



Creating Responsive Webpages Using Bootstrap and jQuery

Session 6



Objectives

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

- Describe the role of media queries in achieving responsiveness in Bootstrap
- Understand the use tables in Bootstrap
- Understand the use tabs in a well in Bootstrap
- Describe how to customize Bootstrap
- Explain how to create a Website using Bootstrap and jQuery



Roles of Media Queries (1-2)

- Media query is a style rule for displaying Website on a particular device type
- Adds responsive CSS to bootstrap application
- CSS2 – computer screens, TV-type gadgets, handheld devices, and printers
- CSS3 – focus on characteristics of target devices rather on type
- Physical properties of device type:

Width and height
of viewport and
device

Screen resolution

Orientation –
portrait, or
landscape

- Device specific style sheet
- Defines breakpoint for width of media where layout changes visibly



Roles of Media Queries (2-2)

- Bootstrap defines media queries in bootstrapresponsive.css file
- Folder structure: **Assets** folder>> **CSS** folder>> **bootstrapresponsive.css** file
- File specifies breakpoints in a grid system
- Breakpoint on mobile:

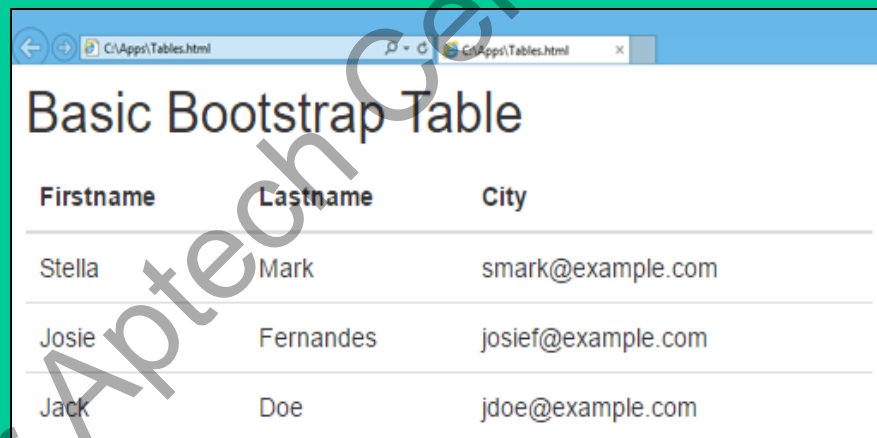


- Contains *@media* attribute with width-based logical expression
- Returns true when matches, otherwise returns false
- Include styles for different devices in a single Webpage



Tables (1-2)

- Displays data in a grid layout
- Contains rows and columns
- Provides built-in classes to improve appearance
- Basic table has – horizontal splitters and slight padding of 8 pixels
- Basic bootstrap table:

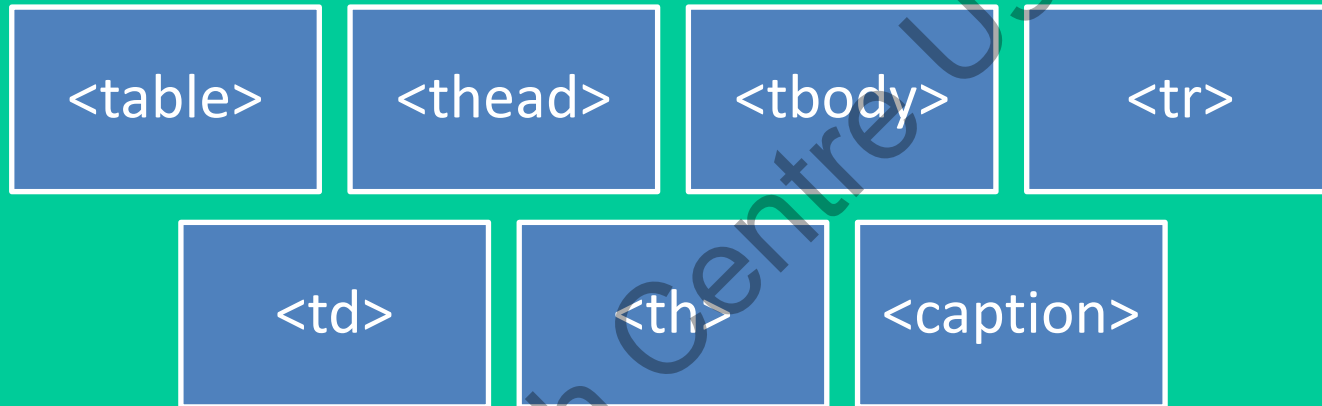


Firstname	Lastname	City
Stella	Mark	smark@example.com
Josie	Fernandes	josief@example.com
Jack	Doe	jdoe@example.com



Tables (2-2)

- Bootstrap provides a clean layout to create a table
- Table elements are:

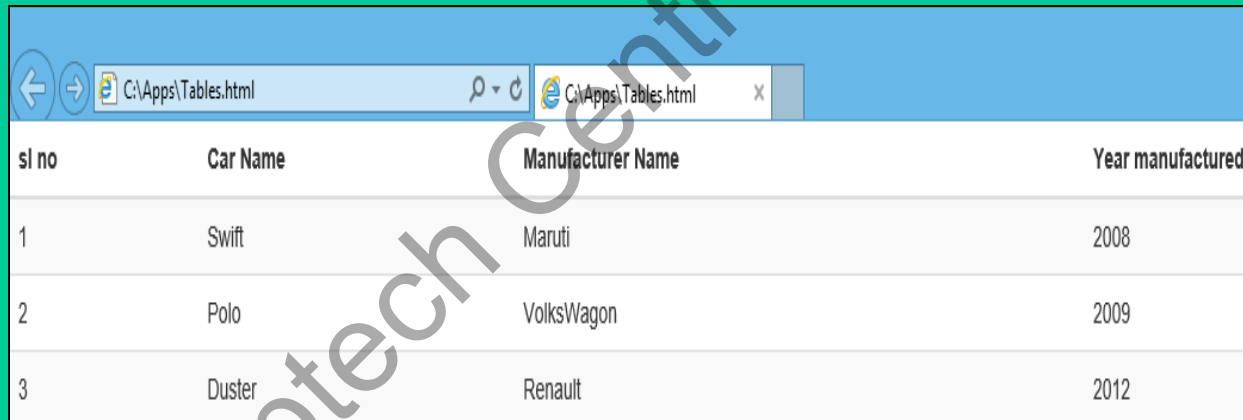


- Standard order of tags: `<table>`, `<tbody>`, `<tr>`, `<td>`
- Order of column headers: `<thead>`, `<tr>`, `<th>`



Striped Rows

- Table can be created with alternate rows and alternate background color.
- Appearance of zebra strips
- Use *.table-striped* class and add to *.table* base class
- Output:



A screenshot of a web browser window displaying a table with four columns: 'sl no', 'Car Name', 'Manufacturer Name', and 'Year manufactured'. The table has three data rows, each with a light gray background, alternating with white header rows. The data rows contain the following information: Row 1: 1, Swift, Maruti, 2008; Row 2: 2, Polo, VolksWagon, 2009; Row 3: 3, Duster, Renault, 2012. The browser's address bar shows 'C:\Apps\Tables.html'.

sl no	Car Name	Manufacturer Name	Year manufactured
1	Swift	Maruti	2008
2	Polo	VolksWagon	2009
3	Duster	Renault	2012



Bordered Table

- Enable borders on all sides of table
- By default only horizontal dividers are enabled
- Use *.table-bordered* class and add to *.table* base class
- Output:

Firstname	Lastname	Email
Stella	Mark	smark@example.com
Josie	Fernandes	josief@example.com
Jack	Doe	jdoe@example.com



Hover Effects on Rows

- Apply hover effects on rows of the table
- When hover effect is applied for row, row color changes when user moves mouse on a particular row
- Use `.table-hover` class and add to `.table` base class
- Output:

Firstname	Lastname	Email
Stella	Mark	smark@example.com
Josie	Fernandes	josief@example.com
Jack	Doe	jdoe@example.com



Condensed Tables

- Also known as compact tables
- Reduce cell padding by half to make condensed table
- Saves spaces around cells
- Use `.table-condensed` class and add to `.table` base class
- Output:

Compact Table

Firstname	Lastname	Email
Stella	Mark	smark@example.com
Josie	Fernandes	josief@example.com
Jack	Doe	jdoe@example.com



Emphasis on Tables

- Few contextual classes to emphasis a cell or entire row
- Indicate success, warning, information, or danger by changing the background color of the row or cell
- List of contextual classes with color:

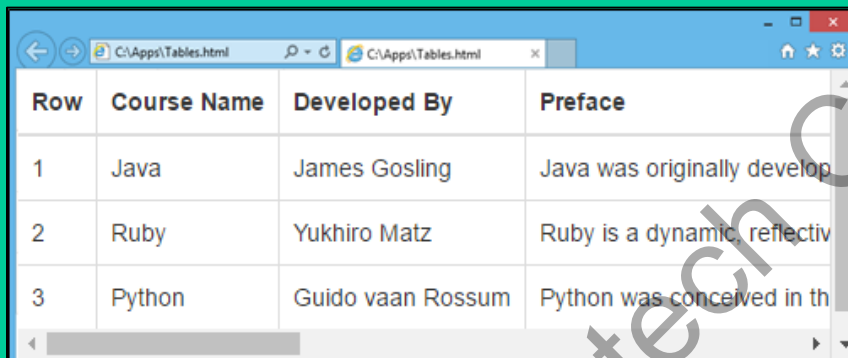
Contextual Class	Background Color	Description
<code>.active</code>	Gray	Applies the hover color to a cell or row.
<code>.success</code>	Green	Denotes a successful action.
<code>.info</code>	Blue	Denotes informative text or neutral action.
<code>.warning</code>	Yellow	Denotes a warning to grab quick attention.
<code>.danger</code>	Red	Denotes a harmful action.

- Use classes `.warning`, `.success`, `.danger`, `.active`, `.info` to `.table` base class.



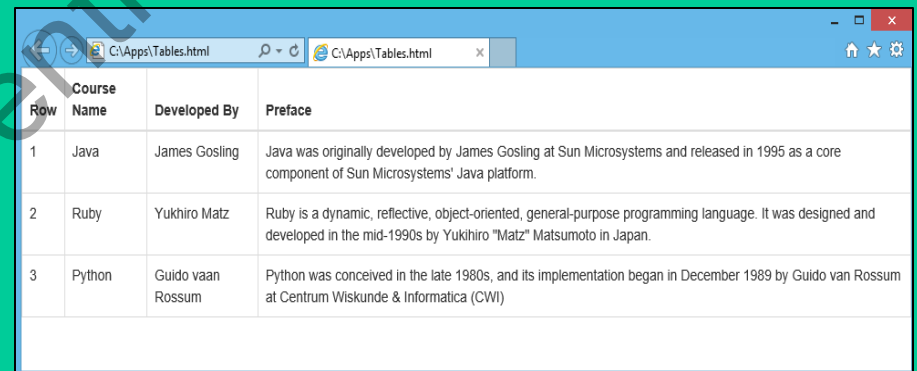
Responsive Tables

- Bootstrap 3 activates horizontal scrolling on small devices
- Same table on larger screens have no difference
- Use .table-responsive class
- Output of responsive table on small screen and larger screen:



A screenshot of a web browser window displaying a table. The table has four columns: Row, Course Name, Developed By, and Preface. It contains three rows of data. The browser window is small, and the table is wider than the viewport, causing horizontal scrolling to be visible at the bottom.

Row	Course Name	Developed By	Preface
1	Java	James Gosling	Java was originally develop
2	Ruby	Yukhiro Matz	Ruby is a dynamic, reflectiv
3	Python	Guido vaan Rossum	Python was conceived in th



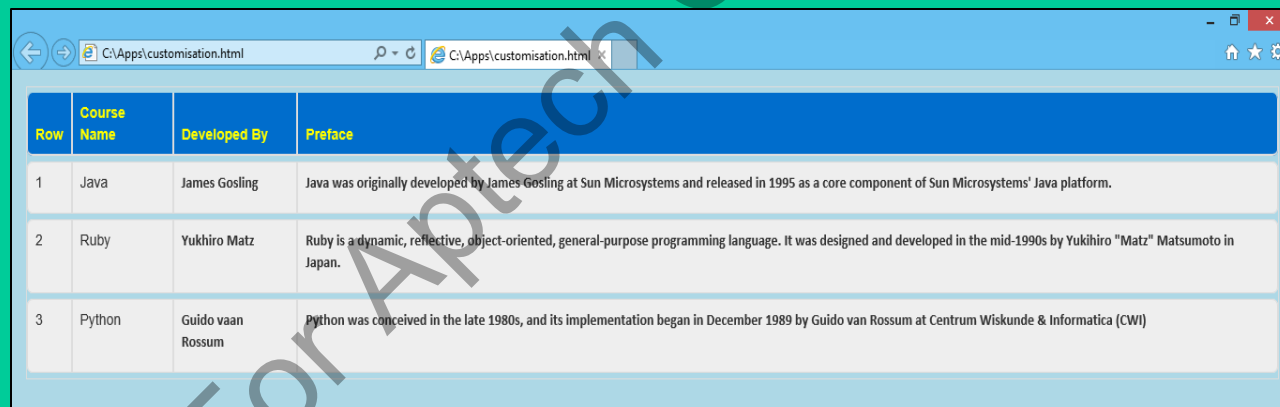

A screenshot of the same web browser window displaying the same table, but on a larger screen. The table now fits perfectly within the viewport, and there is no horizontal scrolling.

Row	Course Name	Developed By	Preface
1	Java	James Gosling	Java was originally developed by James Gosling at Sun Microsystems and released in 1995 as a core component of Sun Microsystems' Java platform.
2	Ruby	Yukhiro Matz	Ruby is a dynamic, reflective, object-oriented, general-purpose programming language. It was designed and developed in the mid-1990s by Yukhiro "Matz" Matsumoto in Japan.
3	Python	Guido vaan Rossum	Python was conceived in the late 1980s, and its implementation began in December 1989 by Guido van Rossum at Centrum Wiskunde & Informatica (CWI)



Customizing Bootstrap

- Twitter bootstrap is a popular CSS framework
- Official Website offers custom builder to generate personal bootstrap package
- LESS and SASS versions for compiling CSS file
- Prevents deviation from normal workflow and provide hassle-free upgradation
- Output:



Row	Course Name	Developed By	Preface
1	Java	James Gosling	Java was originally developed by James Gosling at Sun Microsystems and released in 1995 as a core component of Sun Microsystems' Java platform.
2	Ruby	Yukihiro Matz	Ruby is a dynamic, reflective, object-oriented, general-purpose programming language. It was designed and developed in the mid-1990s by Yukihiro "Matz" Matsumoto in Japan.
3	Python	Guido van Rossum	Python was conceived in the late 1980s, and its implementation began in December 1989 by Guido van Rossum at Centrum Wiskunde & Informatica (CWI)



Bootstrap Wells

- A well is a container component for applying an inset style
- Used to insert content inside a box
- Put content inside <div> using .well class
- Rounded border with padding and grey background color
- Change the size of well by controlling its padding by using two modifier class .well-lg and .well-sm
- Render a well smaller or larger as per defined base class
- Output of smaller, default, and larger well:

SMALL WELL with reduced padding and radius

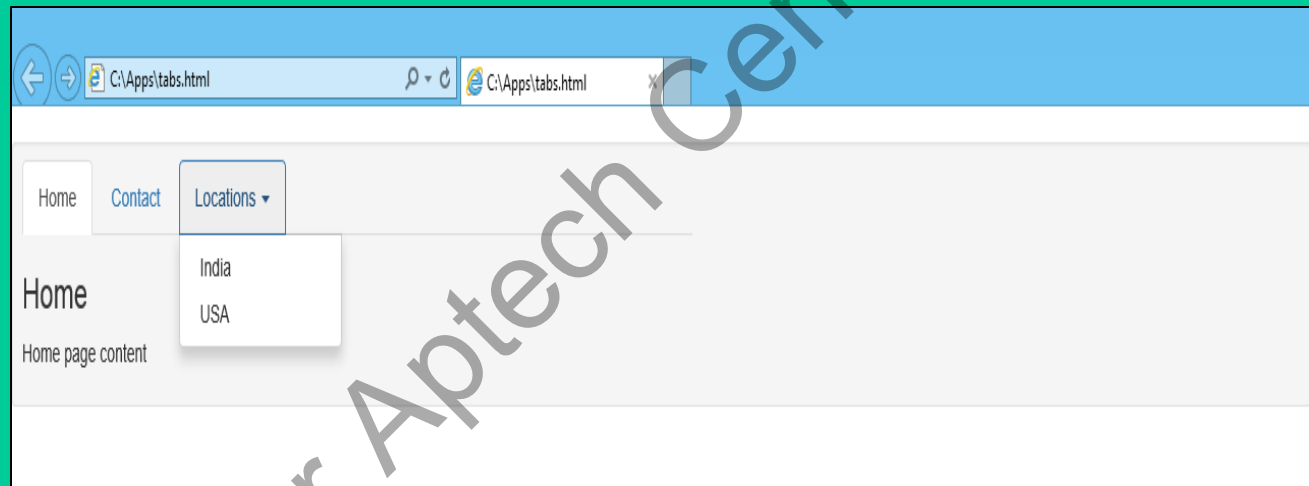
DEFAULT WELL with default padding and radius

A LARGE WELL with increased padding and radius



Tabs in Bootstrap Well

- Offers tabbed interface in a well
- Contains a series of tabs, drop-down menus, or both
- Use `.nav-tabs` class and add to `.nav` base class in `` tag
- Output:



Building a Website

- jQuery with bootstrap used to design robust and dynamic Webpages
- Simple to use and quick to design
- Compatible to multiple browsers
- Bootstrap include containers, form, or form controls in a Webpage
- jQuery provides functionalities to these components



Summary (1-3)

- A media query defines styles for displaying a Webpage on a specific type of device without modifying the markups.
- Media queries are useful in determining the device's physical properties namely, viewport's and device's width and height, screen resolution, and orientation.
- Media queries define the breakpoint for the media's width from where the layout changes on a specific screen.
- Web developers can define device-specific style sheets in Bootstrap and include all in a single Webpage.



Summary (2-3)

- A basic Bootstrap table features distinct appearance in terms of only horizontal splitters and slight padding of 8 pixels.
- A Bootstrap table can have striped rows, borders on all sides, a hovering effect on rows, and emphasized effect on rows or cells.
- The emphasized effect on rows and cells comes from one or more contextual classes namely `.active`, `.success`, `.info`, `.danger`, and `.warning`.
- Bootstrap 3 activates horizontal scrolling on a small device whose screen width is not more than 768 pixels.



Summary (3-3)

- Instead of messing up with the core files, it is more efficient to override the default CSS file in Bootstrap.
- A well is a container component to apply an inset style to a block-level element or sunken effect to its content.
- It is also possible to change the well's size by controlling its padding through the modifier classes.

