**🧱 Bootstrap CSS Framework**

Bootstrap is a widely-used front-end framework designed to help developers create \*\*responsive, mobile-first\*\* websites quickly using pre-built CSS and JavaScript components.

**Why use Bootstrap?**

\* Speeds up development by providing ready-made UI components.

\* Ensures consistent design across devices.

\* Offers a flexible grid system that adapts layouts for different screen sizes.

\* Provides accessibility-friendly components.

**Bootstrap Grid System**

The grid system is based on a 12-column layout:

\* You place content inside \*\*containers\*\* → \*\*rows\*\* → \*\*columns\*\*.

\* Columns add up to 12 units per row.

\* You define how many columns an element should span at different breakpoints (e.g., `.col-md-6` spans 6 columns on medium screens).

Example layout with two equal-width columns:

```html

<div class="container">

<div class="row">

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

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

</div>

</div>

**Responsive Design Features**

\* Uses \*\*fluid grids\*\* that resize with the viewport.

\* Breakpoints for small (sm), medium (md), large (lg), and extra-large (xl) devices allow precise control.

\* Components like \*\*buttons, navbars, modals, and cards\*\* automatically adapt their layout.

**📚 What is Bootstrap?**

**Bootstrap** is a **popular open-source CSS framework** for building **responsive**, **mobile-first** websites quickly. It includes:

* Prebuilt **CSS classes** for layout, colors, buttons, typography, etc.
* Ready-to-use **JavaScript components** like modals, carousels, and dropdowns.
* A flexible **grid system**.

**✅ Key Features of Bootstrap**

| **Feature** | **Description** |
| --- | --- |
| 💠 Grid System | Layout using rows & columns |
| 🎨 Utilities | Built-in spacing, colors, display classes |
| 🧱 Components | Pre-made UI like buttons, navbars, cards |
| ⚙️ JavaScript | Interactive features (collapse, modal, etc) |
| 🌐 Responsive | Mobile-first by default |

**📐 Example: Basic Layout with Bootstrap**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Bootstrap Example</title>

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css" rel="stylesheet">

</head>

<body>

<div class="container">

<h1 class="text-center text-primary mt-4">Hello Bootstrap</h1>

<div class="row mt-5">

<div class="col-md-6 bg-light p-3">Left Column</div>

<div class="col-md-6 bg-secondary text-white p-3">Right Column</div>

</div>

<button class="btn btn-success mt-3">Click Me</button>

</div>

</body>

</html>