**Bootstrap Documentation**

**1. Breakpoints**

Breakpoints in Bootstrap allow for responsive design, ensuring layouts adjust at specific screen widths.

* **Extra small devices**: <576px
* **Small devices**: ≥576px
* **Medium devices**: ≥768px
* **Large devices**: ≥992px
* **Extra large devices**: ≥1200px
* **Extra extra large devices**: ≥1400px

Breakpoints are useful for making layouts responsive across different screen sizes.

**2. Containers**

Containers are used to wrap content and provide responsive layout support. Bootstrap includes three main container types:

* **.container**: Fixed-width, responsive container, adjusting according to the screen size.
* **.container-fluid**: A full-width container, spanning the entire width of the viewport.
* **.container-{breakpoint}**: Responsive containers that adjust at a specific breakpoint, e.g., .container-md.

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

<div class="container-fluid"> ... </div>

<div class="container-md"> ... </div>

**3. Row**

A **row** is used within a container to create a grid layout. It wraps columns and ensures correct alignment.

<div class="container">

<div class="row">

<!-- Columns go here -->

</div>

</div>

Rows must be used within a container, and columns must be placed inside rows for proper alignment.

**4. Col (Column)**

Columns allow for the division of the horizontal space in a row. Bootstrap’s grid system is built on a 12-column layout.

* **.col**: Auto-sizing column that divides equally.
* **.col-{size}-{n}**: Defines the number of columns the element should span, e.g., .col-md-4 spans 4 columns at the md breakpoint.

<div class="row">

<div class="col-md-4">Column 1</div>

<div class="col-md-4">Column 2</div>

<div class="col-md-4">Column 3</div>

</div>

**5. Grid System**

Bootstrap’s grid system uses a series of containers, rows, and columns to layout and align content. It’s fully responsive and adapts to different screen sizes based on breakpoints.

* **Grid Layout**: A grid layout can have a maximum of 12 columns per row.

Key Classes:

* .container, .container-fluid for the container.
* .row to define rows.
* .col, .col-{size}-{n} for columns.

**6. Utility Classes**

Utility classes in Bootstrap allow you to modify components and elements quickly. Some commonly used utility classes include:

**Spacing Utilities**

* **Padding**: .p-{n}, .pt-{n}, .pb-{n}, .ps-{n}, .pe-{n}
* **Margin**: .m-{n}, .mt-{n}, .mb-{n}, .ms-{n}, .me-{n}

**Text Utilities**

* **Text alignment**: .text-left, .text-center, .text-right
* **Text color**: .text-primary, .text-danger, .text-warning, .text-dark, .text-light, .text-info

**Display Utilities**

* **Display**: .d-block, .d-inline-block, .d-none, .d-flex, .d-grid

**Background Utilities**

* **Background colors**: .bg-primary, .bg-success, .bg-warning, .bg-light, .bg-dark, .bg-info

**7. Basic Important Classes**

Here’s a list of some of the most common and important classes in Bootstrap:

* **Grid**:
  + .container, .container-fluid
  + .row
  + .col, .col-sm-{n}, .col-md-{n}, .col-lg-{n}
* **Typography**:
  + .text-left, .text-right, .text-center
  + .font-weight-bold, .font-italic
* **Buttons**:
  + .btn, .btn-primary, .btn-secondary, .btn-danger, .btn-success
* **Display**:
  + .d-none, .d-block, .d-inline-block
  + .d-flex, .d-grid
* **Visibility**:
  + .visible, .invisible
* **Alignment**:
  + .align-items-start, .align-items-center, .align-items-end
  + .justify-content-start, .justify-content-center, .justify-content-end