



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

- Defines a style rule for displaying a webpage on a particular device type
- Adds responsive CSS to bootstrap application
- CSS2 – specify styles for computer screens, TV-type gadgets, handheld devices, and printers
- CSS3 – focus on the characteristics of target device rather on its type. Physical properties of device type:

Width and height of viewport and device

Screen resolution

Orientation – portrait, or landscape

- Helps in rendering a device specific style sheet
- Defines breakpoint for width of media where layout changes visibly

Roles of Media Queries

2-2

- Bootstrap defines its media queries in *bootstrapResponsive.css* file (Folder **Assets /CSS/ bootstrapresponsive.css**)
- This file specifies breakpoints in a grid system
- For ex, breakpoint on
 - ✓ mobile: **480px**
 - ✓ Landscape phone & portrait tablet: **768px**
 - ✓ Portrait tablet & small desktop: **991px**
 - ✓ Landscape tablet & medium desktop: **1199px**
 - ✓ Large desktop & laptop: **1200px**

```
/* Portrait phones and smaller */
@media (max-width: 480px) {}

/* Landscape phones and portrait tablets */
@media (max-width: 767px) {}

/* Portrait tablets and small desktops */
@media (min-width: 768px) and (max-width: 991px) {}

/* Landscape tablets and medium desktops */
@media (min-width: 992px) and (max-width: 1199px) {}

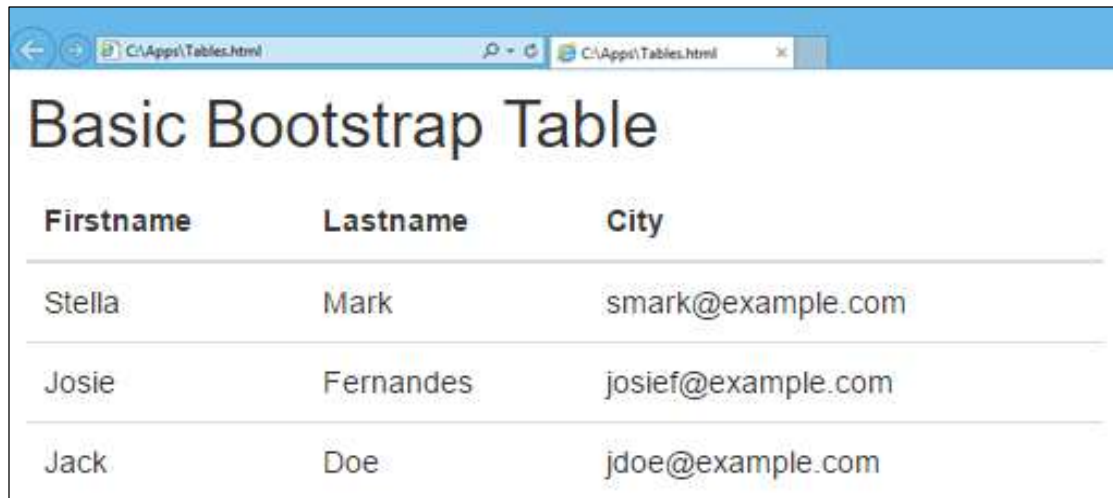
/* Large desktops and laptops */
@media (min-width: 1200px) {}
```

- 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:

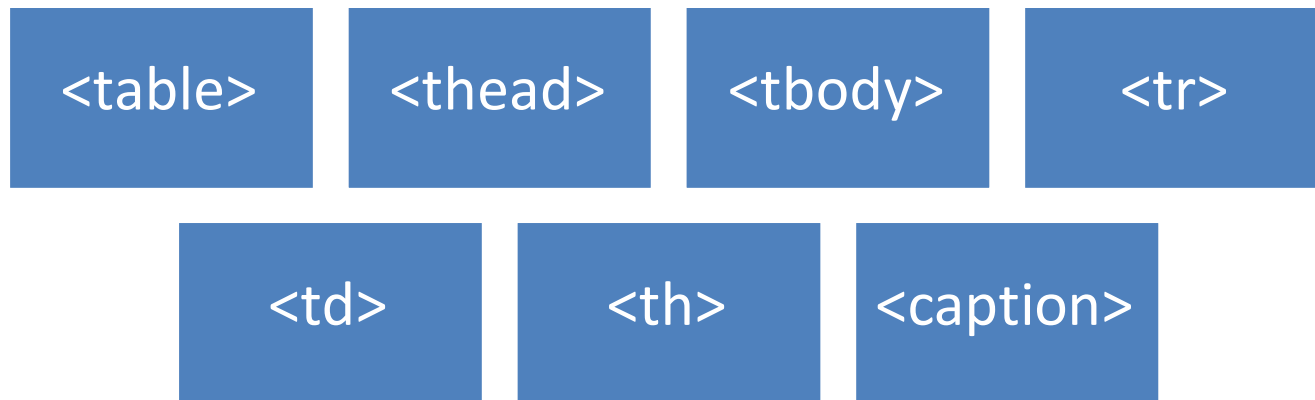


Firstname	Lastname	City
Stella	Mark	smark@example.com
Josie	Fernandes	josief@example.com
Jack	Doe	jdoe@example.com

Tables

2-2

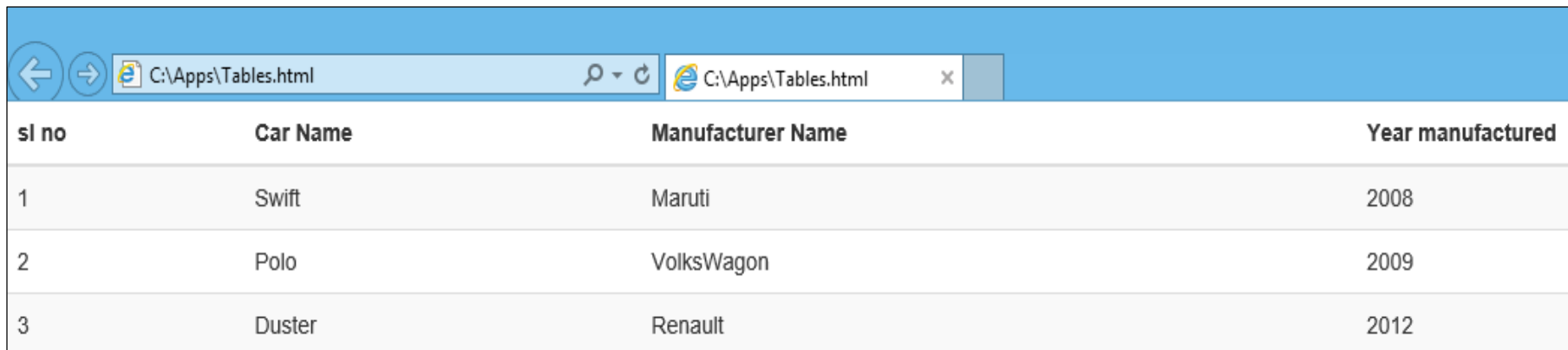
- Bootstrap provides a clean layout to create a table
- Table elements are:



- 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



The image shows a web browser window with a single tab titled 'C:\Apps\Tables.html'. The browser displays 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 background 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.

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

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

Hover Effect on a Table

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

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 are used 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:



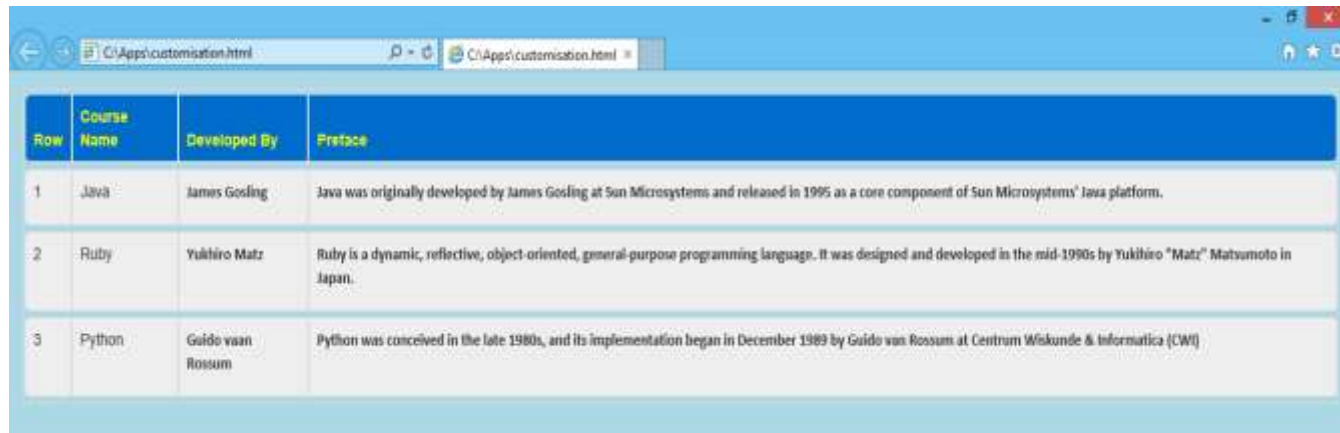
Row	Course Name	Developed By	Preface
1	Java	James Gosling	Java was originally develop
2	Ruby	Yukhiro Matz	Ruby is a dynamic, reflectiv
3	Python	Guido vaan Rossum	Python was conceived in th



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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



A screenshot of a web browser window showing a table with course information. The browser's address bar displays 'C:\Apps\customisation.html'. The table has four columns: 'Row', 'Course Name', 'Developed By', and 'Pretace'. It contains three rows of data for Java, Ruby, and Python.

Row	Course Name	Developed By	Pretace
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.
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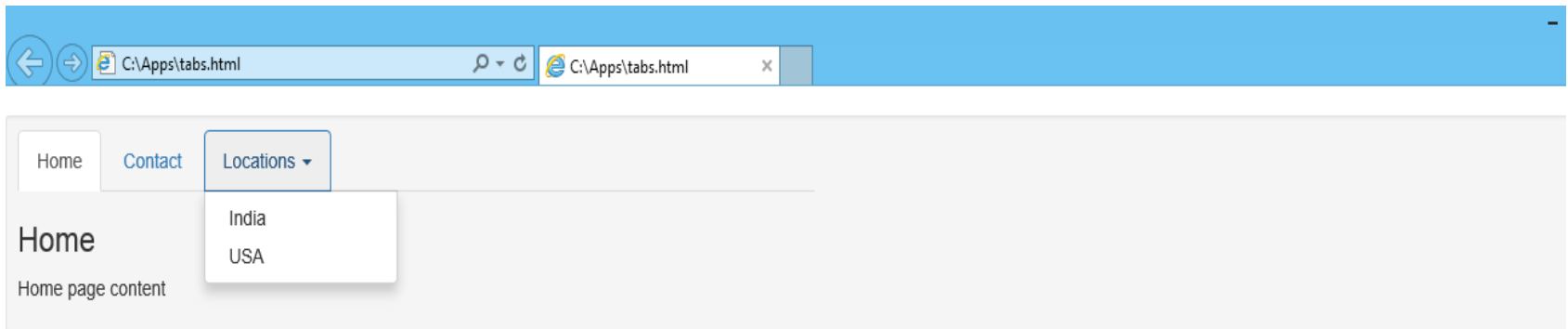
Bootstrap Wells

- 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:



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



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

1-2

- 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.
- 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`.

Summary

2-2

- Bootstrap 3 activates horizontal scrolling on a small device whose screen width is not more than 768 pixels.
- 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.