guide To **Just Starting Out with CSS & HTML**
- Just getting started as a front end developer? Awesome. CSS & HTML are the foundation of building all websites. We have some stuff here that might be useful to you. These are our recommendations.
- #58: HTML & CSS - The VERY Basics** (March 24, 2009 by Chris Coyier)
- Beginner Concepts: How CSS Selectors Work** (August 9, 2014 by Chris Coyier)
- The Difference Between ID and Class** (July 9, 2008 by Chris Coyier)

<Figure></figure>

- Represents self-contained content
- Frequently with a caption "**figcaption**"
- Typically referenced as a single unit

```
<figure>  
    
  <figcaption>  
    Fig.1 Trulli, Puglia, Italy.  
  </figcaption>  
</figure>
```

<figure>

Places to Visit

Puglia's most famous sight is the unique conical houses (Trulli) found in the area around Alberobello, a declared UNESCO World Heritage Site.



Fig.1 - Trulli, Puglia, Italy.

<Details> + <Summary>

- **<details>** – additional details that the user can view or hide
- **<summary>** – defines a visible heading for the **<details>**

<details>

<details>

<summary>Some details</summary>

<p>More info about the details.</p>

</details>



<details>

<Time> + <Address>

- **<time>** – a human-readable time
 - Search engines can produce smarter results

```
<p>We open at <time>10:00</time>  
every morning.</p>
```

- **<address>** – contact information for site author / owner

```
<address>  
  <a href="mailto:tony@gmail.com">  
    tony@gmail.com</a>  
</address>
```



5744 S. Harlan St
Littleton, CO 80123
United States (US)
Phone: (303) 501-4944
Email: webmaster@contentmarketingspot.com

<address>

Monday	<time>	8:00 AM - 8:00 PM
Tuesday		8:00 AM - 8:00 PM
Wednesday		8:00 AM - 8:00 PM
Thursday		8:00 AM - 8:00 PM
Friday		8:00 AM - 8:00 PM
Saturday		8:00 AM - 8:00 PM
Sunday		Closed



Forms

Collect User Input

- The **HTML form** - a document section
 - Contains interactive controls for submitting information
 - Takes **input** from the site **visitor** and posts it

```
<form>
  <label for="fname">First name:</label><br>
  <input type="text" id="fname"
name="fname" value="John"><br>
  <input type="submit" value="Submit">
</form>
```

Sample Form

Please fill the required

First Name

Last Name

Occupation

Age

Gender ☐ Female ☐ Male

<input type="text">

- **Action** - used to specify where the form data is to be sent to the server after submission of the form


```
<form action="register.php" ... />
```

- **Method** - The HTTP method that the browser uses to submit the form
 - **POST** - Corresponds to **HTTP POST** (hides posted form data)
 - **GET** - Corresponds to **HTTP GET** (shows form data in the URL)

```
<form method="POST" ... />
```

```
<form method="GET" ... />
```

- `<input type="text">` element is the most important form element
- It can be displayed in several ways, depending on the **type** attribute:
 - `<input type="text">`
 - `<input type="number">`
 - `<input type="password">`
 - `<input type="email">`
 - `<input type="search">`



Write your comment

Enter your number

Enter your password

Enter your email
Please include an '@' in the email address. 'myMail' is missing an '@'.

Search box

Form Elements – Input

- `<input type="checkbox">`
- `<input type="radio">`
- `<input type="range">`
- `<input type="submit">`
- `<input type="button">`
- `<input type="file">`

I agree to the Privacy Policy ☒

type="checkbox"

I want to receive offers and newsletters ☐

type="radio"

Your computer skills level 0/100

type="range"

Send us your request

type="submit"

Free registration from here:

type="button"

Attach your files: No file chosen

type="file"

Radio Buttons – Example

```
<form action="/register.php" method="get">  
  <label for="male">Male</label>  
  <input type="radio" id="male" name="male" value="Gender">  
  <label for="female">Female</label>  
  <input type="radio" id="female" name="female" value="Gender">  
</form>
```

Name :

Password :

Gender : ☐ Male ☐ Female

Email :

Phone no :


type="radio"

- HTML input **validation** is done automatically by the browser based on **special attributes**

```
<input type="text"  
required="true" />
```



Text Input

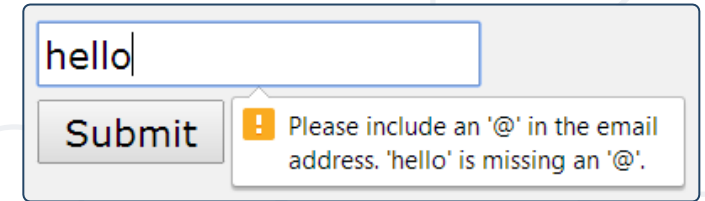
 Please fill out this field.

- The validation only **occurs** when attempting to **submit** the form
- Inputs which are **disabled** or **read-only** will not trigger validation

Input Fields – Examples

- Email – simple validation for emails

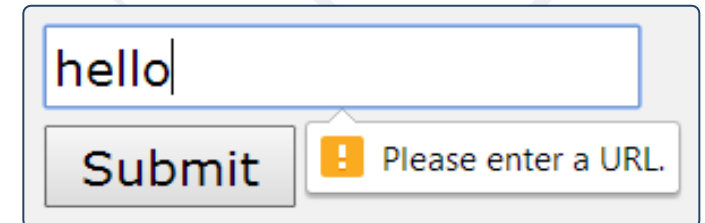
```
<input type="email" required="true" />
```



A form with a text input field containing 'hello', a 'Submit' button, and a validation error message: 'Please include an '@' in the email address. 'hello' is missing an '@'.'

- URL – validation for URL addresses

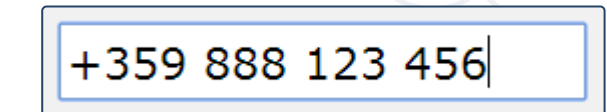
```
<input type="url" required="true" />
```



A form with a text input field containing 'hello', a 'Submit' button, and a validation error message: 'Please enter a URL.'

- Telephone – validation for phone numbers

```
<input type="tel" required="true" />
```



A form with a text input field containing '+359 888 123 456'.

- **value** - specifies the initial value for an input field
- **name** - specifies the name of the input element
- **placeholder** - specifies a hint that describes the expected value of the input field
- **required** - the field must be filled out before submitting the form
- **autofocus** - the input should automatically get focus when the page load
- **disabled** - specifies that the input field is disabled
- **min** and **max** - specify the minimum and maximum values

Form Elements – Examples

```
Email Address: <input type="email" size="48"  
name="email" required="true" autofocus  
placeholder="Enter a valid email address" >
```

Email Address:

Enter a valid email address

placeholder

Email Address:

Enter a valid email address

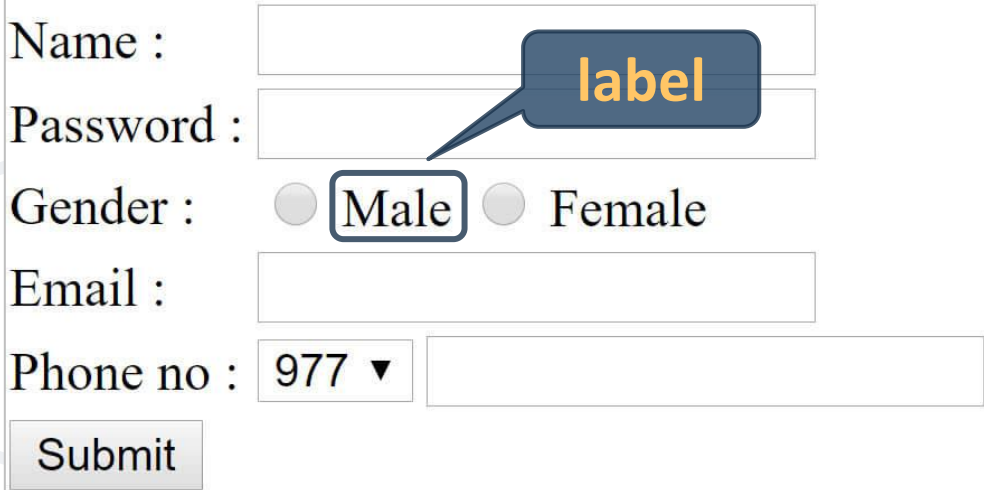
autofocus

Please fill out this field.

required

- **<label>** - defines a label for the others forms elements
- The **for** attribute should be equal to the **id** attribute of the related element to bind them together

```
<form>  
  <label for="male">Male</label>  
  <input type="radio" name="gender"  
    id="male" value="male">  
</form>
```



Name :

Password :

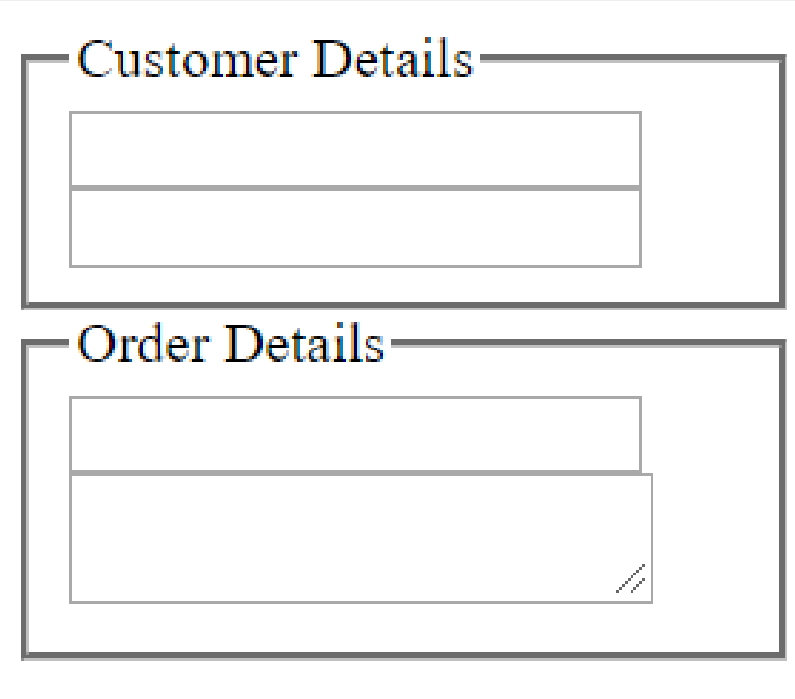
Gender : ☒ Male ☐ Female

Email :

Phone no : 977 ▼

- **<fieldset>** - used to group related data in a form
- **<legend>** - defines a caption for the **<fieldset>** element

```
<fieldset>
  <legend>Customer Details</legend>
  <input type="text" name="fName" />
  <input type="text" name="lName" />
</fieldset>
<fieldset>
  <legend>Order Details</legend>
  <input type="text" name="quantity" />
  <textarea name="remarks"></textarea>
</fieldset>
```

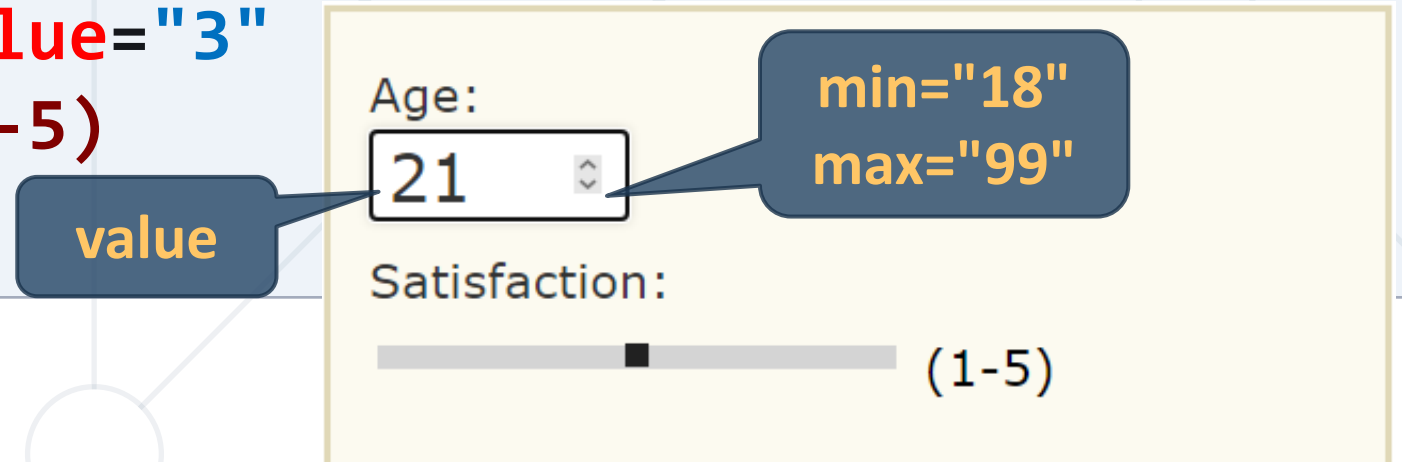


Customer Details

Order Details

Number and Range Fields

```
<fieldset>
  <label for="field_age">Age</label>
  <input type="number" name="age" id="field_age"
    min="18" max="99" value="21">
  <label for="field_sat">Satisfaction</label>
  <input type="range" name="satisfaction"
    min="1" max="5" value="3"
    id="field_sat"> (1-5)
</fieldset>
```



Age: 21

Satisfaction: (1-5)

Form Elements – Select

- **<select>** - defines a drop-down list
- **<option>** - defines an option that can be selected

```
<form>
  <label for="size">Size:</label>
  <select id="size" name="size">
    <option value="39">39 EU</option>
    <option value="40">40 EU</option>
    <option value="41.5">41.5 EU</option>
    ...
  </select>
</form>
```

Size:

Select

Select

39 EU

40 EU

41 EU

41.5 EU

42 EU

42.5 EU

43 EU

43.5 EU

44 EU

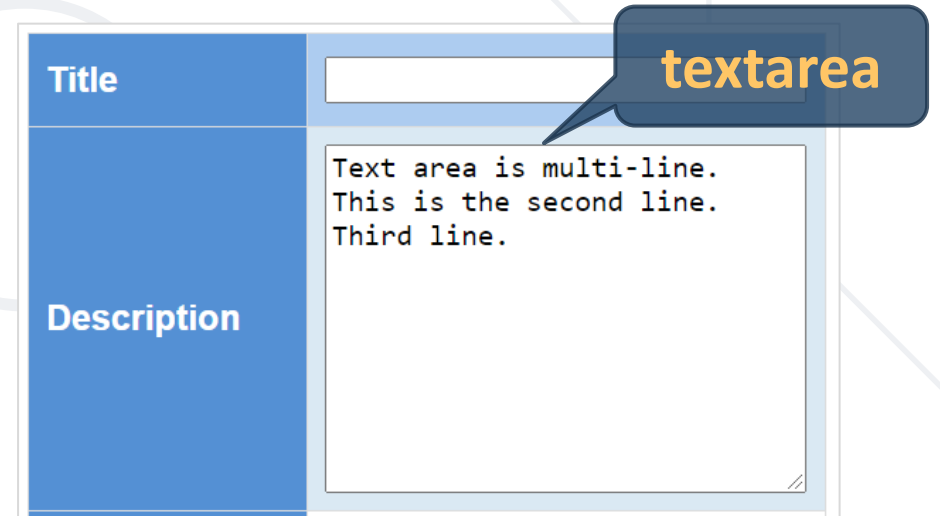
45 EU

46 EU

47 EU

- **<textarea>** - defines a multi-line input field
- Attributes:
 - **rows** - specifies the visible **number of lines** in a text area
 - **cols** - specifies the **visible width** of a text area

```
<textarea rows="10" cols="30">  
Text area is multi-line.  
This is the second line.  
Third line.  
</textarea>
```

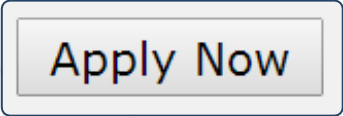


The diagram shows a form with two main sections: 'Title' and 'Description'. The 'Title' section contains a single-line text input field. The 'Description' section contains a multi-line text area. A callout bubble labeled 'textarea' points to the multi-line text area. The text area contains the following text:

Text area is multi-line.
This is the second line.
Third line.

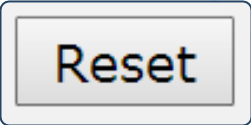
- **Submit** button – sends the form data to the server

```
<input type="submit" value="Apply Now" />
```



- **Reset** button – resets all form fields

```
<input type="reset" />
```



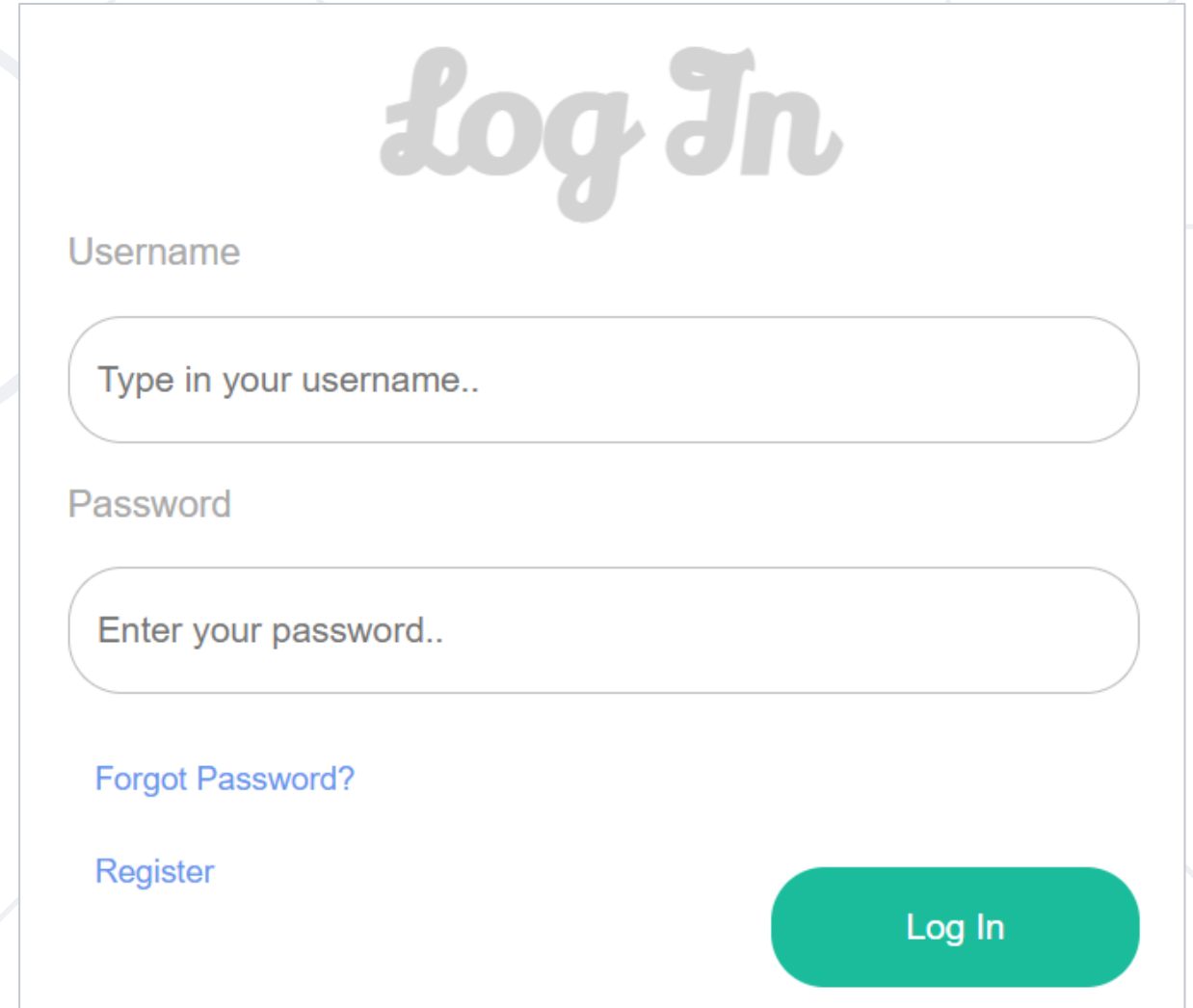
- The **<button>** tag defines a clickable button

```
<button type="button">Click Me!</button>
```



Complete HTML Form – Example

- Example of HTML form + CSS styles
 - <https://codepen.io/snakov/pen/oNYQvpB>



Log In

Username

Password

[Forgot Password?](#)

[Register](#)

Log In

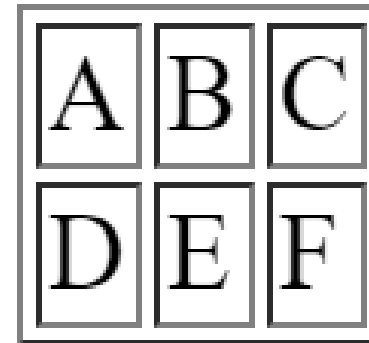


Tables

Arrange Data into Rows and Columns

- An HTML **table** is defined with the `<table>` tag
- Each table **row** is defined with the `<tr>` tag
- A table **cell** is defined with the `<td>` tag

```
<table border="1">  
  <tr>  
    <td>A</td><td>B</td><td>C</td>  
  </tr>  
  <tr>  
    <td>D</td><td>E</td><td>F</td>  
  </tr>  
</table>
```



A	B	C
D	E	F

- There are three specific parts in every table:
 - Table **header**
 - Table **body**
 - Table **footer**
- Each table part holds rows (**<tr>**)
 - Rows hold cells (**<td>** / **<th>**)

```
<table>
  <thead>...</thead>
  <tbody>
    <tr>
      <td>Mark</td>
      <td>5,75</td>
    </tr>
  </tbody>
  <tfoot>...</tfoot>
</table>
```

Complete HTML Tables

Original URL	Visits
https://nakov.com	160
https://selenium.dev	43
https://nodejs.org	86
Total visits	289

```
<table border="1">  
<tbody>
```

```
  <thead>  
    <tr>  
      <th>Original URL</th>  
      <th>Visits</th>  
    </tr>  
  </thead>
```

```
  <tr>  
    <td>https://nakov.com</td>  
    <td>160</td>  
  </tr>
```

```
</tbody>
```

```
  <tfoot>  
    <tr>  
      <td>Total visits</td>  
      <td>289</td>  
    </tr>  
  </tfoot>
```

```
</table>
```

Complete HTML Table – Example

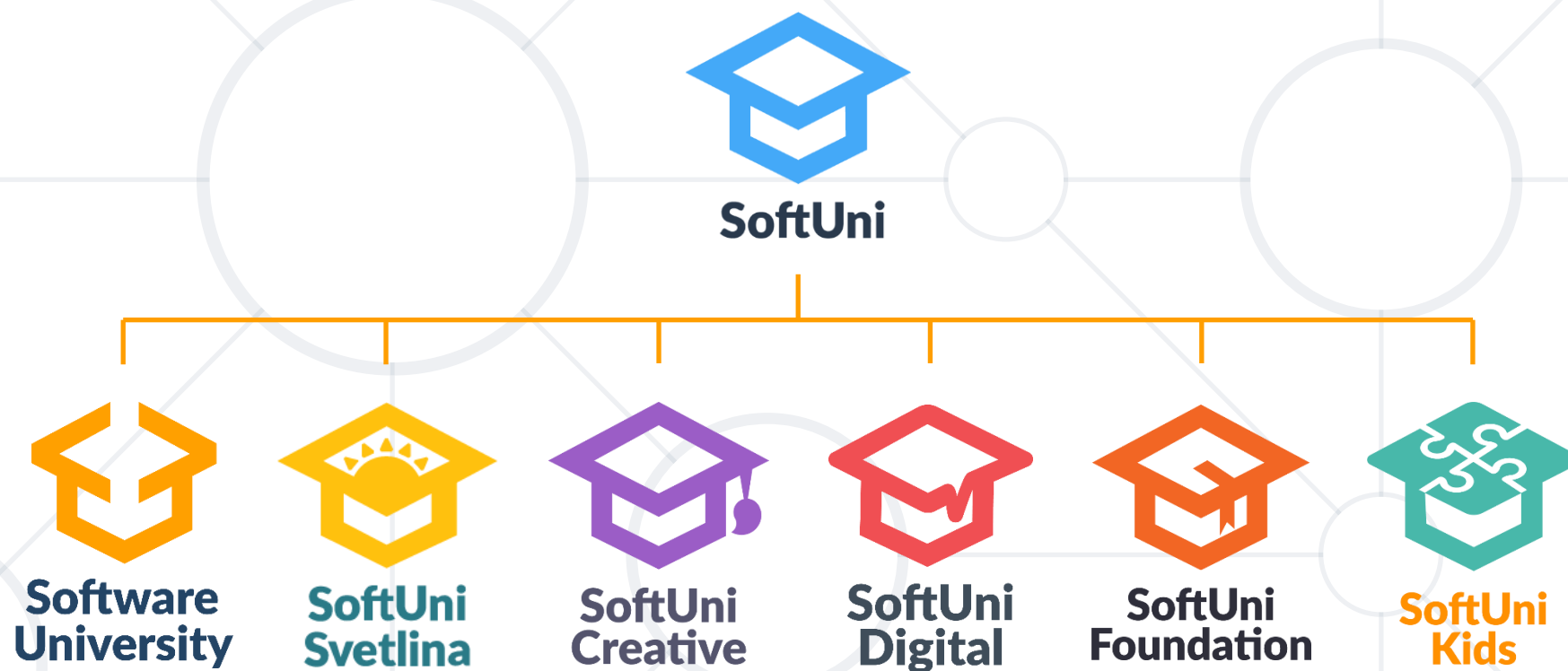
- Example of HTML table + CSS styles
 - <https://codepen.io/snakov/pen/XWNYreJ>

Original URL	Short URL	Date Created	Visits
https://nakov.com	http://shorturl.nakov.repl.co/go/nak	2021-02-17 14:41:33	160
https://selenium.dev	http://shorturl.nakov.repl.co/go/seldev	2021-02-17 22:07:08	43
https://nodejs.org	http://shorturl.nakov.repl.co/go/node	2021-02-19 16:41:56	86

- Semantic HTML
- Tags
- Forms
- Tables



Questions?



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Coca-Cola HBC
Bulgaria



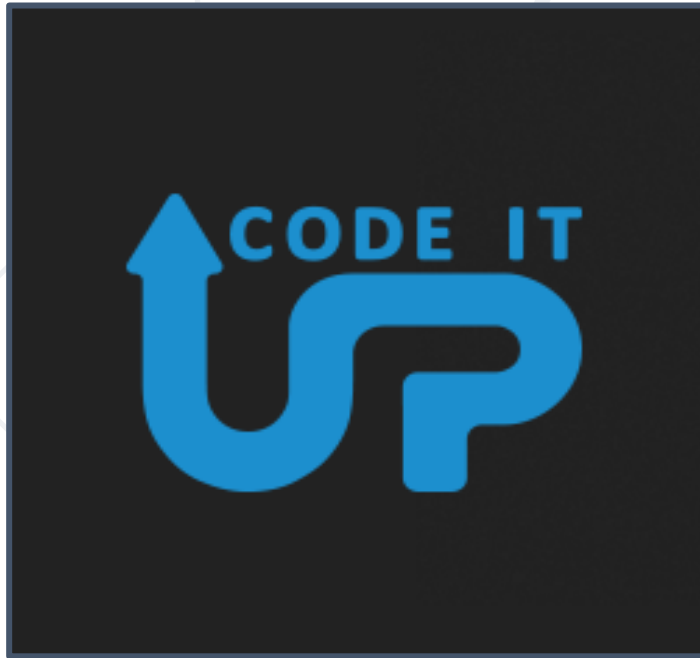
**SUPER
HOSTING
.BG**



INDEAVR
Serving the high achievers



MOTION SOFTWARE



VIRTUAL RACING SCHOOL



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