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# @Directive

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# Content:

- Directives
- Angular's Built-In Directives
- Custom Structural Directives
- Custom Attribute Directives

# Directives

- Directives are a way of attaching behaviour to DOM elements
- Directives are decorated with the @Directive decorator
- Can be used in other components and directives
- Directives are registered in the Declarations array of an NgModule
- Directives are configured through the metadata passed to the @Directive decorator
- Directives can implement Lifecycle hooks to control their runtime behaviour

# Types of Directives

- Components
  - Directives a template
  - Most common directive used throughout the app
- Structural Directives
  - Directives that change the DOM layout by adding/removing elements
  - Prefixed with an asterisk. Eg. \*ngFor, \*ngIf, \*ngSwitch
- Attribute Directives
  - Directives that change the appearance or behaviour of an element
  - Used as attributes of elements. Eg. ngStyle, ngClass

# Built-in Directives

- Structural
  - NgFor
  - NgIf
  - NgSwitch
- Attribute
  - NgClass
  - NgStyle
  - NgNonBindable

# Custom Directives

- Custom Directives are classes that are decorated with the `@Directive` decorator
- Contain the metadata 'selector' which is enclosed in [] to specify it as an attribute
- For attribute directives, we have access to the dom elements through `elementRef`, which can be updated. (Use `renderer`)
- We can access the properties of host element using `@HostBinding`, and register eventlisteners on the host element using `@HostListener`
- We can pass data to the directive using `@Input` decorator
- In structural directives, we have access to the template as `templateRef` and to the view container as `ViewContainerRef`
- We can add the template to the container using `vcRef.createEmbeddedView()` and empty the container using `vcRef.clear()`