



HTML FUNDAMENTALS

TechRacine Solutions Academy

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Study Guide

Table of Contents

Introduction to HTML.....	3
Features of HTML	3
Structure of an HTML Document	3
HTML Tags and Elements	4
Headings and Paragraphs.....	4
Formatting Tags.....	5
Links and Images	5
Lists in HTML.....	5
Tables in HTML	6
Forms in HTML.....	6
Semantic HTML.....	7
HTML with CSS and JavaScript.....	7
Example Web Page	8
Best Practices	8
Summary.....	8

Introduction to HTML

HTML stands for HyperText Markup Language. It is the standard language used to create web pages and web applications.

HTML defines the structure of a webpage using tags and elements. Every website on the internet uses HTML in some form.

HTML works together with CSS and JavaScript to create attractive and interactive websites.

HTML was created by Tim Berners-Lee and is maintained by the World Wide Web Consortium (W3C).

HTML is beginner-friendly and one of the first technologies learned in web development.

Features of HTML

HTML provides many features for creating websites and web applications.

1. Easy to Learn: HTML syntax is simple and readable.
2. Platform Independent: HTML pages work on all operating systems.
3. Browser Support: HTML is supported by all modern browsers.
4. Supports Multimedia: HTML can display images, videos, and audio.
5. Integrates with CSS and JavaScript.
6. Used for responsive and modern web design.

Structure of an HTML Document

Every HTML page follows a standard structure.

The document starts with the DOCTYPE declaration.

The <html> tag contains the complete webpage.

The <head> section stores metadata, styles, and page title.

The <body> section contains visible webpage content.

```
<!DOCTYPE html>
<html>
<head>
  <title>My First Page</title>
</head>
<body>

  <h1>Welcome to TechRacine Academy</h1>

</body>
</html>
```

HTML Tags and Elements

HTML uses tags to define webpage elements.

Most HTML tags have opening and closing tags.

Elements can contain text, images, links, and other elements.

Tags are enclosed inside angle brackets.

```
<p>This is a paragraph</p>
<h1>Main Heading</h1>
<div>Content Section</div>
```

Headings and Paragraphs

HTML provides heading tags from h1 to h6.

The h1 tag is usually the main page heading.

Paragraphs are created using the p tag.

Proper headings improve readability and SEO.

```
<h1>Main Heading</h1>
<h2>Sub Heading</h2>
<p>This is a paragraph.</p>
```

Formatting Tags

Formatting tags help style text content.

Bold, italic, underline, and highlighted text can be created using formatting tags.

These tags improve content presentation.

```
<b>Bold Text</b>
```

```
<i>Italic Text</i>
```

```
<u>Underline Text</u>
```

```
<mark>Highlighted Text</mark>
```

Links and Images

Links help users navigate between pages.

The anchor tag is used to create hyperlinks.

Images are displayed using the img tag.

The src attribute specifies the image path.

```
<a href="https://www.techracine.com">  
Visit TechRacine  
</a>
```

```

```

Lists in HTML

HTML supports ordered and unordered lists.

Ordered lists use numbers.

Unordered lists use bullets.

Lists are useful for menus, navigation, and item grouping.

```
<ul>  
  <li>PHP</li>  
  <li>MySQL</li>
```

```
</ul>
```

```
<ol>
```

```
  <li>HTML</li>
```

```
  <li>CSS</li>
```

```
</ol>
```

Tables in HTML

Tables organize data into rows and columns.

The table tag is used to create tables.

Rows are created using tr.

Headers use th and data cells use td.

```
<table border="1">
  <tr>
    <th>Name</th>
    <th>Course</th>
  </tr>

  <tr>
    <td>Arun</td>
    <td>HTML</td>
  </tr>
</table>
```

Forms in HTML

Forms collect user input from webpages.

Forms are commonly used for login pages, registration forms, and search boxes.

Input fields, buttons, dropdowns, and checkboxes are common form elements.

```
<form>
```

```
  <input type="text" placeholder="Enter Name">
```

```
  <input type="email" placeholder="Enter Email">
```

```
  <button type="submit">
```

```
Submit
</button>
```

```
</form>
```

Semantic HTML

Semantic HTML uses meaningful tags that describe content clearly.

Examples include header, footer, article, section, and nav.

Semantic HTML improves accessibility and search engine optimization.

```
<header>
  Website Header
</header>

<section>
  Main Content
</section>

<footer>
  Footer Content
</footer>
```

HTML with CSS and JavaScript

HTML creates webpage structure.

CSS is used for styling and layout design.

JavaScript adds interactivity and dynamic behavior.

Modern websites use all three technologies together.

```
<style>
h1{
  color:blue;
}
</style>

<script>
alert('Welcome');
</script>
```

Example Web Page

The following example shows a simple complete webpage.

```
<!DOCTYPE html>
<html>
<head>
  <title>Student Portal</title>
</head>
<body>

  <h1>Welcome Students</h1>

  <p>Learning HTML Basics</p>

</body>
</html>
```

Best Practices

Use proper indentation for clean code.

Always close HTML tags correctly.

Use semantic HTML whenever possible.

Optimize images for faster loading.

Write meaningful page titles and headings.

Keep HTML code organized and readable.

Summary

HTML is the foundation of web development.

It helps developers create structured and accessible webpages.

HTML works together with CSS and JavaScript to build modern websites.

Learning HTML fundamentals is essential for frontend and full-stack development.