Bootstrap Grid

```
<!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>

    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/css/bootstrap.min.css"
rel="stylesheet"
integrity="sha384-GLhlTQ8iRABdZLl6O3oVMWSktQOp6b7In1Zl3/Jr59b6EGGoI1aFkw7cmDA6j6gD"
crossorigin="anonymous">

    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/js/bootstrap.bundle.min.js"
integrity="sha384-w76AqPfDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN"
crossorigin="anonymous"></script>

</head>

<body>
    <div class="text-danger">

     <h1> Bootstrap 5 Grid System example </h1>
```

First Bootstrap Example

- to design layout and content structure
- to create a consistent layout rapidly and effectively using HTML and CSS
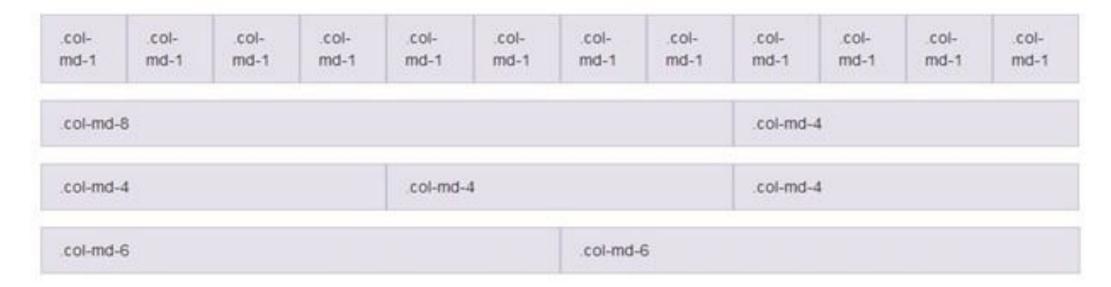- Grid System allows up to 12 columns across the page

.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1	.col-md-1

col-md-8		.col-md-4

col-md-4	.col-md-4	.col-md-4

col-md-6	.col-md-6

table shows the format of the bootstrap 5 grid systems.

Col1	Col1	Col1	Col1	Col1	Col1	Col1	Col1	Col1	Col1	Col1	Col1
Col6						Col6					
Col3			Col3			Col3			Col3		
Col4				Col4				Col4			
Col4				Col8							

Grid Classes:

- Bootstrap Grid System is responsive and the columns are re-arranged automatically according to the screen size.

There are four classes in Bootstrap Grid System:

- xs (for phones)

- sm (for tablets)

- md (for desktops)

- lg (for larger desktops)

Grid options

- **Extra small (xs)**
- **Small (sm)**
- **Medium (md)**
- **Large (lg)**
- **Extra large (xl)**
- **Extra extra large (xxl)**

Note: You can combine the above classes to create more dynamic and flexible layouts

For example

- the **.col-*** classes can construct grid columns for especially **small devices such as mobile phones** in portrait mode, and
- the **.col-sm-*** classes for mobile phones in landscape mode.

```
<div class = "row">
  <div class = "col">
  </div>
  <div class = "col">
  </div>
  <div class = "col">
  </div>
  <div class = "col">
  </div>
</div>
```

Syntax of the Grid System

Basic Structure of a Bootstrap Grid:

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

1. Create a row (<div class="row">).
2. Add the number of columns, you want in the grid (tags with appropriate .col-*-* classes).
3. Note that numbers in .col-*-* should always add up to 12 for each row.

How it works

- **grid supports six responsive breakpoints**. Breakpoints are based on min-width media queries,
  - meaning they affect that breakpoint and all those above it (e.g., .col-sm-4 applies to sm, md, lg, xl, and xxl).
  - This means you can control container and column sizing and behavior by each breakpoint.

- **Containers center and horizontally pad your content**.
  - Use .container for a responsive pixel width, .container-fluid for width: 100% across all viewports and devices, or a responsive container (e.g., .container-md) for a combination of fluid and pixel widths.

- **Rows are wrappers for columns.** Each column has horizontal padding (called a gutter) for controlling the space between them.

- **Columns are incredibly flexible**. There are 12 template columns available per row,

- **Gutters are also responsive and customizable**. Gutter classes are available across all breakpoints, with all the same sizes

- **Sass variables, maps,** and mixins power the gridto create your own with more semantic markup..

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    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/js/bootstrap.bundle.min.js" integrity="sha384-w76AqPfDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN" crossorigin="anonymous"></script>
</head>
<body>
    <div class="text-success">
        <h1> Bootstrap 5 Grid System example </h1>
    </div>
    <div class="container bg-primary">
    <div class = "row" style="border : 1px solid black;">
    <div class = "col" style="border : 2px solid black;"> Bootstrap </div>
    <div class = "col" style="border : 2px solid black;"> Bootstrap 4 </div>
    <div class = "col" style="border : 2px solid black;"> Bootstrap 5 </div>
    </div>     </div>  </body> </html>
```

Reference

- https://getbootstrap.com/docs/4.0/utilities/colors/
- https://getbootstrap.com/docs/5.0/layout/grid/
- https://www.jsdelivr.com/