

# Bootstrap

## Introduction

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# Agenda

- What is Bootstrap?
- Using Bootstrap
- CSS Components
- JavaScript Widgets
- What's new in Bootstrap 4?
- Q & A

# What is Bootstrap?

- Open source front-end framework
- Pre-made HTML/CSS templates and classes
  - Reduces work – for e.g., creating buttons, aligning items, formatting text, etc. becomes easier
- Format user interface, web sites
- JavaScript widgets & plugins
- Mobile first, responsive layout
- Benefits
  - Faster development
  - Browser compatibility
  - Attractive UI, good for developers who lack UI skills
  - Easy to learn
  - Responsive layouts

# Using Bootstrap

- Include in CDN
- Download files
- Package managers
  - NPM
  - Bower

# CSS Components

- Forms & Input Groups
- Tables
- List Groups
- Cards
- Progress Bars
- Alerts
- Navbar & Menus
- Buttons & Button Groups
- Pagination
- Media Objects
- Utility Classes

# JavaScript Widgets

- Carousel
- Accordion
- Modal
- Tooltips
- Popovers

# What's new in Bootstrap 4?

- CSS pre-compiler
  - Moved from Less to Sass
  - Sass is more popular
  - Better performance – C++ Sass compiler is faster
- Button styles & flat design
  - Flat style
  - More color classes
  - New outline classes
    - .btn-outline-\*
- Improved grid system
  - Changes in underlying architecture
  - More responsive – 'rem' and 'em' units instead of pixels
  - New –xl tier for extra large screens
  - Grid uses flexbox
  - No more offset classes, use margin auto classes instead

# What's new in Bootstrap 4?

- Flexbox
  - Use flexbox to manage grids, navigation, components and more
  - Display utilities can transform children items into flex items
    - `<div class="d-flex"> ... </div>`
- Cards
  - Cards replace panels, wells and thumbnails
  - Use flexbox
  - Less markup
  - `.card-body` instead of `.well`
  - Use `.card-title` for titles
  - Image headings
- NavBar
  - Flat design
  - Uses flexbox
  - Wrapping `.navbar` with `.navbar-expand{-sm|-md|-lg|-xl}` for collapse
  - More color schemes



# What's new in Bootstrap 4?

- Form changes
  - Dropped `.form-horizontal` class
  - Forms using grids require the `.row` class and can use `.col-form-label` for labels
  - Use `.form-control-lg` and `.form-control-sm` to increase or decrease the size of an input control
  - Help text – use `.form-text` class instead of `.help-block` class
- Other changes
  - Bigger fonts and headings
  - Dropped support for IE8 and IE9
  - Inversed tables
  - Glyphicons dropped, Font-awesome is recommended
  - New sizing and spacing classes

# Q & A

- Thank you!