# Bootstrap

1. What is Bootstrap? Why do we use it?\*

* Bootstrap is a free and open-source \*front-end framework\* used for designing responsive and mobile-first websites.

It provides \*ready-made CSS and JavaScript components\* like buttons, forms, modals, grid system, navbar, etc.

\*Why use it?\*

\* Saves development time

\* Mobile-first and responsive

\* Cross-browser compatibility

\* Predefined styles & components

\*2. Difference between Bootstrap 4 and Bootstrap 5\*

| Feature | Bootstrap 4 | Bootstrap 5 |

| ----------------- | --------------------------- | ----------------------------------- |

| jQuery Support | Required | Removed (pure JavaScript) |

| Grid System | 12 columns | 12 columns + Extra breakpoint xxl |

| Forms | Custom forms need extra CSS | New enhanced form controls |

| Icons | No default icons | Bootstrap Icons introduced |

| Internet Explorer | Supported | Dropped support for IE10 & IE11 |

-3. Purpose of the Bootstrap Grid System\*

* The grid system allows developers to create \*responsive layouts\* using rows and columns.

\* It divides the page into \*12 equal columns\*.

\* You can combine columns (e.g., col-6 + col-6 = full width).

\* Works with \*breakpoints\* for responsiveness.

### \*4. How many columns are available in the Bootstrap grid system?\*

✅ Bootstrap grid system is based on \*12 columns\*.

You can use these columns individually (col-1 to col-12) or combine them to make flexible layouts.

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\*5. Difference between container, container-fluid, and container-{breakpoint}\*\*

\* \*\*.container\*\* → Fixed-width container, changes size at breakpoints.

\* \*\*.container-fluid\*\* → Full-width container (100% width at all breakpoints).

\* \*\*.container-{breakpoint}\*\* → Container becomes fixed-width \*only after that breakpoint\* (e.g., container-md becomes fixed after medium screens).

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\*6. What are breakpoints in Bootstrap? Explain with example.\*

Breakpoints are \*responsive design points\* that define how content should behave on different screen sizes.

Default Bootstrap 5 breakpoints:

\* xs → Extra small ( <576px )

\* sm → Small ( ≥576px )

\* md → Medium ( ≥768px )

\* lg → Large ( ≥992px )

\* xl → Extra large ( ≥1200px )

\* xxl → Extra extra large ( ≥1400px )

Example:

html

<div class="col-12 col-md-6 col-lg-4">Content</div>

\* Full width on small screens

\* Half width on medium screens

\* One-third width on large screens

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# \*7. What are Bootstrap utility classes? Give 5 examples.\*

Utility classes are \*predefined helper classes\* in Bootstrap that allow quick styling without writing custom CSS.

Examples:

1. text-center → Aligns text to the center

2. mt-3 → Adds margin-top

3. p-2 → Adds padding

4. d-flex → Makes an element a flex container

5. bg-primary → Sets background color to Bootstrap’s primary theme

\*\*8. Difference between inline, block, and inline-block elements in Bootstrap\*\*

\* \*Inline\* (d-inline) → Takes only the width of its content, does not start on a new line (e.g., <span>).

\* \*Block\* (d-block) → Takes full width and always starts on a new line (e.g., <div>).

\* \*Inline-block\* (d-inline-block) → Behaves like inline but allows setting width/height (mix of inline + block).

Example:

html

<span class="d-inline">Inline</span>

<div class="d-block">Block</div>

<span class="d-inline-block" style="width:100px;">Inline-block</span>