

# Working with Tables and Divs

## • Tables

The HTML tables allow web authors to arrange data like text, images, links, other tables, etc. into rows and columns of cells.

The HTML tables are created using the **<table>** tag in which the **<tr>** tag is used to create table rows and **<td>** tag is used to create data cells. The elements under **<td>** are regular and left aligned by default

## Example

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Tables</title>
  </head>

  <body>
    <table border = "1">
      <tr>
        <td>Row 1, Column 1</td>
        <td>Row 1, Column 2</td>
      </tr>

      <tr>
        <td>Row 2, Column 1</td>
        <td>Row 2, Column 2</td>
      </tr>
    </table>

  </body>
</html>
```

Here, the **border** is an attribute of **<table>** tag and it is used to put a border across all the cells. If you do not need a border, then you can use `border = "0"`.

## Table Heading

Table heading can be defined using **<th>** tag. This tag will be put to replace **<td>** tag, which is used to represent actual data cell. Normally you will put your top row as table heading as shown below, otherwise you can use **<th>** element in any row. Headings, which are defined in **<th>** tag are centered and bold by default.

## Example

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Table Header</title>
  </head>

  <body>
    <table border = "1">
      <tr>
        <th>Name</th>
        <th>Salary</th>
      </tr>
      <tr>
        <td>Ramesh Raman</td>
        <td>5000</td>
      </tr>

      <tr>
        <td>Shabbir Hussein</td>
        <td>7000</td>
      </tr>
    </table>
  </body>
</html>
```

## Cellpadding and Cellspacing Attributes

There are two attributes called *cellpadding* and *cellspacing* which you will use to adjust the white space in your table cells. The *cellspacing* attribute defines space between table cells, while *cellpadding* represents the distance between cell borders and the content within a cell.

## Example

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Table Cellpadding</title>
  </head>
```

```
<body>
  <table border = "1" cellpadding = "5" cellspacing = "5">
    <tr>
      <th>Name</th>
      <th>Salary</th>
    </tr>
    <tr>
      <td>Ramesh Raman</td>
      <td>5000</td>
    </tr>
    <tr>
      <td>Shabbir Hussein</td>
      <td>7000</td>
    </tr>
  </table>
</body>
</html>
```

## Colspan and Rowspan Attributes

You will use **colspan** attribute if you want to merge two or more columns into a single column. Similar way you will use **rowspan** if you want to merge two or more rows.

### Example

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Table Colspan/Rowspan</title>
  </head>

  <body>
    <table border = "1">
      <tr>
        <th>Column 1</th>
        <th>Column 2</th>
        <th>Column 3</th>
      </tr>
      <tr>
        <td rowspan = "2">Row 1 Cell 1</td>
        <td>Row 1 Cell 2</td>
        <td>Row 1 Cell 3</td>
      </tr>
      <tr>
        <td>Row 2 Cell 1</td>
        <td>Row 2 Cell 2</td>
        <td>Row 2 Cell 3</td>
      </tr>
    </table>
  </body>
</html>
```

```
        <td>Row 2 Cell 2</td>
        <td>Row 2 Cell 3</td>
    </tr>
    <tr>
        <td colspan = "3">Row 3 Cell 1</td>
    </tr>
</table>
</body>
</html>
```

## Tables Backgrounds

You can set table background using one of the following two ways –

- **bgcolor** attribute – You can set background color for whole table or just for one cell.
- **background** attribute – You can set background image for whole table or just for one cell.

You can also set border color also using **bordercolor** attribute.

**Note** – The *bgcolor*, *background*, and *bordercolor* attributes deprecated in HTML5. Do not use these attributes.

## Example

```
<!DOCTYPE html>
<html>

    <head>
        <title>HTML Table Background</title>
    </head>

    <body>
        <table border = "1" bordercolor = "green" bgcolor =
"yellow">
            <tr>
                <th>Column 1</th>
                <th>Column 2</th>
                <th>Column 3</th>
            </tr>
            <tr>
                <td rowspan = "2">Row 1 Cell 1</td>
                <td>Row 1 Cell 2</td>
                <td>Row 1 Cell 3</td>
            </tr>
            <tr>
                <td>Row 2 Cell 2</td>
```

```
        <td>Row 2 Cell 3</td>
    </tr>
    <tr>
        <td colspan = "3">Row 3 Cell 1</td>
    </tr>
</table>
</body>
</html>
```

Here is an example of using **background** attribute. Here we will use an image available in /images directory.

```
<!DOCTYPE html>
<html>

    <head>
        <title>HTML Table Background</title>
    </head>

    <body>
        <table border = "1" bordercolor = "green" background =
"/images/test.png">
            <tr>
                <th>Column 1</th>
                <th>Column 2</th>
                <th>Column 3</th>
            </tr>
            <tr>
                <td rowspan = "2">Row 1 Cell 1</td>
                <td>Row 1 Cell 2</td><td>Row 1 Cell 3</td>
            </tr>
            <tr>
                <td>Row 2 Cell 2</td>
                <td>Row 2 Cell 3</td>
            </tr>
            <tr>
                <td colspan = "3">Row 3 Cell 1</td>
            </tr>
        </table>
    </body>
</html>
```

This will produce the following result. Here background image did not apply to table's header.

## Table Height and Width

You can set a table width and height using **width** and **height** attributes. You can specify table width or height in terms of pixels or in terms of percentage of available screen area.

## Example

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Table Width/Height</title>
  </head>

  <body>
    <table border = "1" width = "400" height = "150">
      <tr>
        <td>Row 1, Column 1</td>
        <td>Row 1, Column 2</td>
      </tr>

      <tr>
        <td>Row 2, Column 1</td>
        <td>Row 2, Column 2</td>
      </tr>
    </table>
  </body>
</html>
```

## Table Caption

The **caption** tag will serve as a title or explanation for the table and it shows up at the top of the table. This tag is deprecated in newer version of HTML/XHTML.

## Example

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Table Caption</title>
  </head>

  <body>
```

```
<table border = "1" width = "100%">
  <caption>This is the caption</caption>

  <tr>
    <td>row 1, column 1</td><td>row 1, columnn 2</td>
  </tr>

  <tr>
    <td>row 2, column 1</td><td>row 2, columnn 2</td>
  </tr>
</table>
</body>
</html>
```

## Table Header, Body, and Footer

Tables can be divided into three portions – a header, a body, and a foot. The head and foot are rather similar to headers and footers in a word-processed document that remain the same for every page, while the body is the main content holder of the table.

The three elements for separating the head, body, and foot of a table are –

- **<thead>** – to create a separate table header.
- **<tbody>** – to indicate the main body of the table.
- **<tfoot>** – to create a separate table footer.

A table may contain several `<tbody>` elements to indicate *different pages* or groups of data. But it is notable that `<thead>` and `<tfoot>` tags should appear before `<tbody>`

## Example

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Table</title>
  </head>

  <body>
    <table border = "1" width = "100%">
      <thead>
        <tr>
          <td colspan = "4">This is the head of the
table</td>
```

```
        </tr>
    </thead>

    <tfoot>
        <tr>
            <td colspan = "4">This is the foot of the
table</td>
        </tr>
    </tfoot>

    <tbody>
        <tr>
            <td>Cell 1</td>
            <td>Cell 2</td>
            <td>Cell 3</td>
            <td>Cell 4</td>
        </tr>
    </tbody>

</table>
</body>

</html>
```

## Nested Tables

You can use one table inside another table. Not only tables you can use almost all the tags inside table data tag <td>.

### Example

Following is the example of using another table and other tags inside a table cell.

```
<!DOCTYPE html>
<html>

    <head>
        <title>HTML Table</title>
    </head>

    <body>
        <table border = "1" width = "100%">
            <tr>
                <td>
                    <table border = "1" width = "100%">
                        <tr>
                            <th>Name</th>
```



```
        <th>Salary</th>
    </tr>
    <tr>
        <td>Ramesh Raman</td>
        <td>5000</td>
    </tr>
    <tr>
        <td>Shabbir Hussein</td>
        <td>7000</td>
    </tr>
</table>
</td>
</tr>

</table>
</body>

</html>
```

## • Div Tag

The div tag is known as Division tag. The div tag is used in HTML to make divisions of content in the web page like (text, images, header, footer, navigation bar, etc). Div tag has both open(<div>) and closing (</div>) tag and it is mandatory to close the tag. The Div is the most usable tag in web development because it helps us to separate out data in the web page and we can create a particular section for particular data or function in the web pages.

- Div tag is Block level tag
- It is a generic container tag
- It is used to the group of various tags of HTML so that sections can be created and style can be applied to them.

As we know Div tag is block-level tag in this example div tag contain entire width. It will be displayed div tag each time on a new line, not on the same line.

### Example 1:

filter\_none

edit

play\_arrow

brightness\_4

```
<html>
  <head>
    <title>gfg</title>
  <style type=text/css>
```

```
p{
  background-color:gray;
  margin: 10px;
}

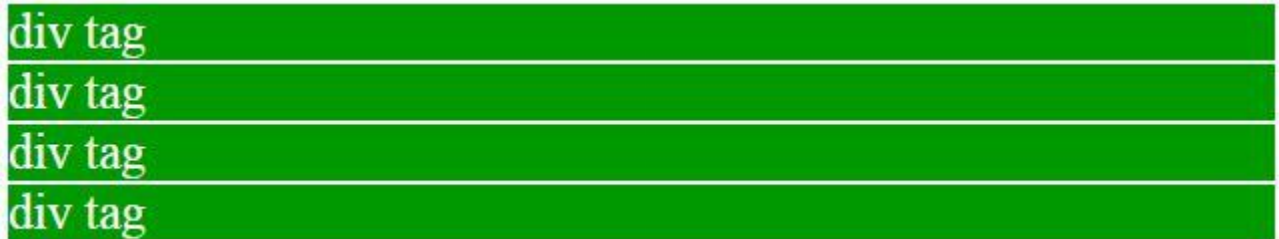
div
{
  color: white;
  background-color: 009900;
  margin: 2px;
  font-size: 25px;
}
</style>

</head>

<body>
  <div> div tag </div>
  <div> div tag </div>
  <div> div tag </div>
  <div> div tag </div>

</body>
</html>
```

### Output:



As we know div tag is used for grouping HTML elements together and is to apply CSS and web layout on them Lets see below example without using div tag. we need to applying CSS for each tag (in the example using **H1 H2** and two paragraphs **p** tags)

### Example 2:

filter\_none

edit

play\_arrow

## brightness\_4

```
<html>
  <head>
    <title>gfg</title>
    <style type=text/css>
      p{
        color: white;
        background-color: 009900;
        width: 400px;
      }
      h1
      {
        color: white;
        background-color: 009900;
        width: 400px;
      }
      h2
      {
        color: white;
        background-color: 009900;
        width: 400px;
      }
    </style>
  </head>
  <body>
    <h1>Heading 1</h1>
    <p>This is the Paragagraph
    </p>
    <h2>heading 2</h2>
    <p>Write the Paragraph here
    </p>
  </body>
</html>
```

### Creating Web Layout using Div Tag

The div tag is a container tag inside div tag we can put more than one HTML element and can group together and can apply CSS for them.

div tag can be used for creating a layout of web pages in the below examples shows creating a web layout

we can also create web layout using tables tag but table tags are very complex to modify the layout

The div tag is very flexible in creating web layouts and easy to modify. in below example will show grouping of HTML element using div tag and create block-wise web layout.

#### Example:

```
<html>
  <head>
    <title>gfg</title>
    <style type=text/css>
      .leftdiv
```

```
{
float: left;
}
.middlediv
{
float: left;
background-color:gray
}
.rightdiv
{
float: left;
}
div{
padding : 1%;
color: white;
background-color: 009900;
width: 30%;
border: solid black;
}
</style>
</head>
<body>
<div class="leftdiv">
<h1>GeeksforGeeks</h1>
<p>How many times were you frustrated while looking out
for a good collection of programming/algorithm/interview
questions? What did you expect and what did you get?
This portal has been created to provide well written,
well thought and well-explained solutions for selected
questions.
</p>
<h2>GeeksforGeeks</h2>
<p>GCET is an entrance test for the extensive classroom
programme by GeeksforGeeks to build and enhance Data
Structures and Algorithm concepts, mentored by Sandeep
Jain (Founder & CEO, GeeksforGeeks).He has 7 years of
teaching experience and 6 years of industry experience.
</p>
</div>
<div class="middlediv">
<h1>GeeksforGeeks</h1>
<p>How many times were you frustrated while looking out
for a good collection of programming/algorithm/interview
questions? What did you expect and what did you get?
This portal has been created to provide well written,
well thought and well-explained solutions for selected
questions.
</p>
<h2>GeeksforGeeks</h2>
<p>GCET is an entrance test for the extensive classroom
programme by GeeksforGeeks to build and enhance Data
Structures and Algorithm concepts, mentored by Sandeep
Jain (Founder & CEO, GeeksforGeeks).He has 7 years of
teaching experience and 6 years of industry experience.
</p>
</div>
<div class="rightdiv">
```

```

<h1>GeeksforGeeks</h1>
<p>How many times were you frustrated while looking out
for a good collection of programming/algorithm/interview
questions? What did you expect and what did you get?
This portal has been created to provide well written,
well thought and well-explained solutions for selected
questions.
</p>
<h2>GeeksforGeeks</h2>
<p>How many times were you frustrated while looking out
for a good collection of programming/algorithm/interview
questions? What did you expect and what did you get?
This portal has been created to provide well written,
well thought and well-explained solutions for selected
questions.
</p>
</div>
</body>
</html>

```

Using Div tag we can cover gap between heading tag and paragraph tag in this example will display three blocks web layout.

basic theory of HTML <DIV> tag, Working with <DIV> tag using Styles and different attributes.

- The <DIV> tag is for Division, as in dividing or subdividing a Page into many Sections or functional blocks, for example: Header, Footer, Navigation pane: Main Content pane: Right Pane etc.
- This HTML <DIV> tag is a container for other HTML items or elements. This HTML-Div Tag is used to layout HTML elements on a page, and can be used to group HTML Elements together. Ultimately we can say that <DIV> tag is container unit that encapsulates other page elements and divides the HTML document into sections.
- You can use the <DIV> Tag to layout your page, The other way to layout your HTML web page is table. I would like to suggest you to use Div tag for page payout.
- Web designers use <DIV> elements to combine together HTML elements and implement CSS styles to many elements at once. For instance, by covering a set of paragraph elements into a <div> element, the designer can take advantage of CSS styles.
- Designer can apply a design to all paragraphs at once by applying a design style to the <DIV> tag instead of coding the same style for each paragraph element.

- Within a <DIV>, you can nest and align A) Paragraphs B) Headings C) Lists D) Definitions E) Pre-formatted text F) Images G) Tables etc. You can use the ALIGN attribute for Horizontal Text Alignment.

## Using the HTML Div Tag:

The following section demonstrates, how to use div tag to layout your page.

**Listing 1:** Simple script to display the content of div tag.

```
<html>
<body>
<div> This is first line. </div>
<div> This is second line. </div>
<div> This is third line. </div>
<div> This is fourth line. </div>
</body>
</html>
```

This is *first* line of **DIV** tag.  
This is *second* line of **DIV** tag.  
This is *third* line of **DIV** tag.  
This is *fourth* line of **DIV** tag.

**Figure 1:** Above figure is out of script to display the content of div tag.

## HTML Div Tag - Alignment and Style

First of all we will add border in each Div tag .we can do this by using in-line CSS. In-line CSS is CSS inside HTML which is used for adding style to page

- This is done by adding style="border: 1px solid red;" to each the div's tag.That will add a red border to one html div.

- It should be kept in mind while designing website that as per requirement add the borders to HTML div tags. You should also take care: what each div contains, where it starts and ends.
- HTML div's alignment can be changed by using the align attribute. To align a div using the align attribute E.g.

**Listing 2:** HTML- Div tag with align property.

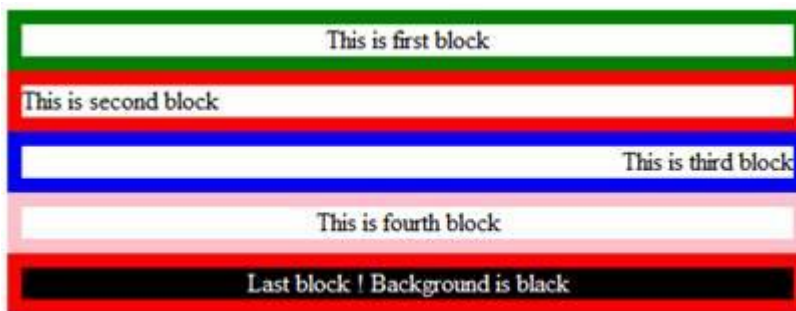
```
<div align="left">"contents"</div>
```

- HTML Div tag can also be used to set layout width and Height, E.g. `<div style="width:100px; Height:100px;">`

Following Script will clear the concept of use of align attribute and adding style

**Listing 3:** Script of HTML Div Tag Layout using the Align Attribute and adding Style

```
<html>
  <body>
    <div style="width:500px;">
      <div align="center" width="400px;"style="border:9px solid green;">This is
first block</div>
      <div align="left" width="400px;"style="border:9px solid red;">This is
second block</div>
      <div align="right" width="400px;"style="border:9px solid blue;">This is
third block</div>
      <div align="center" width="400px;"style="border:9px solid pink;">This is
fourth block</div>
      <div align="center" bgcolor="green" width="900px;align="center"
style="border:9px solid red;background:black;color:white;">Last block !
Background is black</div>
    </div>
  </body>
</html>
```



**Figure 2:** The figure shows output of applying alignment and style property on Div tag

*Note: If you will place <Div> elements or items inside of other <Div> elements, it will allow these elements to be further subdivided. Following Script will clear the concept of subdivision.*

**Listing 4:** HTML script for <DIV> inside </DIV>

```
<html>
<body>
<div style="width:600px;">
<div id="UgDiv" name="UgDiv" title="Div Element" style="font-family: Arial;
font-size: 15pt; border: 4px solid black;">
<div id="subDiv1" name="subDiv1" title="Subdivision Div Element"
style="color: green; border: 7px solid red;">
<h5>paragraph 1</h5>
<p>This is block of first paragraph</p>
</div>
<br /><div id="subDiv2" name="subDiv2" title="Subdivision Div Element"
style="color: Blue;border: 4px dashed green;">
<h5>paragraph2</h5>
<p>This is block of second paragraph</p>
</div>
</body>
</html>
```





**Figure 3:** Output of subdivision script of div tag.

## Conclusion:

This amazing HTML <Div> tag is my most used HTML Tag. These all concepts are the foundation of most of the web pages. Article covers the basics of <Div> tag. You can explore more properties of Div tag. Also there is many other style attributes which can change the layout of Div tag. Play with those attributes and let us know your queries, we are eager to assist you.