Chapter 10 (2.3)

Creating Bootstrap Responsive Layout

Objectives

At the end of this session, you will be able to:

➢ Describe how bootstrap helps in achieving responsiveness
➢ Explain the grid system
➢ Outline the use of Jumbotron component
➢ Describe the use of various typography classes
➢ Describe creation of simple responsiveness pages with Bootstrap

Bootstrap Responsive Layout (1-2)

- A design process for easy access and smooth view

- Efficient way to display Website on different devices

- Responsive layout is adaptive to UI components

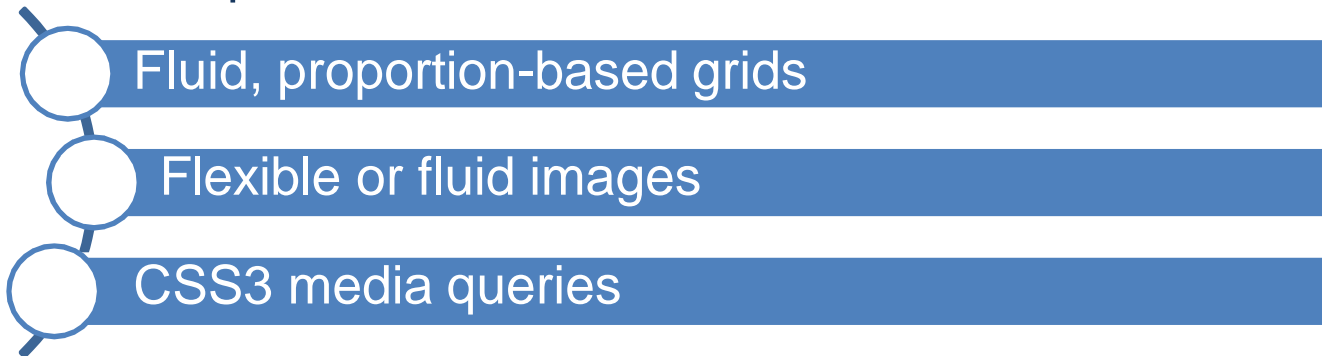- Screen for devices – laptop, desktop, smartphone, or tablets

- Effortless navigation with minimal resizing, scrolling, and rotating

Bootstrap Responsive Layout (2-2)

- Responsive Website uses three elements:

  Fluid, proportion-based grids
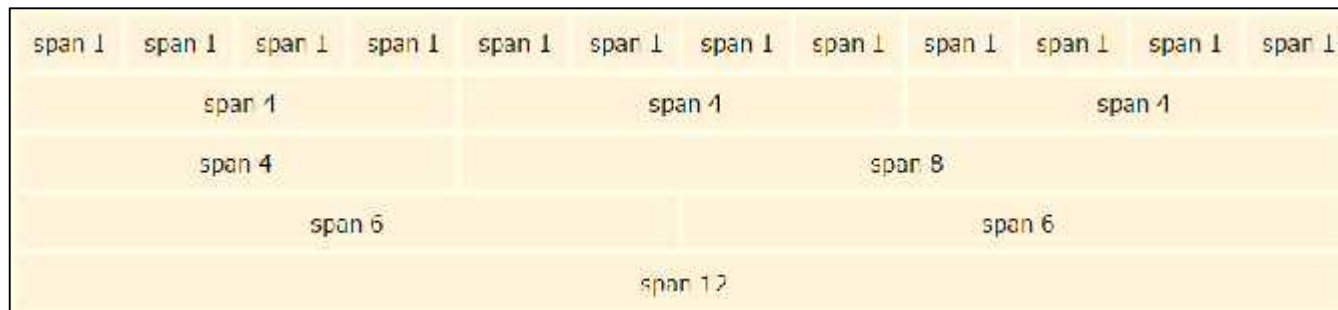
  Flexible or fluid images

  CSS3 media queries

- Grids and multimedia should be fluid and flexible
- Fluid grid handles sizing of page elements in percentage (not in pixels)
- Bootstrap code focuses on small screens first and then it expands for larger screens
- Version 3 has four classes of grids

Working with Grids

- A collection of HTML/CSS components
- Robust mobile-first grid system
- Allows defining rows and columns having content in resulting boxes
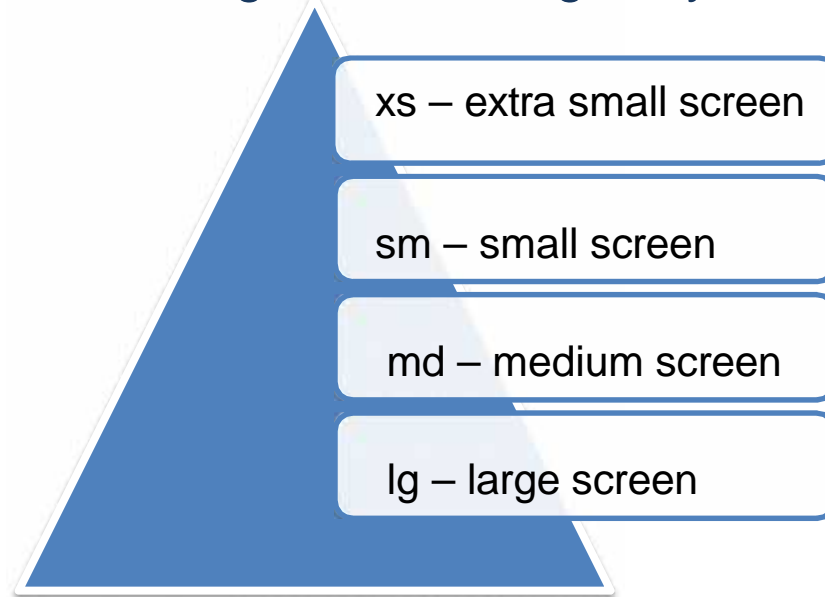- Create up to 12 columns and unlimited rows, known as 12-grid system or 12- column layout

span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1	span 1
span 4				span 4				span 4			
span 4				span 8							
span 6						span 6					
span 12											

- Consists of series of containers, rows, and columns

Predefined Grid Classes (1-2)

- Four classes forming four tiers of grid system

xs – extra small screen

sm – small screen

md – medium screen

lg – large screen

- Use one or more classes for dynamic and fluid design layout

Predefined Grid Classes (2-2)

- Column specification for different browser sizes

Column Definition	Browser of Target Device	Browser Size
.col-lg-*	Large devices (desktops)	1200 pixels and up
.col-md-*	Medium devices (desktops)	992 pixels and up
.col-sm-*	Small devices (tablets)	768 pixels and up
.col-xs-*	Extra small (mobile phones)	< 768 pixels

- Symbol * denotes the number of columns a row should have

- For example, to define column as four out of 14 in one row, specification will be .col-xs-4

Rule of Grid System

Contents of containers to be middle-aligned

Place the rows within a container for proper aligning and padding

Columns have gaps between its content, known as gutters

Columns contain content and are only direct children of rows

Grid tiers depend on minimum widths

Predefined grid classes for rows and columns make quick grid layouts

Predefined grid classes for column indicate type of device and number of columns

Basic Structure of Grid

- Grid structure has one or more containers, rows, and columns

- Define a container containing rows and columns

- First, define rows within container, using .row class

- Then, define columns within row, using .col-xs-*, .col-sm-*, .col-md-*, and .col-lg-* classes.

- Finally, these columns can contain content

Grids for Device

- Grid layout differs with devices
- Columns are divided in a row according to size of device
- Four types of grid:

Stacked	Small Devices	Medium Devices	Large Devices
• Also known as horizontal grid • Load as a stack first on small screen sized devices	• Screen width between 768 and 991 pixels • Use .col-sm-* classes	• Screen width between 992 and 1199 pixels • Use .col-md-* classes	• Screen width is at least 1200 pixels • Use .col-lg-* classes

Working with Headers (1-2)

- Page header layout adds header to a page
- Separates rest of the page by inserting a horizontal line under heading
- Jumbotron is a flexible and lightweight component
- Extends the whole viewport to highlight key informative content
- Use .jumbotron class in <div> element
- Two ways of using this component:

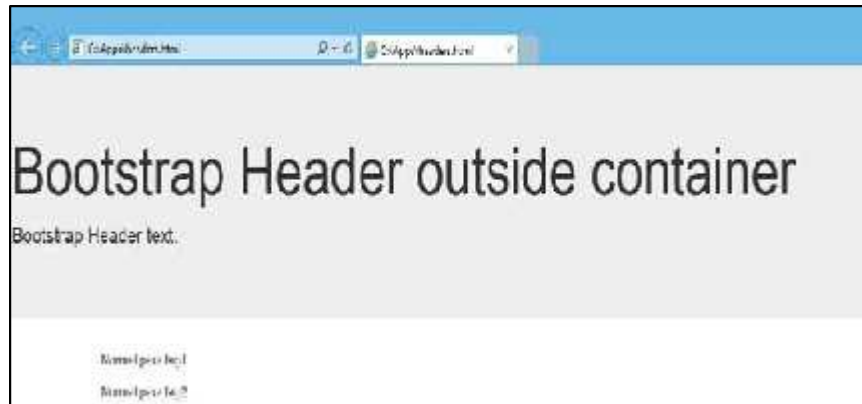| Insert it inside <div class="container"> to prevent from extending up to screen edges	Insert it outside <div class="container"> to extend it up to screen edges

Working with Headers (2-2)

- Output of Jumbotron inside <div>

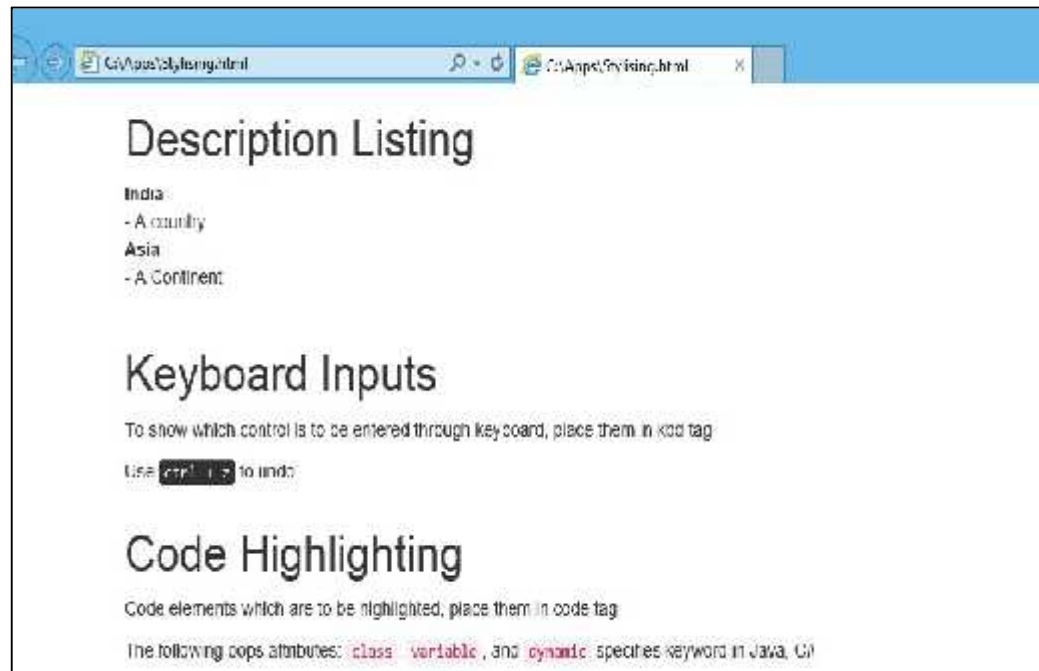- Output of Jumbotron outside <div>

Typography (1-2)

- Typography classes and elements are used to style HTML elements on Webpages
- Typography classes can be applied to text in heading, body, and list
- HTML headings have .h1 to .h6 classes
- Used to match heading font's style and put inline text
- Use .small class for inline sub-heading to display secondary text in smaller size and light color
- Output:

Typography (2-2)

- Bootstrap offers styles for Description list <dl>, inline code snippet <code>, and keyboard input text <kbd>.

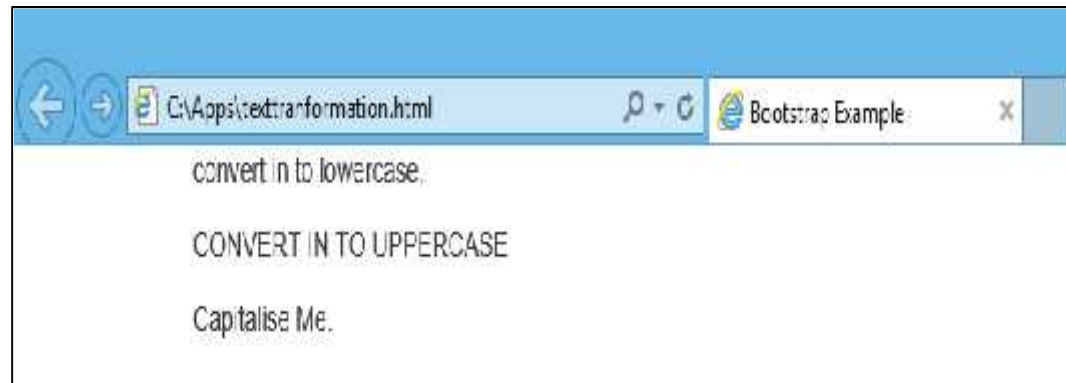- Output:

Text Transformation Classes

- Three text transformation classes to change the text case in component:

  .text-uppercase

  .text-lowercase

  .text-capitalize

- Output:

Responsive Web Designing

- The .clearfix class is used to prevent uneven wrapping and organizes the content

- The .visible-sm class is a responsive utility to make content visible on small devices

- The .visible-sm-block class is used to show content through media queries

- Use one or more classes to toggle content across variety of viewport breakpoints

Summary (1-3)

- A responsive layout adapts its user interface components and perhaps even functionality to any screen size on its own.

- A responsive Website adapts its layout to the viewing screen using three elements namely, fluid grids, flexible multimedia, and CSS3 media queries.

- Bootstrap 3 mobile first technology allows the code to focus first on smaller screens and then, expand for fitting on larger screens.

- A grid in Bootstrap is a collection of HTML/CSS components that enable a Web developer to structure a Website and insert its contents easily in the intended locations.

Summary (2-3)

- Bootstrap provides only up to 12 columns for a Webpage regardless of the viewport, but can have unlimited rows.

- The grid system consists of a series of containers, rows, and columns for designing a layout and aligning its content. The container element covers the content by setting the margins on the left and right.

- Bootstrap offers four predefined classes namely, xs, sm, md, and lg for designing responsive layouts quickly as per the targeted devices.

- The jumbotron component allows increasing the size of heading and other text for grabbing quick attention of visitors.

Summary (3-3)

- Inserting jumbotron inside a <div> tag prevents it to extend up to the edges of the screen, while placing it outside extends it up to the edges.

- Bootstrap offers .h1 to .h6 classes for styling heading text and accommodating inline text.

- Bootstrap provides .text-uppercase, .text-lowercase, and .text-capitalize classes for transforming the case of words in any piece of text.

Q & A