Experiment No. 06

Subject: Web Technologies

Title: Create a webpage containing a carousel using bootstrap framework.

Objective: To study bootstrap framework.

Theory:

What is the Bootstrap?

• Bootstrap is a free front-end framework for faster and easier web development

- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs

What is Responsive Web Design?

Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.

Advantages of Bootstrap:

- Easy to use: Anybody with just basic knowledge of HTML and CSS can start using Bootstrap
- Responsive features: Bootstrap's responsive CSS adjusts to phones, tablets, and desktops
- **Mobile-first approach:** In Bootstrap 3, mobile-first styles are part of the core framework
- **Browser compatibility:** Bootstrap is compatible with all modern browsers (Chrome, Firefox, Internet Explorer, Edge, Safari, and Opera)

Where to Get Bootstrap?

There are two ways to start using Bootstrap on your own web site. You can:

- Download Bootstrap from getbootstrap.com
 - To download and host Bootstrap yourself, go to getbootstrap.com, and follow the instructions there
- Include Bootstrap from a CDN
 - We can include Bootstrap from a CDN (Content Delivery Network).
 - o jsDelivr provides CDN support for Bootstrap's CSS and JavaScript:

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Create First Web Page With Bootstrap

1. Add the HTML5 doctype: Bootstrap uses HTML elements and CSS properties that require the HTML5 doctype. Always include the HTML5 doctype at the beginning of the page, along with the lang attribute and the correct character set:

2. Bootstrap 5 is mobile-first

Bootstrap 5 is designed to be responsive to mobile devices. Mobile-first styles are part of the core framework.

To ensure proper rendering and touch zooming, add the following <meta> tag inside the <head> element:

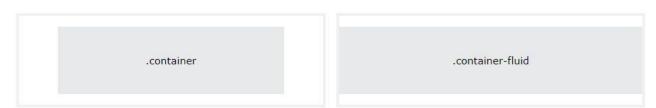
```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

- The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).
- The initial-scale=1 part sets the initial zoom level when the page is first loaded by the browser.

3. Containers

Bootstrap 5 also requires a containing element to wrap site contents. There are two container classes to choose from:

- The .container class provides a responsive fixed width container
- The .container-fluid class provides a full width container, spanning the entire width of the viewport



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How To Create a Carousel

The following table shows classes used to create a basic carousel with indicators and controls:

Class	Description
.carousel	Creates a carousel
.carousel-indicators	Adds indicators for the carousel. These are the little dots at the bottom of each slid (which indicates how many slides there are in the carousel, and which slide the use are currently viewing)
.carousel-inner	Adds slides to the carousel
.carousel-item	Specifies the content of each slide
.carousel-control-prev	Adds a left (previous) button to the carousel, which allows the user to go back between the slides
.carousel-control-next	Adds a right (next) button to the carousel, which allows the user to go forward between the slides
.carousel-control-prev-icon	Used together with .carousel-control-prev to create a "previous" button
.carousel-control-next-icon	Used together with .carousel-control-next to create a "next" button
.slide	Adds a CSS transition and animation effect when sliding from one item to the next. Remove this class if you do not want this effect

The following example shows how to create a basic carousel with indicators and controls:

```
<!-- Carousel -->
<div id="demo" class="carousel slide" data-bs-ride="carousel">
  <!-- Indicators/dots -->
  <div class="carousel-indicators">
    <button type="button" data-bs-target="#demo" data-bs-slide-</pre>
to="0" class="active"></button>
    <button type="button" data-bs-target="#demo" data-bs-slide-</pre>
to="1"></button>
    <button type="button" data-bs-target="#demo" data-bs-slide-</pre>
to="2"></button>
  </div>
  <!-- The slideshow/carousel -->
  <div class="carousel-inner">
    <div class="carousel-item active">
      <img src="la.jpg" alt="Los Angeles" class="d-block w-100">
    </div>
    <div class="carousel-item">
      <img src="chicago.jpg" alt="Chicago" class="d-block w-100">
    </div>
    <div class="carousel-item">
      <img src="ny.jpg" alt="New York" class="d-block w-100">
    </div>
  </div>
  <!-- Left and right controls/icons -->
  <button class="carousel-control-prev" type="button" data-bs-</pre>
target="#demo" data-bs-slide="prev">
    <span class="carousel-control-prev-icon"></span>
  </button>
  <button class="carousel-control-next" type="button" data-bs-</pre>
target="#demo" data-bs-slide="next">
    <span class="carousel-control-next-icon"></span>
  </button>
```

Algorithm:

- 1. Design web page using html.
- 2. Add a carousal using bootstrap.

Key Concepts: Html DOM, JavaScript, Html form Validation

