Understanding Programming in Bootstrap

SESSION 2

Objectives

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

➢ Use different Bootstrap components

➢ Write programs in Bootstrap

➢ Apply CSS and JavaScript to Bootstrap components

Components in Bootstrap

- Bootstrap framework Includes:
  - A collection of Less stylesheets use different components
  - A set of configuration variables that control features of components such as padding, color…

- Bootstrap interface components are implemented as CSS classes

- Bootstrap also provides a variety of JS components as jQuery plugins

- Bootstrap 3 supports browsers: Firefox, Opera, Chrome, Safari, and IE

- Each component comprises

HTML Structure	CSS Code	JavaScript

Layout Components

Glyphicons	Navbars	Input Groups
Pagination	Page Header	Badges
Panels	List Groups	Progress bars

Glyphicons

- BS has more than 250 glyphs or fonts, which are available in 'Glyphicons Halflings' files in 'font' folder

- Apply for only elements neither text nor child element

- Recommended with nested ** tag

- Syntax: **

- *Snippet Code:*


```
13   <div class="container">
14      <h2>Some Glyphicons</h2>
15      <p>Envelope icon: <span class="glyphicon glyphicon-envelope"></span></p>
16      <p>Hyperlinked Envelope:
17         <a href="#"><span class="glyphicon glyphicon-envelope"></span></a>
18      </p>
19      <p>Search: <span class="glyphicon glyphicon-search"></span></p>
20   </div>
```

Navbars

- Also called as Navigation bars

- A navigation header appears on the top of a Web page

- Collapsible or extensible according to the browser screen size

- Contains – links, drop-downs, buttons, icons, or combination

- Left or right alignment of these elements is possible

- Sets horizontally when viewport width increases

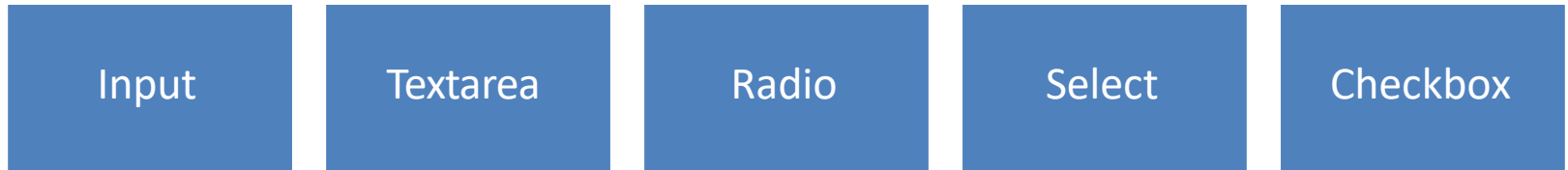- Syntax: *<nav class="*navbar navbar-default*">*

Input Groups (1-3)

- Referred as extended form controls
- Easy to append or prefix icons, buttons, or text.
- **.input-group** container class adds help text, button, or an icon.
- **.input-group-addon** class affixes text, icon, or button
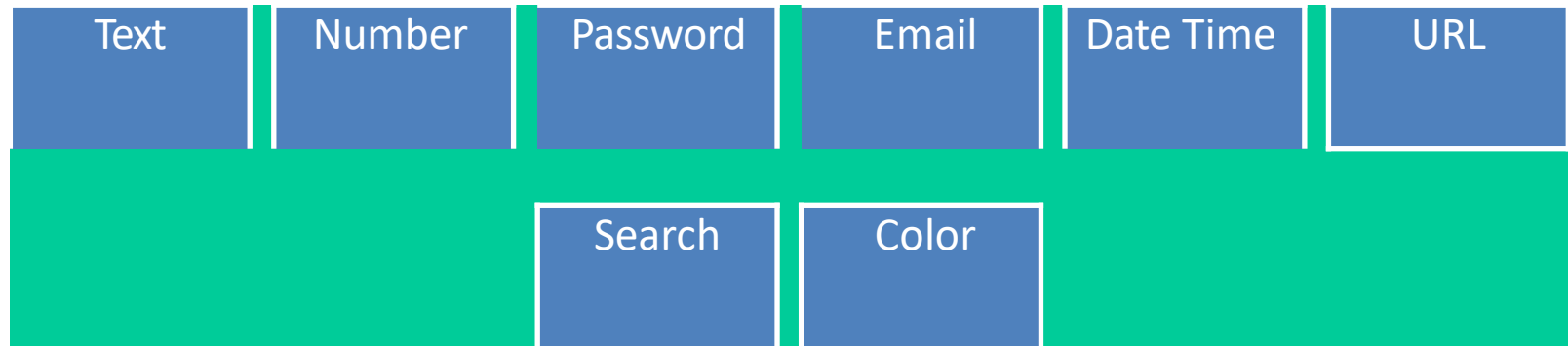- **.form-group** class adds space between controls

Input Groups (2-3)

- Bootstrap supports following form controls:

| Input | Textarea | Radio | Select | Checkbox |

- Also supports input types:

| Text | Number | Password | Email | Date Time | URL |
| | | Search | Color | | |

Input Groups (3-3)

- Syntax for creating text and password input controls:

```
<div class="form-group">
<label for="user">Name:</label>
<input type="text" class="form-control" id="user">
</div>
<div class="form-group">
<label for="pwd">Password:</label>
<input type="password" class="form-control" id="pwd">
</div>
```
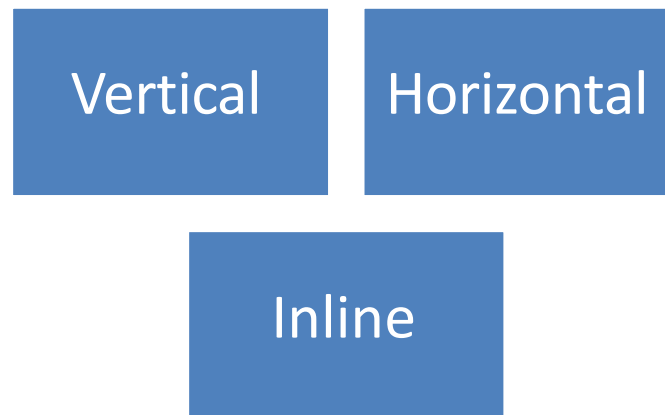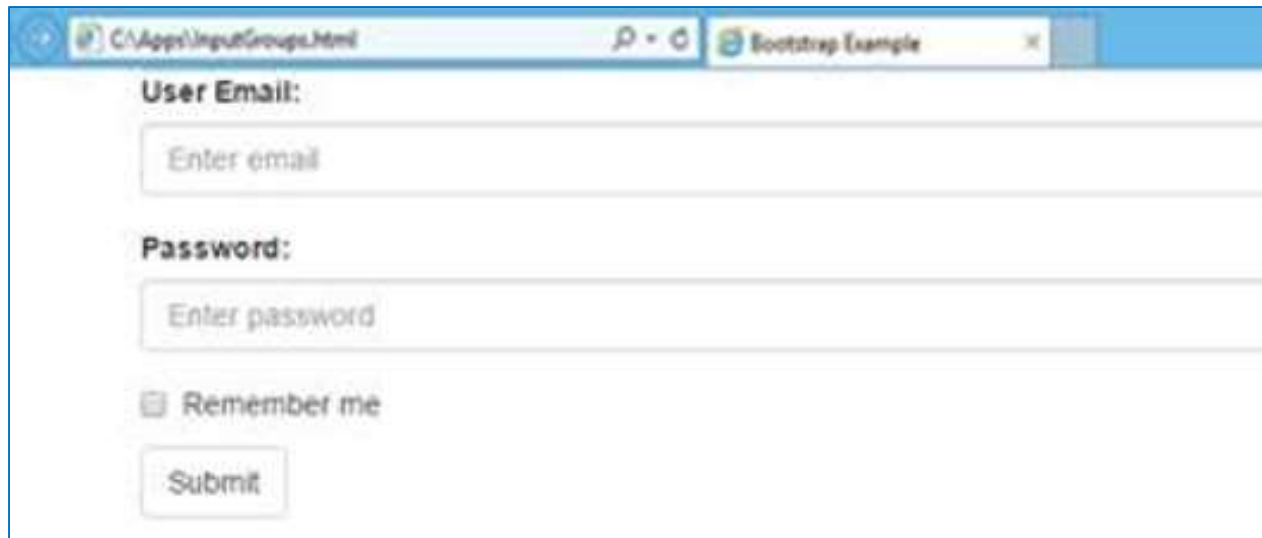
Demo on Bootstrap Functionality

- Bootstrap offers three layouts for forms:

Vertical	Horizontal

Inline

- Include each elements in <div> tag using *.form-group* class.
- Use *.form-control* class in <input>, <textarea>, and <select> elements.

Vertical Forms

- A default layout in bootstrap

- Styles are specified without a base class

- Controls are labeled and aligned to left

- Output of vertical form

Inline Forms

- All elements are in line, one after the other, and left aligned

- Width of viewport is 768 pixels

- Suits the screen of the device

- Controls are arranged side-by-side to adjust the layout vertically

- Output of the inline form:

Pagination

- Useful to Websites with many pages
- Use **.pagination** class in <ul> element to add pagination component
- Code snippet:

```html
<div class="container">
    <h2>Pagination</h2>
    <p>The .pagination class provides pagination links:</p>
    <ul class="pagination">
        <li><a href="#">1</a></li>
        <li><a href="#">2</a></li>
        <li><a href="#">3</a></li>
        <li><a href="#">4</a></li>
        <li><a href="#">5</a></li>
        <li><a href="#">6</a></li>
    </ul>
</div>
```

- Output:

Page Headers

- It is a section splitter, similar to <H1> tag
- Add proper spacing to the Webpage headings
- Use **.page-header** class with <div> element
- Code:

```
13  <div class="page-header">
14      <h1>Example page header <small>Subtext for header</small></h1>
15  </div>
```

- Output

C:\Apps\PageHeader.html   C:\Apps\PageHeader.html

Example Page Header Subtext for header

Badges

- Special labels representing new items
- Show numerical values indicating number of items
- Use **.badge** class with <span> tag
- Code:

```
13    <div class="container">
14        <h2>Badges</h2>
15        <a href="#">Hello <span class="badge">2</span></a><br>
16        <a href="#">World <span class="badge">11</span></a><br>
17        <a href="#">Folks <span class="badge">12</span></a>
18    </div>
```
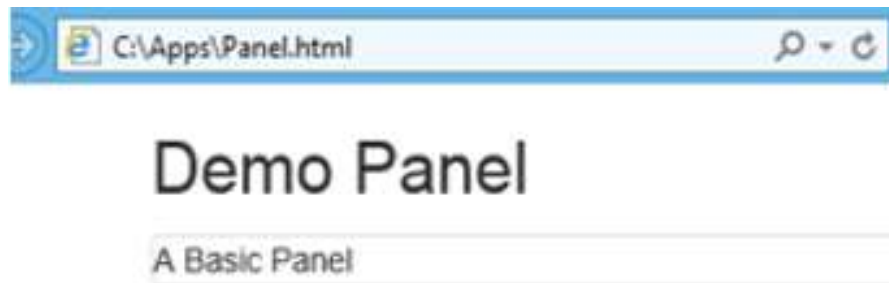
- Output

Panels

- Is a container that holds other components
- Use **.panel** base class with standard padding and border for creating panel
- Use **.panel-body** class to place the content
- Code:

```
13    <div class="container">
14        <h2>Demo Panel</h2>
15        <div class="panel panel-default">
16            <div class="panel-body">A Basic Panel</div>
17        </div>
18    </div>
```

- Output

C:\Apps\Panel.html

Demo Panel

A Basic Panel

List Groups

- Is a unordered list of items

- Renders complex and tailored content

- Use **.list-group** class with <ul>, **.list-group-item** class with

- Code:

```
13   <div class="container">
14       <h2>List Group With Badges</h2>
15       <ul class="list-group">
16           <li class="list-group-item">Hello <span class="badge">2</span></li>
17           <li class="list-group-item">World <span class="badge">15</span></li>
18           <li class="list-group-item">Folks <span class="badge">13</span></li>
19       </ul>
20   </div>
```
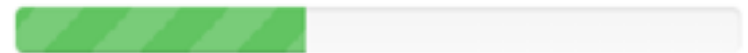
- Output :

List Group With Badges

Hello	2
World	15
Folks	13

Progress Bars (1-2)

- Display the status of an action or process in progress
- Indicate a feedback or convey an action
- Types of progress bars:

Default	Stripped	Animated	Stacked

- Examples of progress bars:

Default Progress Bar

Striped Progress Bar
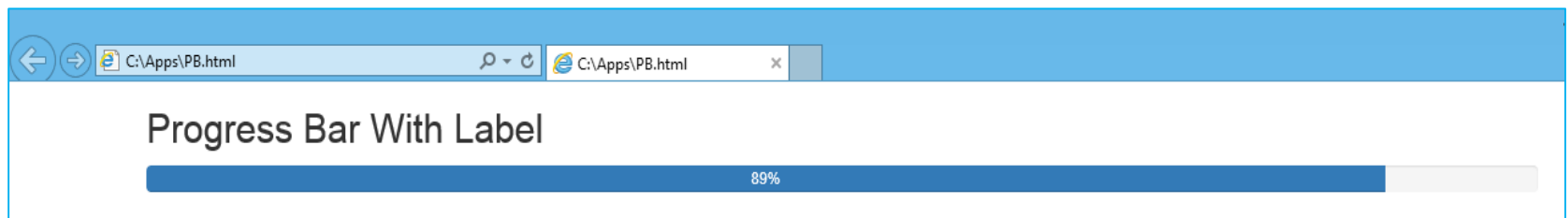
Stacked Progress Bar

Progress Bars (2-2)

- Use **.progress** class in <div> tag for generating progress bars.

- Code:

```
13  <div class="container">
14      <h2>Progress Bar With Label</h2>
15      <div class="progress">
16          <div class="progress-bar" role="progressbar"
17          aria-valuemax="100" style="width:89%">
18              89%
19          </div>
20      </div>
21  </div>
```
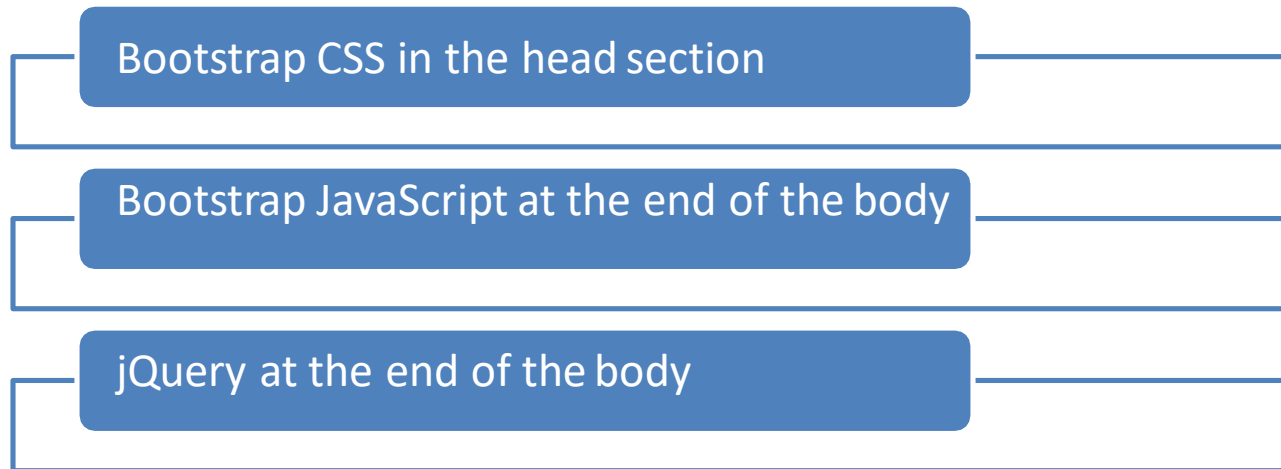
- Output of a default progress bar:

Progress Bar With Label

89%

Programming in Bootstrap (1-2)

- CSS is the core of bootstrap and exists in head section
- JavaScript exists at the end of body section
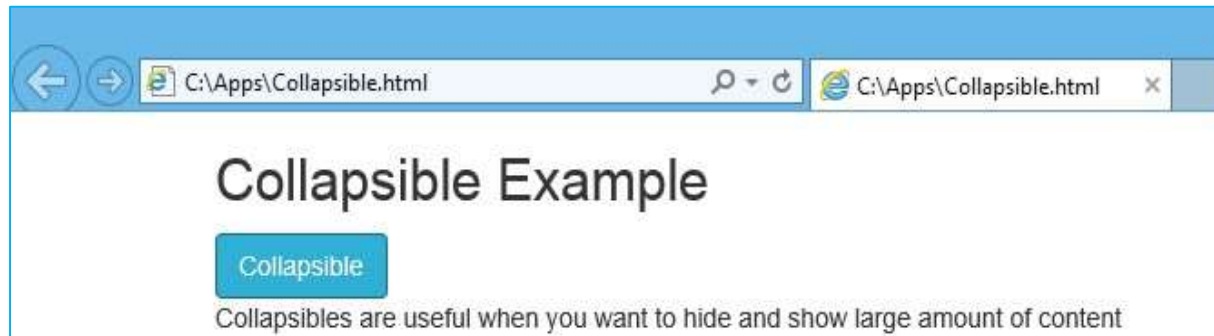- Bootstrap consists three main parts:

Bootstrap CSS in the head section

Bootstrap JavaScript at the end of the body

jQuery at the end of the body

Programming in Bootstrap (2-2)

- Collapsible is used to show or hide content

- Use **.collapse** class in <div> tag to add collapsible

- Code :

*<button type="**button**" class="**btn btn-info**" data-toggle="**collapse**" id="**mybtn**" data-target="**#demo**">Collapsible</button>*

- Output :

- Collapsible hidden by default

Popover

- A pop-up dialog box

- Analogous to a tooltip

- Display much more content

- Not a CSS-only plugin, initialize through jQuery

- Output of the popover:

Summary (1-2)

- Each Bootstrap component is reusable and comprises an HTML structure, CSS code, and even associated JavaScript.

- Bootstrap provides a variety of JavaScript components, which are available as jQuery plugins.

- There are more than 250 glyphs in Bootstrap, which are available in **Glyphicons Halflings** files.

- An icon class is applicable to elements that have neither text nor child elements.

- A navbar is a responsive navigation header visible on the top of a Webpage and is collapsible or extensible.

- Pagination refers to a block of numbers, each indicating a different page of a Website.

Summary (2-2)

- Badges are special labels indicating new items, which is similar to the number of unread e- mails near the Inbox tab in an e-mail account.

- A panel refers to a container that can hold other components such as lists and tables with proper padding.

- A list group renders an unordered list of items as well as complex and tailored content.

- Bootstrap offers four main types of progress bars namely, default, striped, animated, and stacked.

- Programming in Bootstrap includes CSS in the head section and JavaScript/jQuery in the body section.

- The html5shiv.js and respond.min.js files are included in the Bootstrapped template so that IE 8 can render the HTML5 elements.

- Bootstrap offers three form layouts namely, vertical (default), horizontal, and inline.