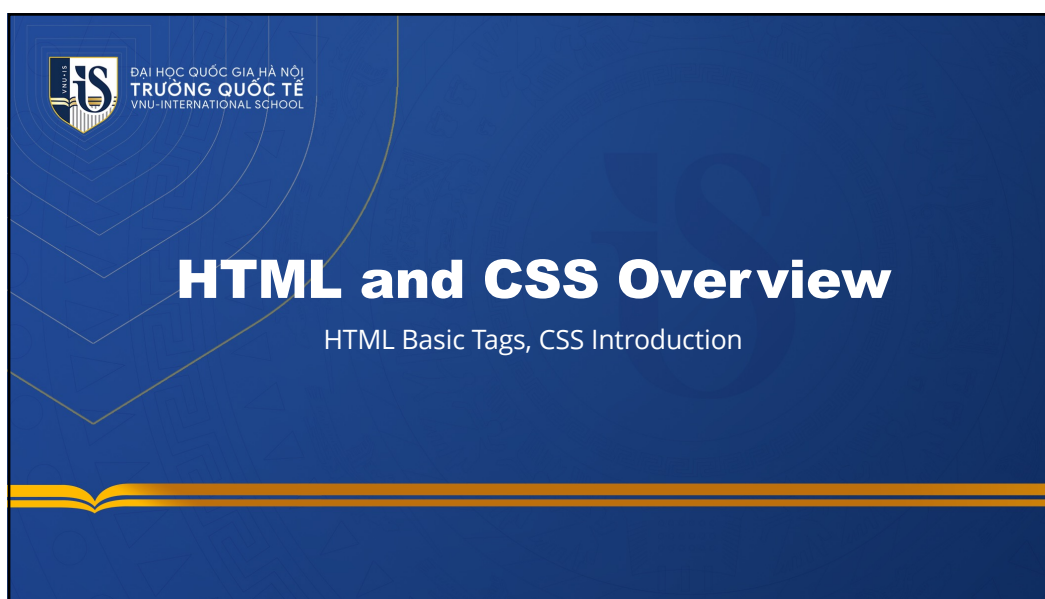




1



2



3

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What is HTML?

- The HTML language describes Web content (Web pages)
 - Text with formatting, images, lists, hyperlinks, tables, forms, etc.
 - Uses **tags** to define **elements** in the Web page

`<p>` Opening tag

Element

`</p>` Closing tag

Document content goes here...

This slide explains the basic structure of an HTML element. It shows an opening tag `<p>`, a closing tag `</p>`, and the content in between. Callouts identify the opening tag, closing tag, and the entire element. The text 'Document content goes here...' is at the bottom.

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HTML Page – Example


```

<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>HTML Example</title>
  </head>
  <body>
    <h1>Hello HTML!</h1>
    <p>HTML describes formatted text using <strong>tags
  </strong>. Visit the <a href="https://softuni.bg/trainings/
  courses">SoftUni HTML course to learn more.</a></p>
  </body>
</html>

```




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Problem: Welcome to HTML

- Create your first HTML page
 - File name: **welcome.html**
 - Title: Welcome
 - Paragraph of text:
I am learning **HTML** and **CSS!**
- Hints:
 - Modify the code from the previous slide, use ****tag
 - Submit the page in the judge: **welcome.html** in a **ZIP file**




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HTML – Developer Environments

- WebStorm
 - Powerful IDE for HTML, CSS and JavaScript, paid product
- Visual Studio
 - Many languages and technologies, Windows & Mac
- Visual Studio Code, Brackets, NetBeans
 - Good free tools for HTML5, cross-platform
- Sublime Text, Vim, Notepad++
 - For hackers






Visual Studio



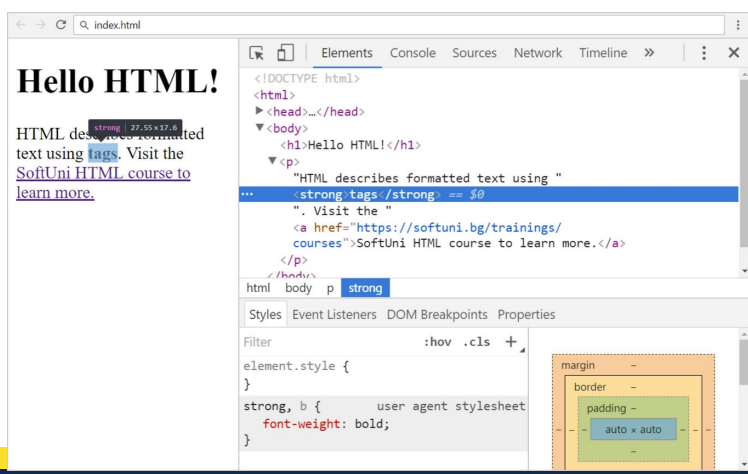


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Developer Tools: [F12] in the Browser



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Zen Coding (Emmet) for Fast HTML Coding

```
ul>li.red*6
```

↓

```
<ul>
  <li class="red"></li>
  <li class="red"></li>
  <li class="red"></li>
  <li class="red"></li>
  <li class="red"></li>
  <li class="red"></li>
</ul>
```

```
div#page>div.logo+ul#menu>li*3>a
```

↓

```
<div id="page">
  <div class="logo"></div>
  <ul id="menu">
    <li><a href=""></a></li>
    <li><a href=""></a></li>
    <li><a href=""></a></li>
  </ul>
</div>
```

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HTML COMMON ELEMENTS

Used in 90% of All Internet Sites

<a> <button> <section>
 <div>
 <input> <h1> <script>

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Headings and Paragraphs

- Headings: `<h1>` to `<h6>`

```

<h1>This is Heading 1 (Biggest)</h1>
<h2>This is Heading 2 (Smaller)</h2>
<h3>This is Heading 3 (More Smaller)</h3>
<h4>This is Heading 4 (Smallest)</h4>

```
- Paragraphs: `<p>` to `</p>`

```

<p>First paragraph</p>
<p>Second paragraph</p>
<br /> <!-- empty line -->
<p>Third paragraph</p>

```

This is Heading 1 (Biggest)

This is Heading 2 (Smaller)

This is Heading 3 (More Smaller)

This is Heading 4 (Smallest)


First paragraph

Second paragraph

Third paragraph

Comment

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Hyperlinks

- External hyperlink Specify the URL


```
<a href="https://google.com">Google</a>
```
- Local hyperlink


```

<h1 id="exercises">Exercises</h1>
...
See the <a href="#exercises" target="_blank">exercises</a>

```
- Relative hyperlink



```
<a href=" ../2.%20HTML5-Overview.pptx">presentation</a>
```

Exercises

See the [exercises](#)

[presentation](#)

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Images

- Images are external files, inserted through the `` tag

```



```


- Embedded image (Data URI) 

```



```

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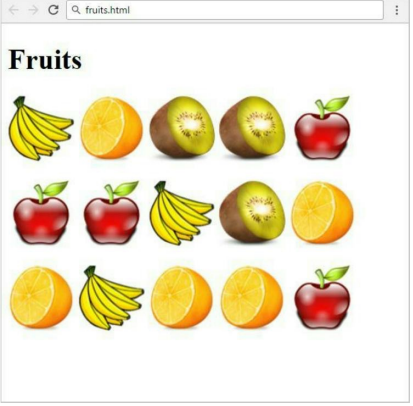


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Problem: Fruits

For today's tasks, you should create a new folder named LAB1 in your GitHub with HTML and supported files (images)

- You are given 4 image files:
 - apple.png, banana.png, kiwi.png, orange.png
- Create a Web page like the screenshot on the right
 - Hints: use 3 paragraphs, each holding 5 images



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Ordered Lists: Tag

- Create an **Ordered List**
- Use ****
 - Each holding ****

```
<ol type="1">
  <li>One</li>
  <li>Two</li>
  <li>Three</li>
</ol>
```

1. One
2. Two
3. Three

■ Attribute values for **type** are **1, A, a, I, or i**

1. One
2. Two
3. Three

A. One
B. Two
C. Three

a. One
b. Two
c. Three

I. One
II. Two
III. Three

i. One
ii. Two
iii. Three

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Unordered Lists: Tag

- Create an **Unordered List** using ****:

```
<ul type="disc">
  <li>First item</li>
  <li>Second item</li>
  <li>Third item</li>
</ul>
```

• First item
• Second item
• Third item

■ Attribute values for **type** are: **disc, circle, square** and **none**


• First item
• Second item
• Third item

◦ First item
◦ Second item
◦ Third item

▪ First item
▪ Second item
▪ Third item

First item
Second item
Third item

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Definition Lists: <dl> Tag


- Create definition lists using <dl>
 - Holds terms (<dt>) with their definitions (<dd>)

```
<dl>
  <dt>HTML</dt>
  <dd>A markup language ...</dd>
  <dt>CSS</dt>
  <dd>Language used to ...</dd>
</dl>
```

HTML
A markup language ...

CSS
Language used to ...

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Problem: Wiki Page

- Create the following HTML page: (page continues here ...)

← → ↻ 🔍 wiki-page.html

The Brown Bear

The brown bear (*Ursus arctos*) is native to parts of northern Eurasia and North America. Its conservation status is currently "Least Concern." There are many subspecies within the brown bear species, including the Atlas bear and the Himalayan brown bear.

[Learn More](#)

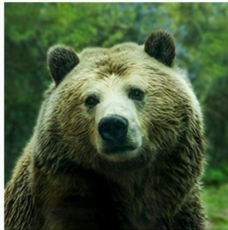
Here are some bear species:

- Arctos
- Collarus
- Horribilis
- Nelsoni (extinct)

← → ↻ 🔍 wiki-page.html

The following countries have the largest populations of brown bears:

1. Russia
2. United States
3. Canada



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Hints: Wiki Page

- **File name:** `wiki-page.html`
- **Title:** The Brown Bear
 - Use `<h1>`
- **Hyperlink:** https://en.wikipedia.org/wiki/Brown_bear
- **List:** use ordered list and unordered list
- **Text:** use paragraph
- **Image:** use the file `bear.jpg`

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HTML TERMINOLOGY

Tags, Attributes and Elements

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HTML Tags, Attributes and Elements

Element ID Attribute: key = value

```
<a id="link" href="https://google.com">Google</a>
```

Attribute (CSS class) Opening tag HTML element

```
<div class="item">
```


```
  
```

```
  <span>Books</span>
```

```
</div>
```

Element body (content) Closing tag

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CSS

CASCADING STYLE SHEETS

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What is CSS?

- CSS defines styling of the HTML elements
 - Specifies fonts, colors, margins, sizes, positioning, floating, ...
 - CSS rules format: **selector { prop1:val1; prop2:val2;... }**
- CSS rule example:

```
h1 {
  font-size: 42px;
  color: yellow;
}
```

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Combining HTML and CSS Files (External Style)

using-css.html

```
<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" type="text/css"
    href="styles.css">
  </head>
  <body class="modern"><p>
    This is a <span class="special"> special
    beer</span> for <span class="special">special
    drinkers</span>.</p>
  </body>
</html>
```


styles.css

```
.special {
  font-style: italic;
  font-weight: bold;
  color: blue;
}

.modern {
  background: #EEE;
}

p {
  font-size: 24pt;
}
```

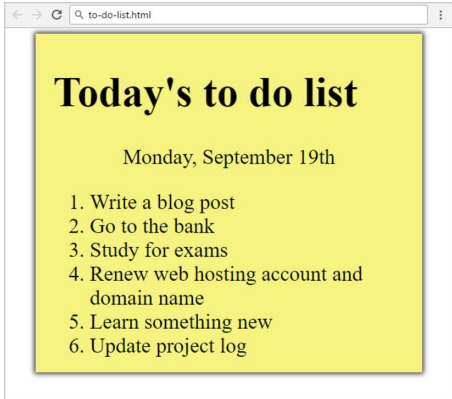
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Problem: To Do List

- Create the following page (HTML + CSS files)
- Hints:
 - Container: use `<div>`
 - Background color: `#f7f381`
 - Heading: use `<h1>`
 - Date: use `<p>`+ center it
 - List: use ``



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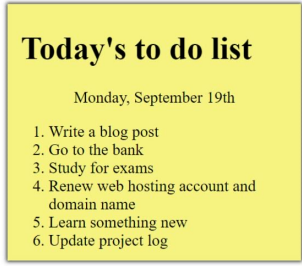
Solution: To Do List (HTML)

todolist.css


```

<!DOCTYPE html>
<html>
  <head><!-- TODO: Link the CSS here --></head>
  <body>
    <div class="my-list">
      <h1>Today's to do list</h1>
      <p>TODO: Put day-info here</p>
      <ol>TODO: Put list-item here</ol>
    </div>
  </body>
</html>

```



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Solution: To Do List (CSS)

todolist.css

```
.my-list {
  margin: 0 auto;
  padding: 8px 24px;
  width: 500px;
  font-size: 30px;
  border: 1px solid #f7f381;
  background: #f7f381;
  box-shadow: 0 0 10px 2px #333333;
}
```

todolist.css

```
.my-list ol {
  margin: 12px;
}
.my-list p {
  text-align: center;
}
```

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Inline CSS Style

- The **style** attribute in HTML elements

Attribute "style"

```
<h1 style="color:blue">This is a blue ...
</h1>
```

Property Value

```
<h2 style="color:red; font-size:2.1em">
  This is a red ...
</h2>
```

Multiple CSS declarations



This is a blue Heading



This is a red Heading

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Embedded CSS Styles in the HTML Page

- Put a `<style>` element in the HTML `<head>` section

```

<!DOCTYPE html>
<html>
<head>
  <style>
    .red {
      color:red;
    }
  </style>
</head>
</html>

```


```

<body>
  <p class="red">This is red</p>
</body>

```



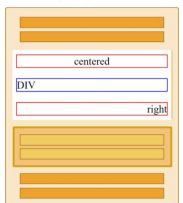
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INLINE AND BLOCK ELEMENTS

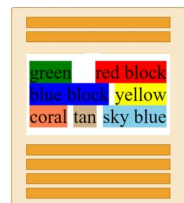
display: block



display: inline




display: inline-block



**<div> vs. **

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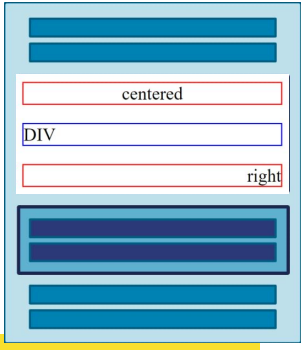
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Block Elements


- **<div>** and **<p>** are **block** elements (rectangles)
 - Fill the entire container width
 - Stack vertically one after another

```
<p style="border:1px solid red;
text-align:center">centered</p>
<div style="border:1px solid
blue">DIV</div>
<p style="border:1px solid red;
text-align:right">right</p>
```

display: block



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Inline Elements

- **** is **inline** element
 - Its shape is not always rectangular
 - Can be split across multiple lines

```
<p style="text-align:justify">
Welcome <span style="color:white;
background:blue; padding-right:3px;
padding-left:3px;">to the
University of Greenwich </span>,
good luck!</p>
```


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Inline-Block Elements

- Elements can be also **inline-block**
 - Rectangles arranged one after another
 - Just like words in a sentence


```
<div style="text-align:justify;">
  <div style="display:inline-block;
    background:green">green</div>
  <div style="display:inline-block;
    background:red">red block</div>
  ...
</div>
```




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MORE HTML PROBLEMS



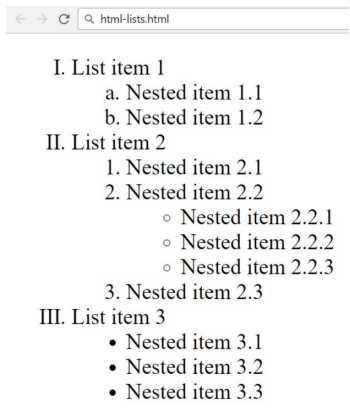
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Problem: HTML Lists

- Create a HTML page, holding nested lists, like at the example
- Hints:
 - Use `` and `` for List item 1, List item 2 and List item 3
 - Use ``, ``, `` and `` for the nested lists



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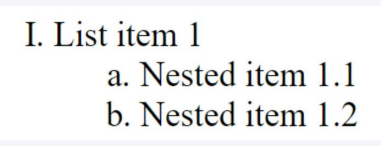
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Solution: HTML Lists


html-lists.html

```

<ol type="I">
  <li>List item 1
    <ol type="a">
      <li>Nested item 1.1</li>
      <li>Nested item 1.2</li>
    </ol>
  </li>
  <!-- TODO: put List item 2 and List item 3 here -->
</ol>
```



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Solution: HTML Lists (2)

html-lists.html

```


<li>List item 2
  <ol type="1">
    <li>Nested item 2.1</li>
    <li>Nested item 2.2
      <ul type="circle">
        <li>Nested item 2.2.1</li>
        <li><!-- TODO: put the next items here--></li>
      </ul>
    </li>
    <li>Nested item 2.3</li>
  </ol>
</li>

```

II. List item 2

1. Nested item 2.1
2. Nested item 2.2
 - Nested item 2.2.1
 - Nested item 2.2.2
 - Nested item 2.2.3
3. Nested item 2.3

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Solution: HTML Lists (3)

html-lists.html

```

<li>
  List item 3
  <ul type="disc">
    <li>Nested item 3.1</li>
    <li><!-- TODO: put the next items here --></li>
  </ul>
</li>

```

III. List item 3

- Nested item 3.1
- Nested item 3.2
- Nested item 3.3

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Summary

- HTML describe structured content (text, images, tables, figures, etc.)
- Commonly used HTML tags:
 - `<html>`, `<head>`, `<body>`, `<p>`, `<h1>`, `<h2>`, `<h3>`, ..., ``, ``, ``, `<ahref="...">`, `<imgsrc="...">`, `<div>`, ``
- `<div>` is block element
- `` is inline element
- CSS styles may be: external, inline, embedded