

Standard Web Technologies

Introduction to Web Technologies

What are Web Technologies?

Web technologies are tools and languages used to create web pages. Today, we will learn the basics of HTML, CSS, and JavaScript.

- **HTML** is like the skeleton of a web page—it holds all the elements in place.
 - **CSS** is like the clothing—it gives style to the web page.
 - **JavaScript** is the brain of the page—it adds interactivity and life to the web page.
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1: Introduction to Standard Web Technologies

HTML - Basics

Description:

HTML (**HyperText Markup Language**) is the foundational language for creating web pages. It defines **the structure** of a web page using various elements like headings, paragraphs, images, and links.

Example:

```
html
Copy code
<html>
  <head>
    <title>My First Page</title>
  </head>
  <body>
    <h1>This is a Heading</h1>
    <p>This is a paragraph of text.</p>
  </body>
</html>
```

```
html

<html>
  <head>
    <title>My First Page</title>
  </head>
  <body>
    <h1>This is a Heading</h1>
    <p>This is a paragraph of text.</p>
  </body>
</html>
```

Explanation:

HTML is **the skeleton** of every web page.

Each HTML element has a specific function, such as headings (<h1>), paragraphs (<p>), and images ().

CSS - Styling**Description:**

CSS (**Cascading Style Sheets**) is a language used to style HTML elements.

It defines **the appearance and layout** of elements on the page.

Example:

```
css
body {
  font-family: Arial, sans-serif;
}
h1 {
  color: blue;
}
p {
  color: gray;
}
```

```
css

body {
  font-family: Arial, sans-serif;
}
h1 {
  color: blue;
}
p {
  color: gray;
}
```

Explanation:

CSS allows the creation of visually appealing pages by changing colors, fonts, element layouts, and much more.

You can try how CSS code affects the page's appearance live using [CodePen](#) or [JSFiddle](#).

JavaScript - Interactivity

Description:

JavaScript is a programming language executed within web browsers.

- It is used to make web pages interactive
- modify the content of page elements,
- enable event programming (e.g., clicking on an element, mouseover events).
- It can be used for form validation, creating animations, and much more.

Example 1:

```
javascript
function showMessage() {
  alert("Hello, World!");
}
```

```
javascript

function prikaziPoruku() {
  alert("Pozdrav, svet!");
}
```

Example 2:

The following simple JavaScript code changes the text on the page when a button is clicked:

```
html
Copy code
<button onclick="changeText()">Click Me</button>
<p id="text">This is the original text.</p>

<script>
function changeText() {
    document.getElementById("text").innerHTML = "The text has been changed!";
}
</script>
```

Explanation:

JavaScript **brings dynamics** to the page, **allowing users to interact with the content** in various ways.

2: Tools for Creating Web Pages

Description:

For a start, you need a good text editor like **Visual Studio Code**.

It allows you to write and test your code.

After that, we will use browsers like Chrome or Firefox to see how our pages look.

1. HTML Editor - Visual Studio Code

- **Link:** [Visual Studio Code](#)
Visual Studio Code is one of the most popular coding editors. It supports HTML, CSS, and JavaScript, along with *many extensions that facilitate the* work.
- "HTML editors like Visual Studio Code make writing and editing code easier by providing useful features such as **automatic tag closing, code suggestions, and project structure overview**.
- Besides VS Code, Sublime Text or Notepad++ are also used.

Task 1:

Install Visual Studio Code and create a new HTML web page with the following elements:

1. A title (h1 element) with your name.
2. A paragraph (p element) describing your favorite hobby.
3. An image (img element) that shows something you love.

Discussion:

Try comparing the work in Notepad++ with the work in Visual Studio Code.

What do you notice?

2. Browsers and Developer Tools

Description:

Every browser has Developer Tools, which are very useful for debugging code.

Browsers allow you to view and test web pages in real-time.

Developer Tools are built-in tools in browsers that allow for code inspection and debugging. They can be used to inspect elements, review CSS rules, and examine JavaScript code."

Task 2:

Open Chrome Developer Tools (F12) and try changing the CSS directly in the browser.

HTML and CSS Validators

Description:

Validators allow you to check the **correctness** of HTML and CSS code according to standards. This **ensures compatibility with different browsers**.

Link: [W3C HTML Validator](#)

Using validators is crucial to ensure that your web page works properly in all browsers.

Final Exercise

Task 3:

Create a simple web page that uses HTML for structure, CSS for styling, and JavaScript for interactivity. For example, create a simple web page with the following elements:

1. A title (h1 element) with your name.
2. A paragraph (p element) describing your favorite hobby.
3. An image (img element) that shows something you love.

Style this page using CSS and add a simple JavaScript function that changes the text color when a button is clicked.

