**Theory Assignment**

**1. What is Bootstrap and Why Is It Useful?**

**Bootstrap** is a free and open-source front-end framework developed by Twitter for designing responsive and mobile-first websites.

**🔹 Why it's useful:**

* Speeds up development with pre-designed components.
* Ensures consistency across browsers and devices.
* Provides a responsive grid system.
* Comes with built-in JavaScript plugins (modals, carousels, etc.).
* Easy to customize using utility classes.

**2. Explain the Bootstrap Grid System**

The **Bootstrap grid system** uses a 12-column layout to create flexible, responsive designs.

**🔹 How it works:**

* You place content in .container or .container-fluid.
* Use .row to create a horizontal group of columns.
* Use .col, .col-md-6, .col-lg-4, etc., to define the number of columns per screen size.

html

<div class="container">

<div class="row">

<div class="col-md-6">Left</div>

<div class="col-md-6">Right</div>

</div>

</div>

**🔹 Responsive Breakpoints:**

* col-sm- (≥576px)
* col-md- (≥768px)
* col-lg- (≥992px)
* col-xl- (≥1200px)

**3. Three Bootstrap Components**

**🔹 Navbar:**

Responsive navigation menu with branding, links, and toggler for mobile views.

html

<nav class="navbar navbar-expand-lg navbar-dark bg-dark">

<a class="navbar-brand" href="#">Brand</a>

</nav>

**🔹 Cards:**

Flexible content container with options for headers, images, buttons, etc.

html

<div class="card" style="width: 18rem;">

<img src="..." class="card-img-top" alt="...">

<div class="card-body">

<h5 class="card-title">Title</h5>

<p class="card-text">Some text.</p>

<a href="#" class="btn btn-primary">Go</a>

</div>

</div>

**🔹 Buttons:**

Pre-styled buttons with classes like .btn, .btn-primary, .btn-danger, etc.

html

<button class="btn btn-success">Submit</button>