1. What is Bootstrap?

Bootstrap is a popular front-end framework designed for building responsive, mobile-first websites, offering pre-designed CSS and JavaScript components alongside utility classes to streamline the creation of modern, consistent interfaces. It includes a responsive grid system for flexible layouts, a wide range of UI elements like buttons, modals, and navbars, and built-in support for responsive typography, spacing, and utility classes. Additionally, Bootstrap is highly customizable through Sass variables and configuration options, allowing developers to tailor the framework to specific project needs while maintaining efficiency and design coherence.

2. How do you use Bootstrap containers?

Containers are the most basic layout element in Bootstrap and are required when using the grid system. There are three types of containers:

Default Container

 The default container uses the ".container" class. It offers a responsive, fixed-width container.

Fixed Container

 The nature of responsive containers is responsive. You can specify a class that is wide until the specified breakpoint is reached with responsive containers. After that, we apply max-widths for each of the higher breakpoints.

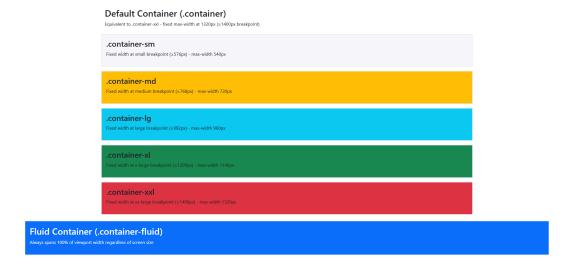
Fluid Container

- The ".container-fluid" class is used by fluid-container. It is applied to full-width containers, which fill the viewport's width.

Code

```
<!-- Default Container --> <div class="container mb-4">
    <h2>Default Container (.container)</h2>
    Equivalent to .container-xxl - fixed max-width at 1320px (≥1400px breakpoint)
<!-- Breakpoint-Specific Fixed Containers --> 
<div class="container-sm bg-light border p-3 mb-3">
    <h3>.container-sm</h3>
    Fixed width at small breakpoint (≥576px) - max-width 540px
<div class="container-md bg-warning border p-3 mb-3">
    <h3>.container-md</h3
    Fixed width at medium breakpoint (≥768px) - max-width 720px
<div class="container-lg bg-info border p-3 mb-3">
    <h3>.container-lg</h3>
Fixed width at large breakpoint (≥992px) - max-width 960px
<div class="container-xl bg-success border p-3 mb-3">
    <h3>.container-xl</h3>
    Fixed width at x-large breakpoint (≥1200px) - max-width 1140px
</div>
<div class="container-xxl bg-danger border p-3 mb-4">
    <h3>.container-xxl</h3:
    Fixed width at xx-large breakpoint (≥1400px) - max-width 1320px
<!-- Fluid Container -->
             container-fluid bg-primary text-white p-3">
    / class= container-filld bg-primary text-white p-3 >
<h2>Fluid Container (.container-fluid)</h2>
Always spans 100% of viewport width regardless of screen size
</div
```

Output



3. How do you use Bootstrap in Typography?

Headings

- Native HTML headings (<h1> to <h6>) come with default Bootstrap styling.
- .h1 to .h6 classes allow applying heading styles to non-heading elements.

Lead Paragraph

 Makes a paragraph stand out with a larger font size (1.25rem) and adjusted line height.

Text Alignment

- Controls horizontal text alignment (left, center, right).
- Responsive variants available (e.g., .text-md-center).

Text Transformation

Modifies text casing (uppercase, lowercase, capitalize first letters).

Font weight and style

- .fw-bold: Applies bold font weight.
- .fst-italic: Applies italic font style.

Code

```
<h1>h1. Bootstrap heading</h1>
h1. Bootstrap heading (using class)
This is a lead paragraph. It stands out from regular paragraphs.
Left aligned text
Center aligned text
Right aligned text
uppercased text
LOWERCASED TEXT
capitalized text
Bold text
Italic text
Italic text
```

Output

h1. Bootstrap heading

h1. Bootstrap heading (using class)

```
This is a lead paragraph. It stands out from regular paragraphs.

Left aligned text

Center aligned text

UPPERCASED TEXT

Iowercased text

Capitalized Text

Bold text

Italians a lead paragraph. It stands out from regular paragraphs.

Center aligned text

Right aligned text

Iowercased text

Capitalized Text

Iowercased text

Capitalized Text

Roll text
```

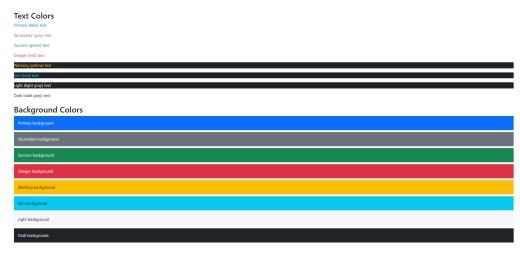
- 4. How do you use Bootstrap in Colors?
 - Text Color
 - Applies contextual text colors using Bootstrap's theme colors.
 - Requires contrast-appropriate backgrounds.
 - Background Color
 - Applies contextual background colors using Bootstrap's theme colors.
 - Often paired with contrasting text color classes

Code

```
<h2>Text Colors</h2>
class="text-primary">Primary (blue) text
class="text-secondary">Secondary (gray) text
class="text-secondary">Secondary (gray) text
class="text-success">Success (green) text
class="text-danger">Danger (red) text
class="text-warning bg-dark">Warning (yellow) text
class="text-info bg-dark">Info (teal) text
class="text-light bg-dark">Light (light gray) text
class="text-dark">Dark (dark gray) text

<h2 class="mt-4">Background Colors</h2>
<div class="p-3 mb-2 bg-primary text-white">Primary background</div>
<div class="p-3 mb-2 bg-secondary text-white">Secondary background</div>
<div class="p-3 mb-2 bg-success text-white">Danger background</div>
<div class="p-3 mb-2 bg-danger text-white">Danger background</div>
<div class="p-3 mb-2 bg-warning text-dark">Warning background</div>
<div class="p-3 mb-2 bg-info text-dark">Info background</div>
<div class="p-3 mb-2 bg-light text-dark">Light background</div>
<div class="p-3 mb-2 bg-light text-dark">Light background</div>
<div class="p-3 mb-2 bg-dark text-white">Dark background</div></div></div class="p-3 mb-2 bg-dark text-white">Dark background</div>
```

Ouput



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