Creating Bootstrap Responsive Layout

SESSION 5

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
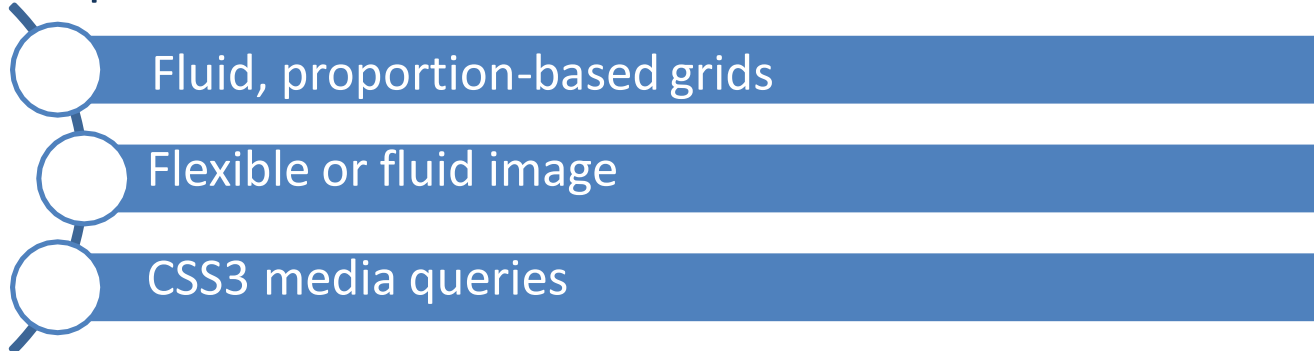
Bootstrap Responsive Layout   1-2

- Refer to a web design process for providing a easy access and smooth view experience.

- Is an efficient way to display Website on different devices

- Responsive layout is adaptive to UI components, even to any screen size

- Screen can be of a laptop, desktop, smartphone, or tablet...

- Changing of the layout as per size of target screen facilitates an optimal viewing experience.

Bootstrap Responsive Layout   2-2

- Responsive Website uses three elements:

  - Fluid, proportion-based grids

  - Flexible or fluid image

  - 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
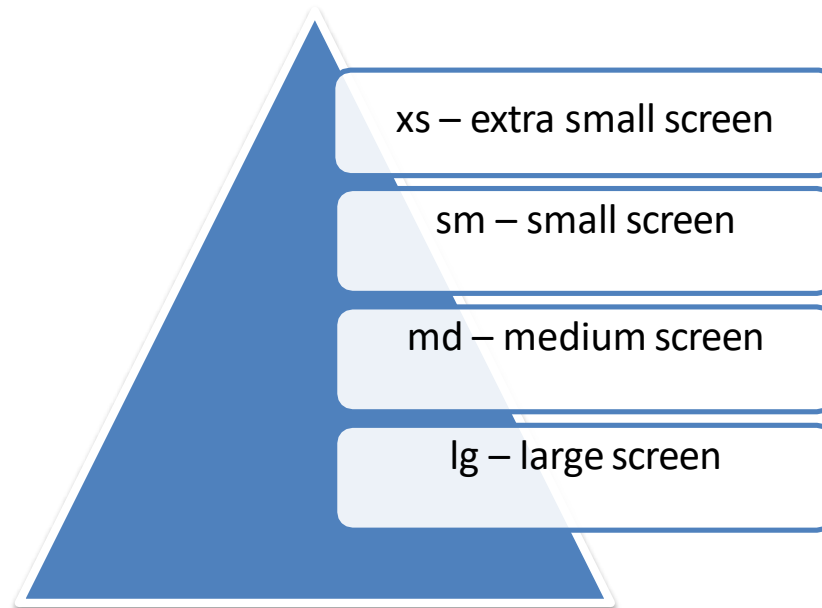
Working with Grids

- Bootstrap 3 comes with a robust mobile-first grid system.

- Gird in bootstrap is a collection of HTML/CSS components.

- 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											

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 12 in one row, specification will be .col-xs-4

Rules 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

- 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
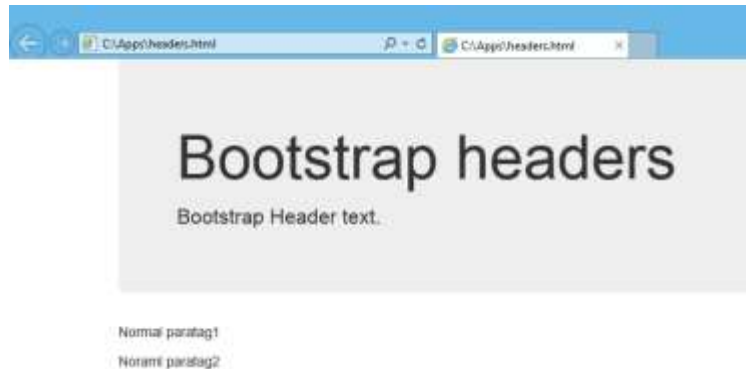- Use .jumbotron class in <div> element
- Two ways of using this component:

| 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

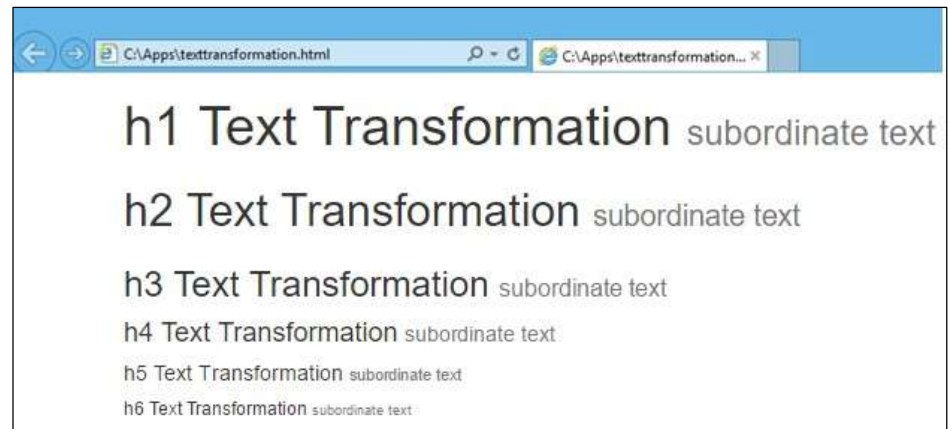- Output of Jumbotron inside <div>

- Output of Jumbotron outside <div>
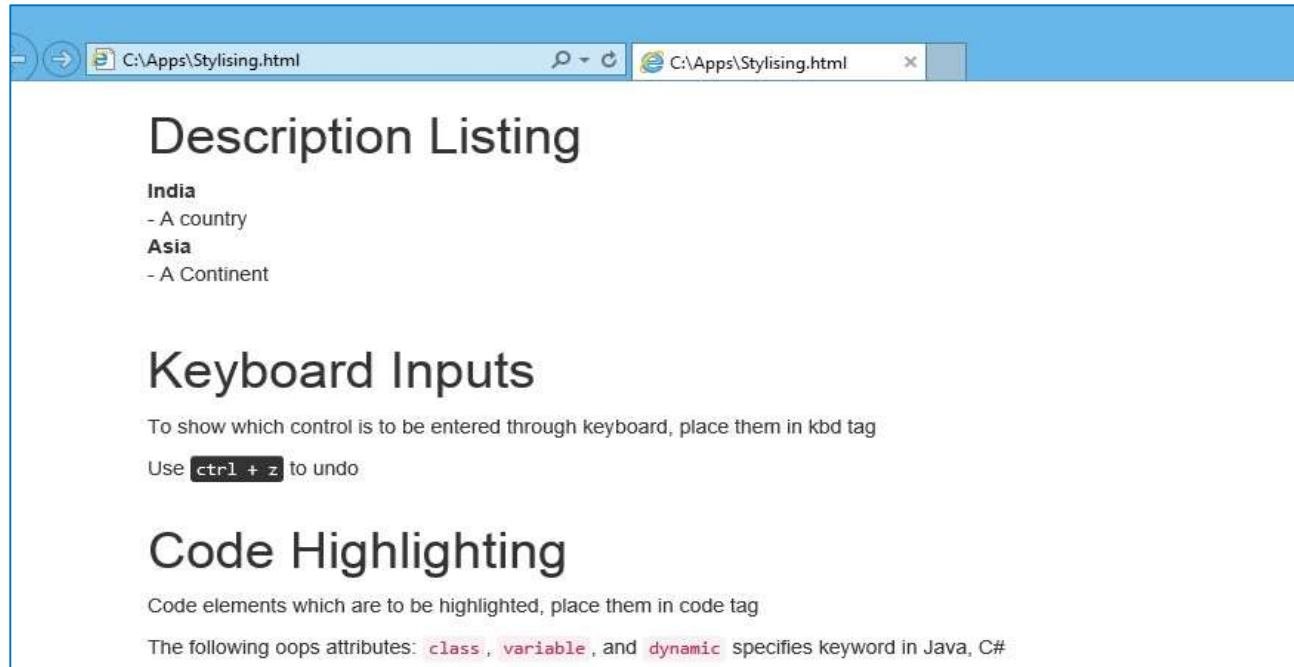
Typography   1-2

- 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

Typography   2-2

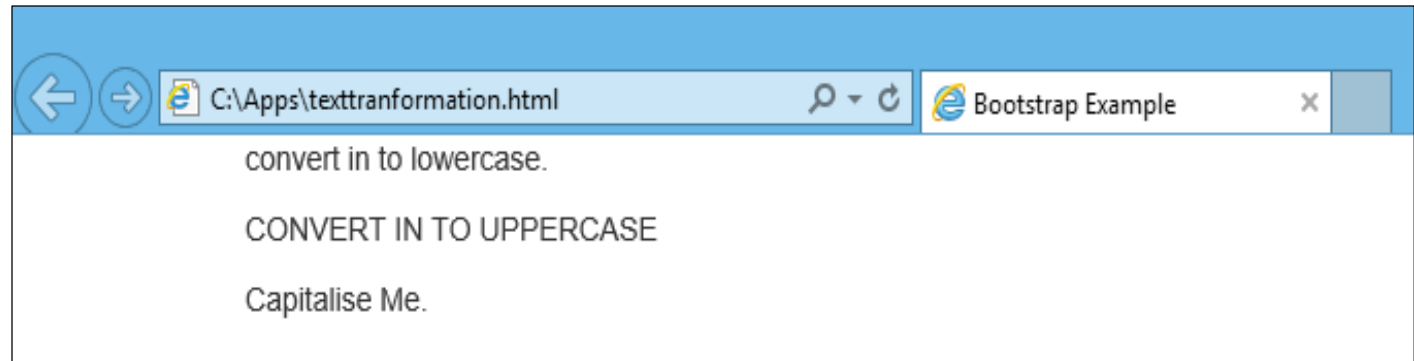- Bootstrap offers styles for Description list <dl>, inline code snippet <code>, and keyboard input text <kbd>

Text Transformation Classes

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

  .text-uppercase

  .text-lowercase

  .text-capitalize

- Output:

C:\Apps\texttranformation.html	Bootstrap Example ✕

convert in to lowercase.

CONVERT IN TO UPPERCASE

Capitalise Me.

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 1-2

- 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.

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

Summary   2-2

- 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.

- 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.