Bootstrap - Grid System

What is Bootstrap Grid System?

Bootstrap includes a responsive, mobile first fluid grid system that appropriately scales up to 12 columns as the device or viewport size increases. It includes predefined classes for easy layout options, as well as powerful mixins for generating more semantic layouts.

Mobile First Strategy-

- **Content**

    o   Determine what is most important.

- **Layout**

    o   Design to smaller widths first.

    o   Base CSS address mobile device first; media queries address for tablet, desktops.

- **Progressive Enhancement**

    o   Add elements as screen size increases.

Working of Bootstrap Grid System

Grid systems are used for creating page layouts through a series of rows and columns that house your content. Here's how the Bootstrap grid system works –

- Rows must be placed within a **.container** class for proper alignment and padding.

- Use rows to create horizontal groups of columns.

- Content should be placed within the columns, and only columns may be the immediate children of rows.

- Predefined grid classes like **.row and .col-xs-4** are available for quickly making grid layouts. LESS mixins can also be used for more semantic layouts.

- Columns create gutters (gaps between column content) via padding. That padding is offset in rows for the first and the last column via negative margin on **.rows**.

- Grid columns are created by specifying the number of twelve available columns you wish to span. For example, three equal columns would use three **.col-xs-4**.

Basic Grid Structure

Following is basic structure of Bootstrap grid –

```
<div class = "container">

  <div class = "row">
```

```
   <div class = "col-*-*"></div>

   <div class = "col-*-*"></div>

  </div>

  <div class = "row">...</div>

</div>

<div class = "container">

  ....

</div>
```

Bootstrap - Typography

Bootstrap uses Helvetica Neue, Helvetica, Arial, and sans-serif in its default font stack. Using typography feature of Bootstrap you can create headings, paragraphs, lists and other inline elements. Let see learn each one of these in the following sections.

❖ Headings

All HTML headings (h1 to h6) are styled in Bootstrap. An example is shown below –

```
<h1>I'm Heading1 h1</h1>

<h2>I'm Heading2 h2</h2>

<h3>I'm Heading3 h3</h3>

<h4>I'm Heading4 h4</h4>

<h5>I'm Heading5 h5</h5>

<h6>I'm Heading6 h6</h6>
```

The above code segment with Bootstrap will produce following result –

Inline Subheadings

To add an inline subheading to any of the headings, simply add <small> around any of the elements or add **.small** class and you will get smaller text in a lighter color as shown in the example below –

```
<h1>I'm Heading1 h1. <small>I'm secondary Heading1 h1</small></h1>

<h2>I'm Heading2 h2. <small>I'm secondary Heading2 h2</small></h2>

<h3>I'm Heading3 h3. <small>I'm secondary Heading3 h3</small></h3>

<h4>I'm Heading4 h4. <small>I'm secondary Heading4 h4</small></h4>

<h5>I'm Heading5 h5. <small>I'm secondary Heading5 h5</small></h5>

<h6>I'm Heading6 h6. <small>I'm secondary Heading1 h6</small></h6>
```

❖ Lead Body Copy

To add some emphasis to a paragraph, add class = "lead". This will give you a larger font size, lighter weight, and a taller line height as in the following example −

```
<h2>Lead Example</h2>

<p class = "lead">This is an example paragraph demonstrating

   the use of lead body copy. This is an example paragraph

   demonstrating the use of lead body copy.This is an example

   paragraph demonstrating the use of lead body copy.This is an

   example paragraph demonstrating the use of lead body copy.

   This is an example paragraph demonstrating the use of lead body copy.</p>
```

❖ Emphasis

HTML's default emphasis tags such as <small> sets text at 85% the size of the parent, <strong> emphasizes a text with heavier font-weight, and <em> emphasizes a text in italics.

Bootstrap offers a few classes that can be used to provide emphasis on texts as seen in the following example −

```
<small>This content is within tag</small><br>

<strong>This content is within tag</strong><br>

<em>This content is within tag and is rendered as italics</em><br>

<p class = "text-left">Left aligned text.</p>

<p class = "text-center">Center aligned text.</p>

<p class = "text-right">Right aligned text.</p>

<p class = "text-muted">This content is muted</p>

<p class = "text-primary">This content carries a primary class</p>

<p class = "text-success">This content carries a success class</p>

<p class = "text-info">This content carries a info class</p>

<p class = "text-warning">This content carries a warning class</p>

<p class = "text-danger">This content carries a danger class</p>
```

❖ Abbreviations

The HTML <abbr> element provides markup for abbreviations or acronyms, like WWW or HTTP. Bootstrap styles <abbr> elements with a light dotted border along the bottom and reveals the full text

on hover (as long as you add that text to the <abbr> title attribute). To get a a slightly smaller font size add .initialism to <abbr>.

```
<abbr title = "World Wide Web">WWW</abbr><br>

<abbr title = "Real Simple Syndication" class = "initialism">RSS</abbr>
```

❖Addresses

Using <address> tag you can display the contact information on your web page. Since the <address> defaults to display: block; you'll need to use

Tags to add line breaks to the enclosed address text.

```
<address>

  <strong>Some Company, Inc.</strong><br>

  007 street<br>

  Some City, State XXXXX<br>

  <abbr title = "Phone">P:</abbr> (123) 456-7890

</address>

<address>

  <strong>Full Name</strong><br>

  <a href = "mailto:#">mailto@somedomain.com</a>

</address>
```

❖Blockquotes

You can use the default <blockquote> around any HTML text. Other options include, adding a <small> tag for identifying the source of the quote and right-aligning the blockquote using class .pull-right. The following example demonstrates all these features –

```
<blockquote>

  <p>This is a default blockquote example. This is a default

    blockquote example. This is a default blockquote

    example.This is a default blockquote example. This is a

    default blockquote example.</p>

</blockquote>

<blockquote>

  This is a blockquote with a source title.

  <small>Someone famous in <cite title = "Source Title">Source Title</cite></small>
```

```
</blockquote>

<blockquote class = "pull-right">This is a blockquote aligned to the right.

   <small>Someone famous in <cite title = "Source Title">Source Title</cite></small>

</blockquote>
```

Bootstrap - Tables

Bootstrap provides a clean layout for building tables. Some of the table elements supported by Bootstrap are −

Tag	Description
<table>	Wrapping element for displaying data in a tabular format
<thead>	Container element for table header rows (<tr>) to label table columns.
<tbody>	Container element for table rows (<tr>) in the body of the table.
<tr>	Container element for a set of table cells (<td> or <th>) that appears on a single row.
<td>	Default table cell.
<th>	Special table cell for column (or row, depending on scope and placement) labels. Must be used within a <thead>
<caption>	Description or summary of what the table holds.

❖ Basic Table

If you want a nice, basic table style with just some light padding and horizontal dividers, add the base class of *.table* to any table as shown in the following example −

```
<table class = "table">
  <caption>Basic Table Layout</caption>
  <thead>
    <tr>
      <th>Name</th>
      <th>City</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Tanmay</td>
      <td>Bangalore</td>
```

```
    </tr>

    <tr>

      <td>Sachin</td>

      <td>Mumbai</td>

    </tr>

  </tbody>

</table>
```

❖Optional Table Classes

Along with the base table markup and the .table class, there are a few additional classes that you can use to style the markup. Following sections will give you a glimpse of all these classes.

Striped Table

By adding the *.table-striped* class, you will get stripes on rows within the <tbody> as seen in the following example –

```
<table class = "table table-striped">

  <caption>Striped Table Layout</caption>

  <thead>

    <tr>

      <th>Name</th>

      <th>City</th>

      <th>Pincode</th>

    </tr>

  </thead>


  <tbody>

    <tr>

      <td>Tanmay</td>

      <td>Bangalore</td>

      <td>560001</td>

    </tr>

    <tr>

      <td>Sachin</td>
```

```
      <td>Mumbai</td>

      <td>400003</td>

    </tr>

    <tr>

      <td>Uma</td>

      <td>Pune</td>

      <td>411027</td>

    </tr>

  </tbody>

</table>
```

Bordered Table

By adding the *.table-bordered* class, you will get borders surrounding every element and rounded corners around the entire table as seen in the following example −

```
<table class = "table table-bordered">

  <caption>Bordered Table Layout</caption>

  <thead>

    <tr>

      <th>Name</th>

      <th>City</th>

      <th>Pincode</th>

    </tr>

  </thead>

  <tbody>

    <tr>

      <td>Tanmay</td>

      <td>Bangalore</td>

      <td>560001</td>

    </tr>

    <tr>

      <td>Sachin</td>

      <td>Mumbai</td>
```

```
      <td>400003</td>

    </tr>

    <tr>

      <td>Uma</td>

      <td>Pune</td>

      <td>411027</td>

    </tr>

  </tbody>

</table>
```

Hover Table

By adding the *.table-hover* class, a light gray background will be added to rows while the cursor hovers over them, as seen in the following example −

```
<table class = "table table-hover">

  <caption>Hover Table Layout</caption>

  <thead>

    <tr>

      <th>Name</th>

      <th>City</th>

      <th>Pincode</th>

    </tr>

  </thead>

  <tbody>

    <tr>

      <td>Tanmay</td>

      <td>Bangalore</td>

      <td>560001</td>

    </tr>

    <tr>

      <td>Sachin</td>

      <td>Mumbai</td>

      <td>400003</td>
```

```
    </tr>

    <tr>

      <td>Uma</td>

      <td>Pune</td>

      <td>411027</td>

    </tr>

  </tbody>

</table>
```

Condensed Table

By adding the *.table-condensed* class, row padding is cut in half to condense the table. As seen in the following example. This is useful if you want any denser information.

```
<table class = "table table-condensed">

  <caption>Condensed Table Layout</caption>

  <thead>

    <tr>

      <th>Name</th>

      <th>City</th>

      <th>Pincode</th>

    </tr>

  </thead>

  <tbody>

    <tr>

      <td>Tanmay</td>

      <td>Bangalore</td>

      <td>560001</td>

    </tr>

    <tr>

      <td>Sachin</td>

      <td>Mumbai</td>

      <td>400003</td>

    </tr>
```

```
   <tr>

     <td>Uma</td>

     <td>Pune</td>

     <td>411027</td>

   </tr>

 </tbody>

</table>
```

Contextual classes

The Contextual classes shown in following table will allow you to change the background color of your table rows or individual cells.

Class	Description
.active	Applies the hover color to a particular row or cell
.success	Indicates a successful or positive action
.warning	Indicates a warning that might need attention
.danger	Indicates a dangerous or potentially negative action

These classes can be applied to <tr>, <td> or <th>.

```
<table class = "table">

 <caption>Contextual Table Layout</caption>

 <thead>

   <tr>

     <th>Product</th>

     <th>Payment Date</th>

     <th>Status</th>

   </tr>

 </thead>

 <tbody>

   <tr class = "active">

     <td>Product1</td>

     <td>23/11/2013</td>

     <td>Pending</td>

   </tr>
```

```
    <tr class = "success">

      <td>Product2</td>

      <td>10/11/2013</td>

      <td>Delivered</td>

    </tr>

    <tr class = "warning">

      <td>Product3</td>

      <td>20/10/2013</td>

      <td>In Call to confirm</td>

    </tr>

    <tr class = "danger">

      <td>Product4</td>

      <td>20/10/2013</td>

      <td>Declined</td>

    </tr>

  </tbody>

</table>
```

Responsive Tables

By wrapping any *.table* in *.table-responsive* class, you will make the table scroll horizontally up to small devices (under 768px). When viewing on anything larger than 768px wide, you will not see any difference in these tables.

```
<div class = "table-responsive">

  <table class = "table">

    <caption>Responsive Table Layout</caption>

    <thead>

      <tr>

        <th>Product</th>

        <th>Payment Date</th>

        <th>Status</th>

      </tr>

    </thead>
```

```html
      <tbody>

        <tr>

          <td>Product1</td>

          <td>23/11/2013</td>

          <td>Pending</td>

        </tr>

        <tr>

          <td>Product2</td>

          <td>10/11/2013</td>

          <td>Delivered</td>

        </tr>

        <tr>

          <td>Product3</td>

          <td>20/10/2013</td>

          <td>In Call to confirm</td>

        </tr>

        <tr>

          <td>Product4</td>

          <td>20/10/2013</td>

          <td>Declined</td>

        </tr>

      </tbody>

    </table>

  </div>
```