



HTML5



Book 1.

Guide to HTML - Master Your Web Development.

One of the most used languages for creating web pages or websites is HTML. The most important language for a programmer to learn in order to become a great web designer . "Guide to HTML - Master your Web Development" . This book was written with students/developers in mind to help them understand the fundamentals of HTML programming. It contains all the instructions you need to begin studying Hypertext Markup Language. **Happy Coding!**

Created by Modcom Institute of Technology.

Table of Contents

Guide to HTML - Master Your Web Development.....	1
Overview.....	4
Introduction.....	5
What You Can Do with HTML.....	6
What This Book Covers.....	6
Getting Started.....	6
Creating Your First HTML Document.....	7
Step 1: Creating the HTML file.....	7
Step 2: Type some HTML code.....	7
Step 3: Saving the file.....	7
Explanation of code.....	8
HTML Tags and Elements.....	8
HTML Head.....	9
HTML Meta.....	10
HTML Headings.....	10
Organizing Content with Headings.....	10
Importance of Headings.....	11
HTML Paragraphs.....	12
Creating Line Breaks.....	12
Formatting Text with HTML.....	12
Practical Example.....	13
Full Code.....	14
Student Assignment.....	15
Working with HTML Lists.....	16
HTML Unordered Lists.....	16
HTML Ordered Lists.....	17
Description/Definition Lists in HTML.....	18
Format of description Lists:.....	18
Example of Description/Definition List.....	19
Practice Example.....	19
Student Assignment.....	21
HTML Attributes.....	21
What are Attributes.....	21
Example.....	22
Inserting Images into Web Pages.....	22
Setting the Width and Height of an Image.....	23
Practical Example.....	24
Student Practice.....	25
HTML Tables.....	26
Common HTML Table tags.....	26
Practical Example.....	27
Spanning Multiple Rows and Columns.....	28
Student Assignment.....	31
HTML Forms.....	32
What is HTML Form.....	32
Practical Example.....	33
Student Practice.....	35
HTML Links.....	35

Creating Links in HTML.....	35
HTML Link Syntax.....	36
Setting the Targets for Links.....	36
Absolute URLs vs. Relative URLs.....	37
Practical Example.....	37
Example.....	40
Check the Site here.....	42
Student Practice.....	42
HTML Entities.....	42
What is HTML Entity?.....	42
Frequently Used HTML Character Entities.....	43
Practice Questions.....	44
Reference and More useful Links.....	45

Overview

HTML is one of the languages that is most frequently used to create web pages or websites. The language that a programmer should master in order to become a master web designer. Students and developers who want to learn the basics of HTML programming should read "Guide to HTML - Master your Web Development." All the instructions you need to start learning Hypertext Markup Language are included in this book.

For advanced HTML/CSS, Please check our Book 2

Introduction

HTML stands for HyperText Markup Language. HTML is the basic building block of World Wide Web.

Hypertext is text displayed on a computer or other electronic device with references to other text that the user can immediately access, usually by a mouse click or key press.

Apart from text, hypertext may contain tables, lists, forms, images, and other representational elements. It is an easy-to-use and flexible format to share information over the Internet.

Markup languages use sets of markup tags to characterize text elements within a document, which gives instructions to the web browsers on how the document should appear.

HTML was originally developed by Tim Berners-Lee in 1990. He is also known as the father of the web. In 1996, the World Wide Web Consortium (W3C) became the authority to maintain the HTML specifications. HTML also became an international standard (ISO) in 2000. HTML5 is the latest version of HTML. HTML5 provides a faster and more robust approach to web development.

What You Can Do with HTML

There are lot more things you can do with HTML.

- You can publish documents online with text, images, lists, tables, etc.
- You can access web resources such as images, videos or other HTML document via hyperlinks.
- You can create forms to collect user inputs like name, e-mail address, comments, etc.
- You can include images, videos, sound clips, flash movies, applications and other HTML documents directly inside an HTML document.
- You can create offline version of your website that work without internet.
- You can store data in the user's web browser and access later on.
- You can find the current location of your website's visitor.

What This Book Covers

This HTML book series covers all the fundamentals of HTML, such as the concept of elements and attributes, how to format text using HTML tags, how to add information to the document, how to insert images and tables, how to make lists and forms etc

Getting Started

You will discover how simple it is to construct an HTML document or a web page in this book. You only need a web browser and a simple text editor to start coding HTML.

Well, let's get started with creating your first HTML page.

Creating Your First HTML Document

Let's walk through the following steps. At the end of this section, you will have made an HTML file that displays "Hello world" message in your web browser.

Step 1: Creating the HTML file

Open up your computer's plain text editor and create a new file. The file should have a .html extension. I.e Lesson1.html. NB: Its important to have your files in One Folder.

Step 2: Type some HTML code

Start with an empty window and type the following code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>A Simple HTML document</title>
</head>
<body>
  <p>Hello World!</p>
</body>
</html>
```

Step 3: Saving the file

Now save the file on your Folder as "myfirstpage.html ".

To open the file in a browser. Navigate to your file then double click on it. It will open in your default Web browser. If it does not, open your browser and drag the file to it.

Alternatively you can Right click inside the File where your program is and select Open in Browser, NB: This depends on the HTML Editor you are using.

Explanation of code

You might think what that code was all about. Well, let's find out.

- The first line `<!DOCTYPE html>` is the document type declaration. It instructs the web browser that this document is an HTML5 document. It is case-insensitive.
- The `<head>` element is a container for the tags that provides information about the document, for example, `<title>` tag defines the title of the document.
- The `<body>` element contains the document's actual content (paragraphs, links, images, tables, and so on) that is rendered in the web browser and displayed to the user.

You will learn about the different HTML elements in detail in the upcoming chapters. For now, just focus on the basic structure of the HTML document.

HTML Tags and Elements

HTML is written in the form of HTML elements consisting of markup tags. These markup tags are the fundamental characteristic of HTML. Every markup tag is composed of a keyword, surrounded by angle brackets, such as `<html>`, `<head>`, `<body>`, `<title>`, `<p>`, and so on.

HTML tags normally come in pairs like `<html>` and `</html>`. The first tag in a pair is often called the opening tag (or start tag), and the second tag is called the closing tag (or end tag).

An opening tag and a closing tag are identical, except a slash (/) after the opening angle bracket of the closing tag, to tell the browser that the command has been completed.

In between the start and end tags you can place appropriate contents. For example, a paragraph, which is represented by the `p` element, would be written as:

```
<p>This is a paragraph.</p>
```

```
<p> This is <b>another</b> paragraph. </p>
```

HTML Head

The `<head>` element primarily is the container for all the head elements, which provide extra information about the document (metadata), or reference to other resources that are required for the document to display or behave correctly in a web browser.

The HTML elements that can be used inside the `<head>` element are: `<title>`, `<base>`, `<link>`, `<style>`, `<meta>`, `<script>` and the `<noscript>` element.

Below we have HTML head tag with title inside.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>This is a Title</title>
</head>
<body>
  <p>Put some text here...</p>
</body>
</html>
```

HTML Meta

The `<meta>` tags are typically used to provide structured metadata such as a document's *keywords*, *description*, *author name*, *character encoding*, and other metadata. Any number of meta tags can be placed inside the head section of an HTML document.

Below is a meta tag showing the UTF-8 Character set, meta tags are put in `<head>` tags.

```
<meta charset="utf-8">
```

HTML Headings

Organizing Content with Headings

Headings help in defining the hierarchy and the structure of the web page content.

HTML offers six levels of heading tags, `<h1>` through `<h6>`; the lower the heading level number, the greater its importance — therefore `<h1>` tag defines the most important heading, whereas the `<h6>` tag defines the least important heading in the document.

By default, browsers display headings in larger and bolder font than normal text. Also, `<h1>` headings are displayed in largest font, whereas `<h6>` headings are displayed in smallest font.

```
<h1>Heading level 1</h1>
```

```
<h2>Heading level 2</h2>
```

```
<h3>Heading level 3</h3>
```

```
<h4>Heading level 4</h4>
```

```
<h5>Heading level 5</h5>
```

```
<h6>Heading level 6</h6>
```

Output

Heading level 1

Heading level 2

Heading level 3

Heading level 4

Heading level 5

Heading level 6

Importance of Headings

- HTML headings provide valuable information by highlighting important topics and the structure of the document, so optimize them carefully to improve user engagement.
- Don't use headings to make your text look BIG or bold. Use them only for highlighting the heading of your document and to show the document structure.
- Since search engines, such as Google, use headings to index the structure and content of the web pages so use them very wisely in your webpage.
- Use the `<h1>` headings as main headings of your web page, followed by the `<h2>` headings, then the less important `<h3>` headings, and so on.

HTML Paragraphs

Paragraph element is used to publish text on the web pages.

Paragraphs are defined with the `<p>` tag. Paragraph tag is a very basic and typically the first tag you will need to publish your text on the web pages.

Here's an example:

```
<p>This is a paragraph.</p>
```

```
<p>This is another paragraph.</p>
```

Creating Line Breaks

The `
` tag is used to insert a line break on the web page.

Since the `
` is an empty element, so there is no need of corresponding `</br>` tag.

```
<p>This is a paragraph <br> with line break.</p> <p>This is  
<br>another paragraph <br> with line breaks.</p>
```

Formatting Text with HTML

HTML provides several tags that you can use to make some text on your web pages to appear differently than normal text, for example, you can use the tag `` to make the text bold, tag `<i>` to make the text italic, tag `<mark>` to highlight the text, tag `<code>` to display a fragment of computer code, tags `<ins>` and `` for marking editorial insertions and deletions, and more.

The following example demonstrates the most commonly used formatting tags in action. Now, let's try this out to understand how these tags basically work:

```
<p>This is <b>bold text</b>.</p>
```

```
<p>This is <strong>strongly important text</strong>.</p>
```

<p>This is <i>italic text</i>.</p>
<p>This is emphasized text.</p>
<p>This is <mark>highlighted text</mark>.</p>
<p>This is <code>computer code</code>.</p>
<p>This is <small>smaller text</small>.</p>
<p>This is _{subscript} and ^{superscript}
text.</p>
<p>This is deleted text.</p>
<p>This is <ins>inserted text</ins>.</p>

Practical Example.

This is my first heading

This is my first heading

This is my first heading

This is my first heading

This is my first heading

This is my first heading

Welcome To Sarova Group

HomeLand

Lorem, ipsum dolor sit amet consectetur adipisicing elit. Illum doloremque qui, fuga quidem, iusto, debitis provident amet sed quae odio dolor nemo libero harum tempore maiores quos. Delecta ab architecto.

Town Land

Lorem, ipsum dolor sit amet consectetur adipisicing elit. Eligendi illum totam molestiae culpa magnam laudantium deserunt iure excepturi quisquam ea quo, odio natus harum aperiam sed, atque debitis in quibusdam.

City Land

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Rem minima aspernatur earum nesciunt esse, recusandae aliquam enim voluptates quae, molestias fugit sint temporibus. A porro laudant quis, eos aut nihil?

City Land

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Rem minima aspernatur earum nesciunt esse, recusandae aliquam enim voluptates quae, molestias fugit sint temporibus. A porro laudant quis, eos aut nihil?

Modcom

Welcome To Modcom

We are happy to see you

Come again

Anytime

Welcome To Modcom

Full Code.

In below Program we demonstrate the use of headings and paragraphs in HTML.

Create a HTML file and type this code inside.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>
<!-- This is heading tag -->
<h1>This is my first heading </h1>
<h2>This is my first heading </h2>
<h3>This is my first heading </h3>
<h4>This is my first heading </h4>
<h5>This is my first heading </h5>
<h6>This is my first heading </h6>

<!-- center tag -->
<!-- This here u can see what we call nesting of tags -->
<center><h2>Welcome To Sarova Group</h2></center>
<h2>HomeLand</h2>
<!-- Paragraphs -->
<p>Lorem, ipsum dolor sit amet consectetur dolor nemo libero harum tempore maiores
quos. Delectus, ab architecto.</p>

<h3>Town Land</h3>
<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Eligendi illum totam
molestiae culpa magnam laudantium de.</p>

<h4>City Land</h4>
<p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Rem minima aspernatur
earum nesciunt esse, recusandae aliquil?</p>

<h4>City Land</h4>
<p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Rem minima aspernatur
earum nesciunt esse, recusandae aut nihil?</p>

<!-- formatting tags -->
<!-- We are going to include a break tag for spacing..abbreviated by br -->
<u>Modcom</u><br>
<b>Welcome To Modcom</b><br>
```

```
<i>We are happy to see you</i><br>
<sub>Come again</sub><br>
<sup>Anytime</sup><br>
<marquee behavior="" direction="right">Welcome To Modcom</marquee>
</body>
</html>
```

Student Assignment.

Practice by creating a HTML program to out below design

Westorn Hotel

Lorem ipsum dolor sit amet consectetur adipisicing elit. Corporis vel sapiente harum expedita molestiae. Libero ea quas dolorem sint deleniti animi atque autem veniam enim quasi iste, ipsum, eligendi magni!

Objective

Lorem ipsum dolor sit amet consectetur, adipisicing elit. Quidem eligendi alias, nihil necessitatibus, rerum et beatae maxime, sed quam expedita quia quos possimus corrupti accusantium provident sit tempora delectus ratione.

Mission

Lorem ipsum dolor sit amet consectetur, adipisicing elit. Quidem eligendi alias, nihil necessitatibus, rerum et beatae maxime, sed quam expedita quia quos possimus corrupti accusantium provident sit tempora delectus ratione.

Vision

Lorem ipsum dolor sit amet consectetur, adipisicing elit. Quidem eligendi alias, nihil necessitatibus, rerum et beatae maxime, sed quam expedita quia quos possimus corrupti accusantium provident sit tempora delectus ratione.

Comments

Lorem ipsum dolor sit amet consectetur adipisicing elit. Reiciendis, optio necessitatibus nam ad et id quasi accusantium rem ullam nisi rerum debitis. Reprehenderit obcaecati rem aspernatur, laudantium consequuntur ut modi.

Products you may also like

Lorem ipsum dolor sit amet consectetur adipisicing elit. Reiciendis, optio necessitatibus nam ad et id quasi accusantium rem ullam nisi rerum debitis. Reprehenderit obcaecati rem aspernatur, laudantium consequuntur ut modi.

Accomodation

Lunch No Discounts Allowed

Opening Date 28TH

Welcome Again

Working with HTML Lists

HTML lists are used to present list of information in well formed and semantic way. There are three different types of list in HTML and each one has a specific purpose and meaning.

- **Unordered list** — Used to create a list of related items, in no particular order.
- **Ordered list** — Used to create a list of related items, in a specific order.
- **Description list** — Used to create a list of terms and their descriptions.

HTML Unordered Lists

An unordered list created using the `` element, and each list item starts with the `` element.

The list items in unordered lists are marked with bullets. Here's an example:

```
<ul>
  <li>Chocolate Cake</li>
  <li>Black Forest Cake</li>
  <li>Pineapple Cake</li>
</ul>
```

Output

- 
- Chocolate Cake
 - Black Forest Cake
 - Pineapple Cake

Also we can change the bullets type by adding the **type** attribute

There three types namely **disc**, **circle**, **square**

Example


```
<ul type="disc">  
</ul>
```

HTML Ordered Lists

An ordered list created using the `` element, and each list item starts with the `` element. Ordered lists are used when the order of the list's items is important.

The list items in an ordered list are marked with numbers. Here's an example:

```
<ol>  
  <li>Fasten your seatbelt</li>  
  <li>Starts the car's engine</li>  
  <li>Look around and go</li>  
</ol>
```

1. Fasten your seatbelt
2. Starts the car's engine
3. Look around and go

Also we can change the ordering of the list

Below indicates the numbering type:

- 'a' indicates lowercase letters,
- 'A' indicates uppercase letters,
- 'i' indicates lowercase Roman numerals,
- 'I' indicates uppercase Roman numerals,
- and '1' indicates numbers (default).

- Example using roman number(small caps)

```
<ol type="i">  
  <li>Chocolate Cake</li>  
  <li>Black Forest Cake</li>  
  <li>Pineapple Cake</li>  
</ol>
```

Output.

- i.Chocolate Cake
- ii.Black Forest Cake
- iii.Pineapple Cake

Description/Definition Lists in HTML

A description list is a list of terms, with a description of each term. Lists in HTML are used for specifying particular information in list form.

Description Lists are used for:

- To give definitions to particular terms that we have defined in our lists.
- To have a dictionary type of format(term and definition of term)

Format of description Lists:

- Description Lists are used with description list tag <dl> tag in html.
- In <dl> tag we have description terms it is represented as <dt> tag Here we do not use li tag as Other Lists. In <dt> write terms of the data. We can have different terms with the help of <dl>tag.
- In this we use data description tag <dd> we use this tag for defining the term that we have stated. for eg. If we declare term as Pizza then we can have description as Pizza is a food item.

Example of Description/Definition List

```
<!DOCTYPE html>
<html>
<body>
<h1>The dl, dd, and dt elements</h1>
<p>These three elements are used to create a description list:</p>

<dl>
  <dt>Coffee</dt>
  <dd>Black hot drink</dd>

  <dt>Milk</dt>
  <dd>White cold drink</dd>
</dl>

</body>
</html>
```

Output

The dl, dd, and dt elements

These three elements are used to create a description list:

Coffee

Black hot drink

Milk

White cold drink

Practice Example

Create a HTML file and type this code inside.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Lily Academy</title>
</head>
<body>
<h1>Lily Academy</h1>
<h3>The Learning Environment in Kenya</h3>
<marquee behavior="" direction="">Welcome</marquee>
```

```
<h4>Message From Principal</h4>
```

```
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Voluptate beatae commodi doloribus? Recusandae quisquam nead.</p>
```

```
<h4>School Objective</h4>
```

```
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Suscipit tempora fugiat culpa pariatur ad, voluptatibus quas eaque quillam!</p>
```

```
<h3>Curricular Activities</h3>
```

```
<!-- ordered List with a,--> b,--> c,--> d ordering -->
```

```
<ol type="a">
```

```
<li>Grade 1</li>
```

```
<li>Grade 2</li>
```

```
<li>Grade 3</li>
```

```
<li>Grade 4</li>
```

```
<li>Grade 4</li>
```

```
</ol>
```

```
<h3>Extra Curriculum</h3>
```

```
<!-- unordered List with disc bullets, others types include square and circle -->
```

```
<ul type = "disc">
```

```
<li>Swimming</li>
```

```
<li>Skating</li>
```

```
<li>Drama</li>
```

```
<li>Games</li>
```

```
<li>Games</li>
```

```
</ul>
```

```
<!-- definition/description List -->
```

```
<dl>
```

```
<dt>Events</dt>
```

```
<dd>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Unde, eat porro!</dd>
```

```
<dt>Comments</dt>
```

```
<dd>Lorem ipsum dolor sit amet, consectetur adipisicing sseeat porro!</dd>
```

```
</dl>
```

```
</body>
```

```
</html>
```

Student Assignment

FastMatt Supermarkets

Quick, Cheap and Affordable

Fast Moving Foods

- a. Unga
- b. White Bread 2
- c. Brown Bread
- d. Milk

Furnitures

- Dining Table
- Chairs
- Wardrobe
- Beds

Fruits

1. Green Apple
2. Red Apples
3. Water Melons
4. Passion Fruits

Advertisements

Latest

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Unde, esse iure omnis culpa consequuntur sed dolor saepe nostrum beatae similique totam officiis consectetur exercitationem, dolorem deserunt, minus quam placeat porro!

Notices

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Unde, esse iure omnis culpa consequuntur sed dolor saepe nostrum beatae similique totam officiis consectetur exercitationem, dolorem deserunt, minus quam placeat porro!

Gifts and Offers

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Unde, esse iure omnis culpa consequuntur sed dolor saepe nostrum beatae similique totam officiis consectetur exercitationem, dolorem deserunt, minus quam placeat porro!

HTML Attributes

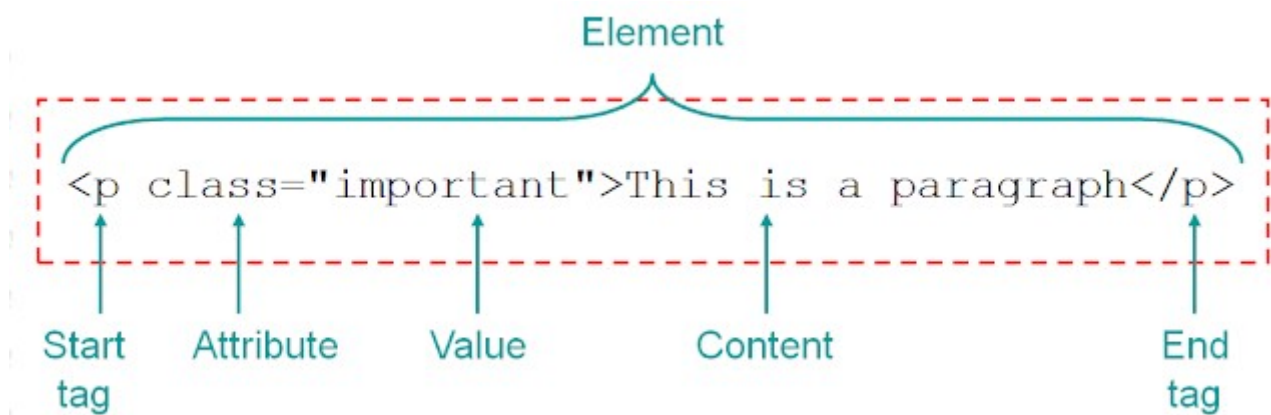
What are Attributes

Attributes define additional characteristics or properties of the element such as width and height of an image. Attributes are always specified in the start tag (or opening tag) and usually consists of name/value pairs like `name="value"`. Attribute values should always be enclosed in quotation marks.

Also, some attributes are required for certain elements. For instance, an `` tag must contain a `src` and `alt` attributes. Let's take a look at some examples of the attributes usages:



Example



Above shows a paragraph with an attribute named **class** and **value important**

Inserting Images into Web Pages

Images enhance visual appearance of the web pages by making them more interesting and colorful.

The `` tag is used to insert images in the HTML documents. It is an empty element and contains attributes only. The syntax of the `` tag can be given with:

```

```

Before placing the images in HTML, we need to create a Folder where our images will be stored.

TODO.

In your working folder create a Folder named **images**.

Inside the images folder put 5 images.(Download images from the internet)

The following example inserts three images on the web page:

```



```

Each image must carry at least two attributes: the **src** attribute, and an **alt** attribute.

The **src** attribute tells the browser where to find the image. Its value is the URL of the image file.(NB: in this example the src points to images folder where the images are located)

Whereas, the **alt** attribute provides an alternative text for the image, if it is unavailable or cannot be displayed for some reason. Its value should be a meaningful substitute for the image.

Setting the Width and Height of an Image

The **width** and **height** attributes are used to specify the width and height of an image.

The values of these attributes are interpreted in pixels by default.

```



```

Practical Example

In this practical Example you will learn how to place images in your HTML page and place a heading, paragraph and a List below the images.

Create a HTML file and type this code inside.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>My Players</title>
</head>
<body>
<h1>My Favourite Players</h1>

<h3>Player 1</h3>
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Tempore aut ipii?</p>
<ol>
  <li>Born: 1998</li>
  <li>Team: The Starlets</li>
  <li>Height: 1.5</li>
</ol>
<hr>

<h3>Player 2</h3>
<p>Lorem ipsum dolor, sit amet consectetur adipisicing elit. Nemo magni expedit. </p>
<ol>
  <li>Born: 1996</li>
  <li>Team: The Warriors</li>
  <li>Height: 1.5</li>
</ol>
<hr>

<h3>Player 3</h3>
<p>Lorem ipsum dolor sit amet consectetur, adipisicing elit. Aut laudant. </p>
<ol>
  <li>Born: 1998</li>
  <li>Team: The Blues</li>
  <li>Height: 1.5</li>
</ol>
<hr>

<h3>Player 4</h3>
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Explicabo impedit odio fug?
</p>
<ol>
  <li>Born: 1998</li>
```



```
<li>Team: The Starlets</li>
<li>Height: 1.5</li>
</ol>

</body>
</html>
```

Student Practice

Create HTML program to display the best cities.

Best Cities in Africa

Kigali, Rwanda



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Voluptate ipsam placeat repellat amet tenetur consequatur ea autem eum, non repudiandae nemo optio molestiae sequi magni aperiam exercitationem consectetur ab blanditiis.

Cairo, Egypt



Lorem ipsum dolor sit amet consectetur adipiscing elit. Id blanditiis doloribus atque perferendis voluptatum? Quam illum, nihil asperiores libero et in maiores molestiae, voluptatum iusto optio, deleniti a voluptatem provident.

Daresalam, TZ



Lorem ipsum dolor sit amet consectetur, adipiscing elit. Dolore harum voluptate, assumenda tenetur distinctio eos illo repudiandae rem qui. Sunt nulla numquam tenetur omnis modi odit esse nesciunt eveniet atque.

1. President: Suluhu
2. Population: 63M
3. Continent: Africa
4. Worth: \$104B

Lagos, Nigeria



Lorem ipsum dolor sit amet consectetur, adipiscing elit. Dolore harum voluptate, assumenda tenetur distinctio eos illo repudiandae rem qui. Sunt nulla numquam tenetur omnis modi odit esse nesciunt eveniet atque.

1. President: Buhari
2. Population: 213M
3. Continent: Africa
4. Worth: \$504B



HTML Tables

HTML table allows you to arrange data into rows and columns. They are commonly used to display tabular data like product listings, customer's details, financial reports, and so on.

You can create a table using the `<table>` element. Inside the `<table>` element, you can use the `<tr>` elements to create rows, and to create columns inside a row you can use the `<td>` elements. You can also define a cell as a header for a group of table cells using the `<th>` element.

The following example demonstrates the most basic structure of a table.

Common HTML Table tags

Other tags include:

- `<table>` - create a table
- `<tr>` - represents rows
- `<td>` - used to create data cells

- <th> - used to add table headings
- <caption> - used to insert captions
- <thead> - adds a separate header to the table
- <tbody> - shows the main body of the table
- <tfoot> - creates a separate footer for the table

Practical Example

In this practical example you will learn to create a table using <table>, <tr>, <th>, <td> tags.

Create a HTML file and type this code inside.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>
<h2>Agri Choice</h2>
<table border="1" width = "80%">
<tr>
<th>Product</th>
<th>Cost</th>
<th>Quantity</th>
<th>Contact Person</th>
</tr>
<tr>
<td>Maize</td>
<td>80/kg</td>
<td>40</td>
<td>254729225***</td>
</tr>
<tr>
<td>Beans</td>
<td>80/kg</td>
<td>40</td>
<td>254729225***</td>
</tr>
<!-- Students cab practice many rows until you are satisfied they got the -->
<tr>
<td>Carrots</td>
<td>40/kg</td>
<td>70</td>
<td>254729225***</td>
</tr>
</table>
```

```
</body>
</html>
```

Tables do not have any borders by default. You can use the **border** attribute. Also, table cells are sized just large enough to fit the contents by default, you can add the width attribute to stretch the table width.

Spanning Multiple Rows and Columns

Spanning allow you to extend table rows and columns across multiple other rows and columns.

Normally, a table cell cannot pass over into the space below or above another table cell. But, you can use the `rowspan` or `colspan` attributes to span multiple rows or columns in a table.

Let's try out the following example to understand how **colspan** basically works:

Below program is continuation or an improvement of previous program, here we add colspan and rowspan.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>
<h2>Agri Choice</h2>
<p>For Best Farm Produce</p>
<p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Architecto explicabo.</p>
<table border="1" width="80%">
<tr>
<th>Product</th>
<th>Cost</th>
<th>Quantity</th>
<th>Contact Person</th>
</tr>
<tr>
<td>Maize</td>
<td>80KES/kg</td>
<td>40</td>
```

```

    <td>254729225***</td>
</tr>
<tr>
    <td>Beans</td>
    <td>80KES/kg</td>
    <td>40</td>
    <td>254729225***</td>
</tr>
<!-- Students cab practice many rows until you are satisfied they got the -->
<tr>
    <td>Carrots</td>
    <td>40KES/kg</td>
    <td>70</td>
    <td>254729225***</td>
</tr>

<!-- COLSPAN -->
<!--Please note we had 4 columns in the begining, below we do 2 columns instead of 4, we
then need to colspan = 2
for every colums so that to fit the 4-->
<tr>
    <td colspan="2">Packed Fruits</td>
    <td colspan="2">300KES</td>
</tr>

<tr>
    <td colspan="2">Packed Lemon</td>
    <td colspan="1">500KES</td>
    <td colspan="1">20% OFF</td>
</tr>
</table>
</body>
</html>

```

Let's try out the following example to understand how **rowspan** basically works:

Create a HTML file and type this code inside.

```

<!DOCTYPE html>

<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>

```

```

<h2>Agri Choice</h2>
<p>For Best Farm Produce</p>
<p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Architecto explic.</p>

<!-- ROW SPAN -->
<!-- Here we create a new table to do a row span -->
<!-- Below we see that the Juice crate and soda crate cost the same, we can row span that
-->
<h3>More..</h3>
<table border="1" width="100%">
<tr>
  <th>Id</th>
  <th>Name</th>
  <th>Cost</th>
</tr>

<tr>
  <td>1001</td>
  <td>Delmonte</td>
  <td>200KES</td>
</tr>

<tr>
  <td>1002</td>
  <td>Juice Crate</td>
  <td rowspan="2">300KES</td>
</tr>

<tr>
  <td>1002</td>
  <td>Soda Crate</td>
  <!-- <td>300KES</td> -->
</tr>
</table>
</body>
</html>

```

Student Assignment

Employee Register

Name	Job Title	Department	Leave Date	Active
Steve Johns	Software Developer	IT	2023/05/05	No
Eric Hales	Accountant	Business	2023/06/05	Yes
Mary Green	Marketer	Business	2024/05/05	Yes
Ann Joseph	Software Developer	IT	2023/09/05	No
Tom Jeremy		CEO		
Agnes Thomas		Manager - ICT		

HTML Forms

What is HTML Form

HTML Forms are required to collect different kinds of user inputs, such as contact details like name, email address, phone numbers, or details like credit card information, etc.

Forms contain special elements called controls like inputbox, date, checkboxes, radio-buttons, submit buttons, etc. Users generally complete a form by modifying its controls e.g. entering text, selecting items, etc. and submitting this form to a web server for further processing.

This part describes the different types for the HTML `<input>` element.

type=" "	Description
text	Defines a one-line text input field
password	Defines a one-line password input field
submit	Defines a submit button to submit the form to server
reset	Defines a reset button to reset all values in the form.
radio	Defines a radio button which allows select one option.
checkbox	Defines checkboxes which allow select multiple options form.
button	Defines a simple push button, which can be programmed to perform a task on an event.
file	Defines to select the file from device storage.

type=" "	Description
color	Defines an input field with a specific color.
date	Defines an input field for selection of date.
datetime-local	Defines an input field for entering a date without time zone.
email	Defines an input field for entering an email address.
month	Defines a control with month and year, without time zone.
number	Defines an input field to enter a number.
url	Defines a field for entering URL
week	Defines a field to enter the date with week-year, without time zone.
search	Defines a single line text field for entering a search string.
tel	Defines an input field for entering the telephone number.

Practical Example

In this practical example you will learn how to create a HTML form.

Create a HTML file and type this code inside.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
```

```

</head>
<body>
<h2>HTML FORMS</h2>
<form action="">
<fieldset>
<legend>Personal Details</legend>
<input type="text" name="" id="" placeholder="Your Name"><br><br>
<input type="number" placeholder="Your ID Number"><br><br>
<input type="email" name="" id="" placeholder="Your Email"><br><br>
<input type="password" name="" id="" placeholder="Your Password"><br><br>
</fieldset>
<br>

<fieldset>
<label for="">Your Interests</label> <br>
<input type="checkbox" name="" id="">Football<br>
<input type="checkbox" name="" id="">Volleyball<br>

<label for="">Your Gender</label> <br>
<input type="radio" name="" id="">Male
<input type="radio" name="" id="">Female<br>

<label for="">Your PIC</label> <br>
<input type="file" name="" id=""><br><br>

<label for="">Select Course</label> <br>
<select name="" id="">
<option value="">Choose course</option>
<option value="">Comp science</option>
<option value="">Engineering</option>
<option value="">Medicine</option>
</select><br>
<br>
</fieldset>
<br>
<fieldset>
<label for="">Leave a Comment</label> <br>
<textarea name="" id="" cols="20" rows="05"></textarea>
</fieldset>

<input type="submit" value="Make Application"><br>
<input type="reset" name="" id=""><br>
</form>
</body>
</html>

```

Student Practice

IT CONSULTANT APPLICATION FORM

Please make sure you fill out the form below*

CONTACT DETAILS

Enter name

Enter telephone nnumber

Enter Email

PERSONAL DETAILS

Your Age

Gender
Male

What gave you the motivation to apply

PICK YOUR FAVOURITE LANGUAGE

JAVA ☐ HTML ☐ SQL ☐

Submit

HTML Links

Creating Links in HTML

A link or hyperlink is a connection from one web resource to another. Links allow users to move seamlessly from one page to another, on any server anywhere in the world.

A link has two ends, called anchors. The link starts at the source anchor and points to the destination anchor, which may be any web resource, for example, an image, an audio or video clip, a PDF file, an HTML document or an element within the document itself, and so on.

By default, links will appear as follow in most of the browsers:

- An [unvisited link](#) is underlined and blue.

- A [visited link](#) is underlined and purple.
- An [active link](#) is underlined and red.

HTML Link Syntax

Links are specified in HTML using the `<a>` tag.

A link or hyperlink could be a word, group of words, or image.

```
<a href="url">Text link</a>
```

Anything between the opening `<a>` tag and the closing `` tag becomes the part of the link that the user sees and clicks in a browser. Here are some examples of the links:

Lets look at a simple Example of External Links(Links that Link outside our website).

```
<a href="https://www.google.com/">Google Search</a>
```

```
<a href="https://www.gmail.com/">GMAIL</a>
```

The `href` attribute specifies the target of the link. Its value can be an absolute or relative URL.

An absolute URL is the URL that includes every part of the URL format, such as protocol, host name, and path of the document, e.g., `https://www.google.com/`.

Setting the Targets for Links

The `target` attribute tells the browser where to open the linked document.

There are four defined targets, and each target name starts with an underscore(`_`) character:

- `_blank`— Opens the linked document in a new window or tab.

- `_parent`— Opens the linked document in the parent window.
- `_self`— Opens the linked document in the same window or tab as the source document. This is the default, hence it is not necessary to explicitly specify this value.
- `_top`— Opens the linked document in the full browser window.

Absolute URLs vs. Relative URLs

Both examples above are using an **absolute URL** (a full web address) in the href attribute.

A local link (a link to a page within the same website) is specified with a **relative URL** (without the "https://www" part):

`<h2>Absolute URLs</h2>`

`<p>W3C</p>`

`<p>Google</p>`

`<h2>Relative URLs</h2>`

`<p>HTML Images</p>`

`<p>HTMLTutorial</p>`

Practical Example

In this Example we will create a website for **Awesome Furnitures**.

Create a HTML File named **home.html**, and type below program inside.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
```

```

<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>
<h1>Awesome Furnitures</h1>
<p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Corrupti consectetur enim
mollitia. Alias nihil assumenda ullam nisi esse harum, id ipsa dicta cum, unde
necessitatibus. Accusamus animi cupiditate vitae officia.</p>
<br>
<a href="">Home</a> /
<a href="">Products</a> /

<br>

<h2>Welcome to Awesome Furnitures</h2>
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Minus earum accusantium sit
placeat blanditiis est enim tempora q maiores?</p>

<h2>We have Best prices!</h2>
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Iste numquam vero fugiat
voluptatem laboriosam ipsa illo haruore.</p>

<h2>We value of Clients</h2>
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Libero eum beatae suscipit
eligendi, obcaecati ratione minus cuoremque, sed!</p>
<h2>Thank you</h2>
</body>
</html>

```

Create a HTML File named **products.html**, and type below program inside.

Downloads furniture images from Google or <https://modcom.co.ke/pics/>

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Document</title>
</head>
<body>
<h1>Awesome Furnitures</h1>
<p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Corrupti consectetur enim mollitia. Alias nihil assumenda ullam niate vitae officia.</p>
<br>
<a href="">Home</a> /
<a href="">Products</a> /
<br>
<h3>Nice Sofa</h3>

<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex puri nisi eveniet aliquam?</p>
<h3>America Sofa</h3>

<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex eveniet aliquam?</p>
<h3>Japannese Sofa</h3>

<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex pl eveniet aliquam?</p>

<h3>Great Sofa</h3>

<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex plact aliquam?</p>

<h3>Nice Sofa</h3>

<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex pveniet aliquam?</p>

<h2>Thank you</h2>
</body>
</html>
```

Above we have created two pages namely home.html and products.html

Each of the pages have 2 Links as shown below.

```
<a href="">Home</a> /  
<a href="">Products</a> /
```

Now Its time To Link the Pages, Inside the **href attribute of the Link** type the the respective page to link to;

Example

Home link to Link to **home.html**

Product link should link to **products.html**

```
<a href="home.html">Home</a> /  
<a href="products.html">Products</a> /
```

Now your two Pages **home.html** and **products.html** should look like this
home.html

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
<meta charset="UTF-8">  
<meta http-equiv="X-UA-Compatible" content="IE=edge">  
<meta name="viewport" content="width=device-width, initial-scale=1.0">  
<title>Document</title>  
</head>  
<body>  
<h1>Awesome Furnitures</h1>  
<p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Corrupti consectetur enim  
mollitia. Alias nihil assumenda ullam nisi esse harum, id ipsa dicta cum, unde  
necessitatibus. Accusamus animi cupiditate vitae officia.</p>  
<br>  
<a href="home.html">Home</a> /  
<a href="products.html">Products</a> /  
  
<br>  
  
<h2>Welcome to Awesome Furnitures</h2>  
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Minus earum accusantium sit  
placeat blanditiis est enim tempora quas ullam suscipit, expedita excepturi quasi sed  
deserunt quod vel perferendis architecto maiores?</p>  
  
<h2>We have Best prices!</h2>
```



```
<p>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Iste numquam vero fugiat voluptatem laboriosam ipsa illo harum earum corrupti facere dolore ipsum amet, ab reiciendis sunt hic architecto quos tempore.</p>
```

```
<h2>We value of Clients</h2>
```

```
<p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Libero eum beatae suscipit eligendi, obcaecati ratione minus cumque atque iure eaque perferendis corrupti, in nam reiciendis repellendus veniam provident! Doloremque, sed!</p>
```

```
<h2>Thank you</h2>
```

```
</body>
```

```
</html>
```

products.html

```
<!DOCTYPE html>
```

```
<html lang="en">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta http-equiv="X-UA-Compatible" content="IE=edge">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>Document</title>
```

```
</head>
```

```
<body>
```

```
<h1>Awesome Furnitures</h1>
```

```
<p>Lorem ipsum, dolor sit amet consectetur adipisicing elit. Corrupti consectetur enim mollitia. Alias nihil assumenda ullam nisi esse harum, id ipsa dicta cum, unde necessitatibus. Accusamus animi cupiditate vitae officia.</p>
```

```
<br>
```

```
<a href="home.html">Home</a> /
```

```
<a href="products.html">Products</a> /
```

```
<br>
```

```
<h3>Nice Sofa</h3>
```

```

```

```
<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex placeat voluptatem necessitatibus dolore cupiditate, iste architecto ea soluta, excepturi nisi eveniet aliquam?</p>
```

```
<h3>America Sofa</h3>
```

```

```

```
<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex placeat voluptatem necessitatibus dolore cupiditate, iste architecto ea soluta, excepturi nisi eveniet aliquam?</p>
```

```
<h3>Japannese Sofa</h3>
```

```

```

```
<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis sapiente porro ullam. Quae nesciunt ex placeat voluptatem necessitatibus dolore cupiditate, iste architecto ea soluta, excepturi nisi eveniet aliquam?</p>
```

```
<h3>Great Sofa</h3>

<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis
sapiente porro ullam. Quae nesciunt ex placeat voluptatem necessitatibus dolore
cupiditate, iste architecto ea soluta, excepturi nisi eveniet aliquam? </p>

<h3>Nice Sofa</h3>

<p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Voluptatum dicta perferendis
sapiente porro ullam. Quae nesciunt ex placeat voluptatem necessitatibus dolore
cupiditate, iste architecto ea soluta, excepturi nisi eveniet aliquam? </p>

<h2>Thank you</h2>
</body>
</html>
```

NB: Please note that every page has a link to other page hence providing the website user to navigate to both pages easily!

Check the Site here

<https://coding.co.ke/2023/site/home.html>

Student Practice

Add two Pages **help.html** and **about.html** and link them.

Check The Pages Design

<https://coding.co.ke/2023/site/about.html>

<https://coding.co.ke/2023/site/help.html>

HTML Entities

What is HTML Entity?

Some characters are reserved in HTML, e.g. you cannot use the less than (<) or greater than (>) signs or angle brackets within your text, because the browser could mistake them for markup, while some characters are not present on the keyboard like copyright symbol ©.

To display these special characters, they must be replaced with the character entities. Character entity references, or entities for short, enable you to use the

characters that cannot be expressed in the document's character encoding or that cannot be entered by a keyboard.

Frequently Used HTML Character Entities

Result	Description	Entity Name	Numerical reference
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
"	quotation mark	"	"
'	apostrophe	'	'
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
©	copyright	©	©
®	registered trademark	®	®
™	trademark	™	™

Practice Questions

What is HTML?

What does HTML stands for?

What are Tags?

Do all HTML tags have an end tag?

What is formatting in HTML?

How many types of heading does an HTML contain?

How to create a hyperlink in HTML?

Which HTML tag is used to display the data in the tabular form?

What are some common lists that are used when designing a page?

How to insert a copyright symbol on a browser page?

What is a marquee?

What are the entities in HTML?

Does a <!DOCTYPE html> tag is a HTML tag?

What are the different form input types in HTML 5?

Which tags are used in creating a table

What is strike tag used for?

What is mark tag used for?

What does head tag do?

What are Attributes in HTML?

What is an Anchor tag in HTML

Reference and More useful Links

<https://www.freecodecamp.org/news/html-tables-table-tutorial-with-css-example-code/>

<https://www.javatpoint.com/html-form-input-types>

<https://developer.mozilla.org/en-US/docs/Web/HTML>

<https://www.geeksforgeeks.org/html-basics/>

<https://www.youtube.com/watch?v=PlxWf493en4>

<https://www.tutorialspoint.com/html/index.htm>