



Kursname, Standort, Referent

NGG Advanced

Programming a Website with HTML, CSS & JavaScript





Agenda

1. HTML
2. CSS Basic
3. CSS Advanced
4. JS Basic
5. JS Advanced





Introduction

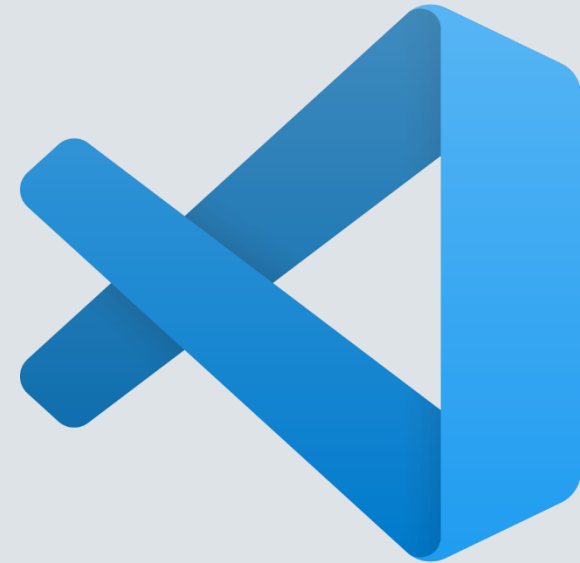
- Who are you? Name, Age, Place of Origin, Education, Family, etc.
- What is your goal by attending this course?
- What would you say is your level of knowledge in IT? Complete beginner to absolute pro.
- What is your favorite thing to do?
- Anything else we should know about you?



Visual Studio Code

We will use Visual Studio Code to edit HTML, CSS and JS files.

You can download the editor from <https://code.visualstudio.com/>.

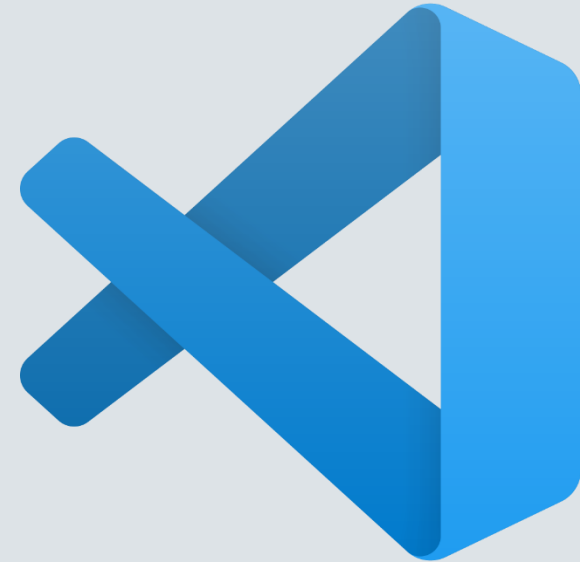




Visual Studio Code Extensions

Some useful VS Code Extensions are:

- Prettier
- Auto Close Tag
- Emmet (Installed by default) - Enables HTML and CSS autocompletion.



HTML

Hyper Text Markup Language

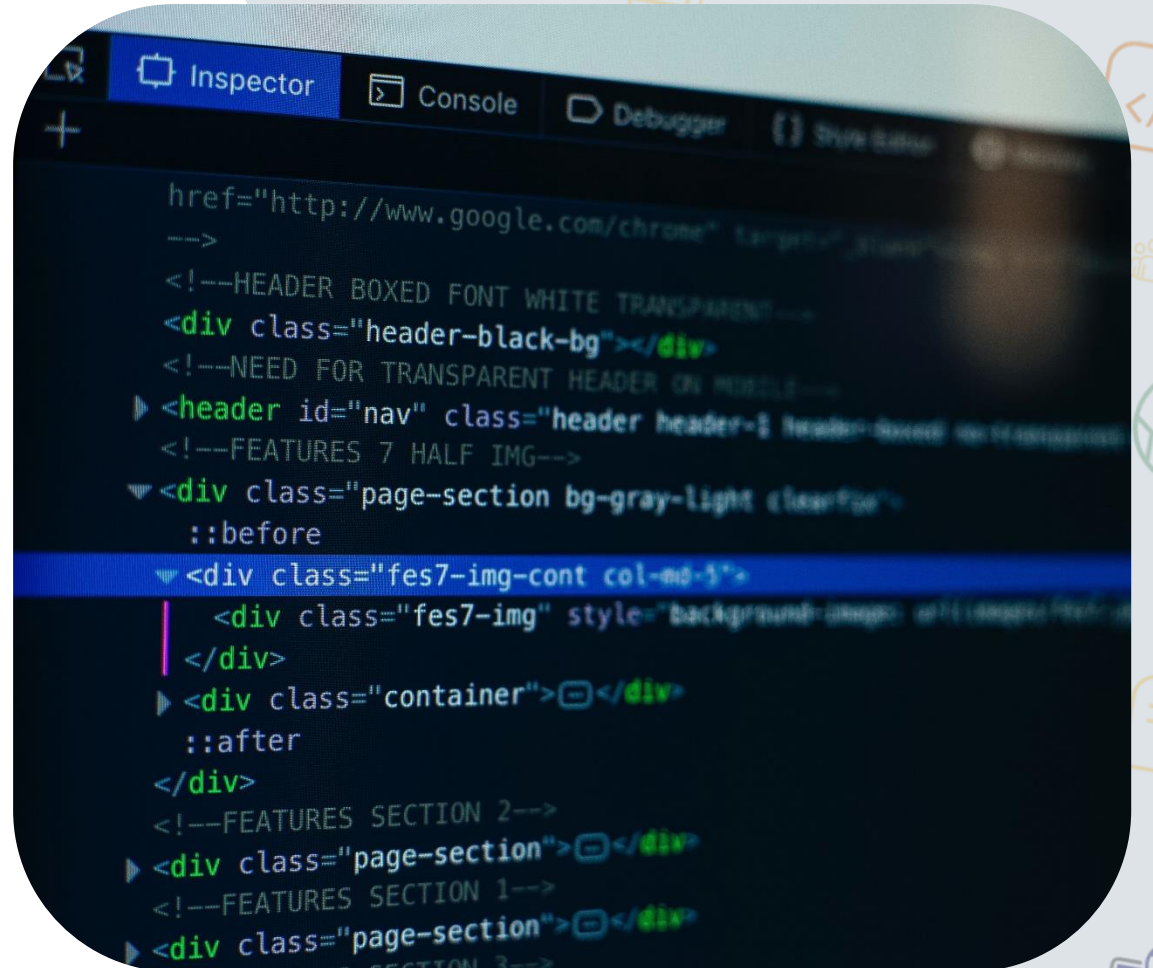




Table of Contents

- Introduction - What is HTML?
- Basics
 - Structure
 - Tags
 - Syntax
 - Attributes
 - Best Practices
 - Document Setup for Project
- Starting your own Project





What is HTML?

- Hypertext Markup Language
- Describes and defines the content and layout of a website
- **Not** a programming language



Basic Document Structure

```
<!DOCTYPE html>
<html>
  <head>
  </head>
  <body>
  </body>
</html>
```

The `<!DOCTYPE>` declaration is an "information" to the browser about what document type to expect.

The `<html>` tag is the container for all other HTML elements.

The `<head>` element is a container for metadata (data about the HTML document like the `<title>` tag, character set, styles, scripts, etc.)

All main content goes between the `<body>` tags



HTML Basic Tags

Tag	Description	Example
comment	Defines comment	<code><!-- Comment --></code>
heading	For titles, ranges h1– h6	<code><h1>Welcome to my Page!</h1></code>
paragraph	Text paragraph	<code><p>Once upon a time, there was...</p></code>
button	Clickable button	<code><button>Cancel</button></code>
anchor	Defines hyperlink	<code>Click Here</code>
image	Embeds an image	<code></code>
break	Single line break	<code>
</code>

self-closing tags (= no end tags)



HTML List Tags

ordered list
(numbered)

list elements (*can be used
inside any type of list*)

```
<ol>  
  <li>first list element</li>  
  <li>second list element</li>  
</ol>
```

Website
Preview

```
1. first list element  
2. second list element
```



HTML List Tags

unordered list
(bullet points)

list elements (*can be used
inside any type of list*)

```
<ul>
  <li>list element</li>
  <li>another list element</li>
</ul>
```

Website
Preview

- list element
- another list element



HTML Table Tags

table header
(one per column)

table row

table data
(= column)

```
<table>
  <thead>
    <th>column 1 title</th>
    <th>column 2 title</th>
  </thead>
  <tbody>
    <tr>
      <td>data row 1 column 1</td>
      <td>data row 1 column 2</td>
    </tr>
    <tr>
      <td>data row 2 column 1</td>
      <td>data row 2 column 2</td>
    </tr>
  </tbody>
</table>
```

table element

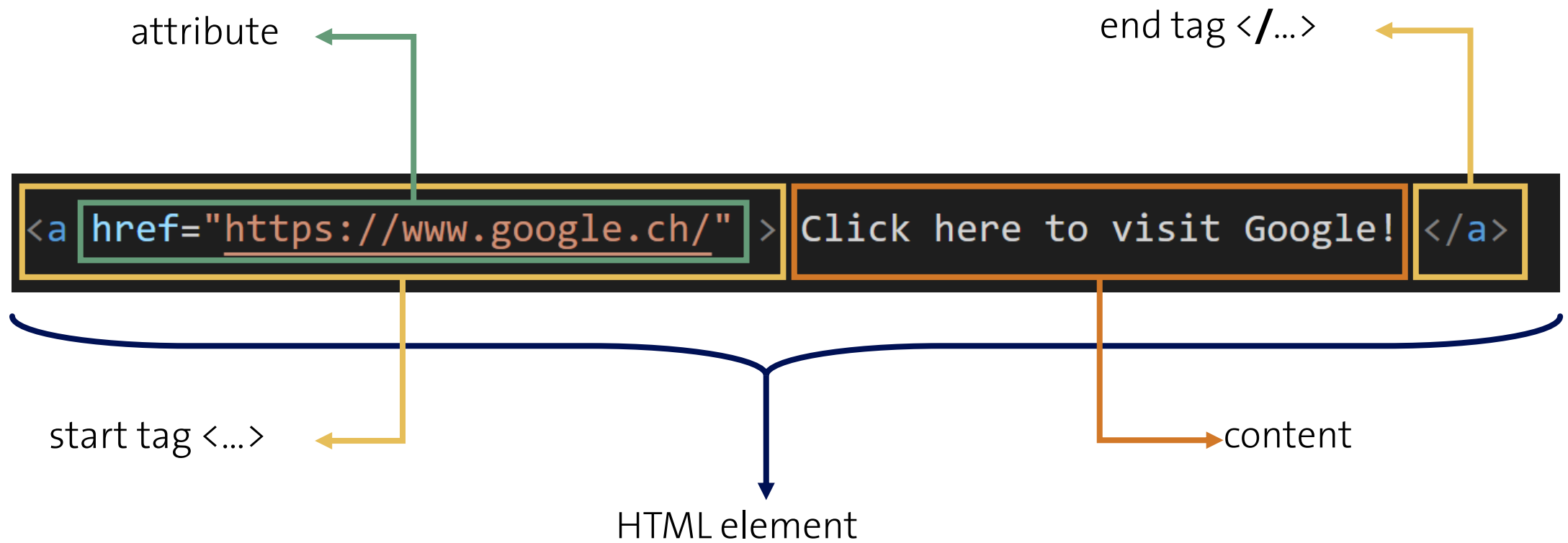


Table Website Preview

column 1 title	column 2 title
data row 1 column 1	data row 1 column 2
data row 2 column 1	data row 2 column 2



HTML Syntax





HTML Attributes

- All HTML elements can have **attributes**.
- Attributes provide **additional information** about elements.
- Attributes are always specified in the **start tag**.

for: references name attribute of input

name: defines a name

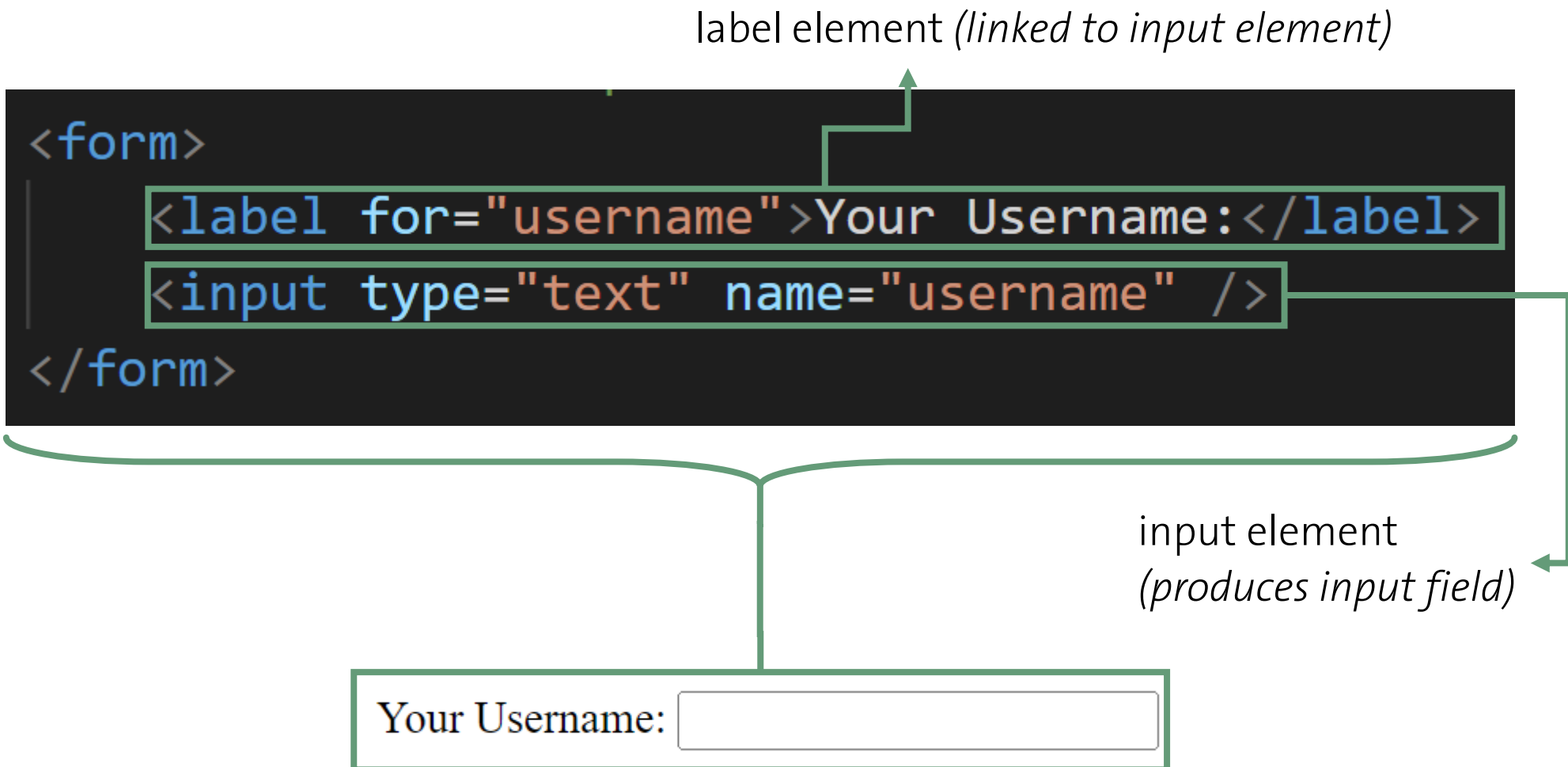
```
<label for="password">Your Password:</label>  
<input type="password" name="password" />  
<input type="submit" value="Submit"/>
```

type: defines the type of input field

value: text shown in input field



HTML Form





HTML Form

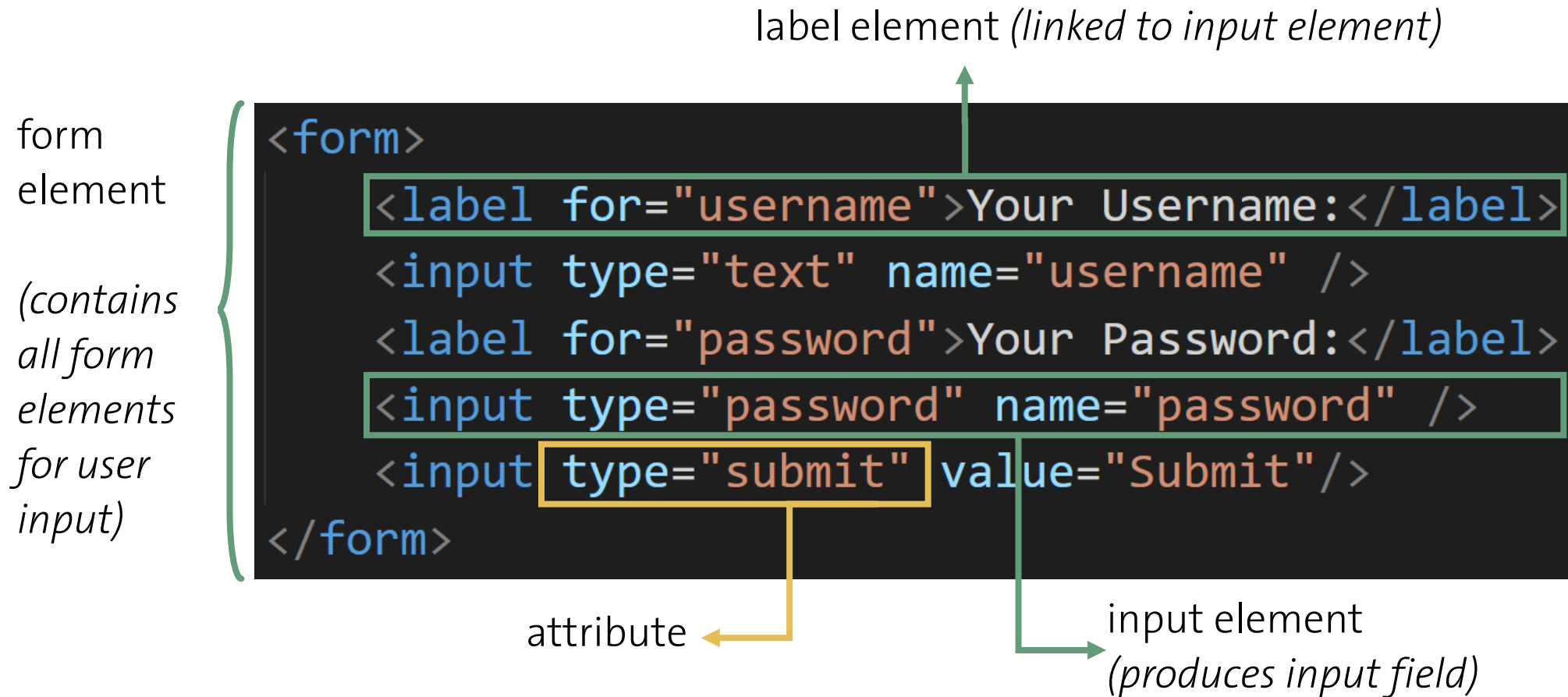
Attribute

```
<form>
  <label for="password">Your Password:</label>
  <input type="password" name="password" />
  <input type="submit" value="Submit"/>
</form>
```

Your Password:



HTML Form





HTML Attributes - Examples

```
<a href="www.page.com">Click Here</a>
```

`href`: specifies the URL of the generated hyperlink

```

```

`src`: source of image

`alt`: alternative text if image can't load

```
<div class="container"></div>
```

`class`: defines a class name, used for styling



Best Practices

- Even if HTML tags and attributes are case-insensitive, it's recommended to always use **lowercase**
- Don't use spaces around equal signs when defining attributes

```
<A HREF="www.page.com"></A> ✗  
<a href = "www.page.com"></a> ✗  
<a href="www.page.com"></a> ✓
```

- When using the `` element, always specify the **alt**, **width** and **height** **attributes** (**alt** = text shown if image cannot be displayed)
- Always pay attention to correct **indentation**



HTML Document Setup

In a Folder named "NGG", create an HTML file with the name "index.html" and add the basic structure needed for an HTML Document.

```
<!DOCTYPE html>
<html>
  <head>
    <!-- title and linked documents -->
  </head>

  <body>
    <!-- main content -->
  </body>
</html>
```




Personal Website

At the end of this course, the goal is to have made a simple website about yourself.

In the "index.html" file you just created, add some HTML to your page for example the following:

- Title of the Website (in browser tab + on the page)
- Who are you (headings, paragraphs, breaks)
- Your Hobbies (list)
- Your favourite song (link to YouTube)
- Photo of you (image)



Exercise 1 - Table

Create a table like shown in the picture below.

Be creative in the topic, it doesn't have to be the same as the one below.

My Job Applications				
Date	Company	Job Description	Status	
12.10.2020	Google	Software Engineer II	Rejected	
01.03.2021	Apple	Data Scientist	Rejected	
23.05.2021	Twitter	Software Engineer I	Rejected	
01.08.2021	Swisscom	Software Engineer I	Accepted	



Exercise 2 - Form

Create a form like shown in the picture.
Try to use the "type" attribute of the input-tag.

Register:

Choose a username:

Enter your E-Mail address:

Select your Nationality:

Choose a password:



Exercise 3 - Videos + Documents

Incorporate a YouTube Video and a PDF document into your page.

We haven't explained that, so search a solution on the internet.





Homework

You will get the homework through e-mail too.

Exercise 1

Go to <https://socrative.com>, press Login -> Student Login -> Enter the room code from the email -> Solve the quiz

Exercise 2

Continue with your webpage, using the tags you learnt today. In case you're already done, try creating a second page with a topic of your choice.

Create a .zip of your project folder and send it to ngg.nex@swisscom.com. Take care that **your course** is mentioned in the subject!

