

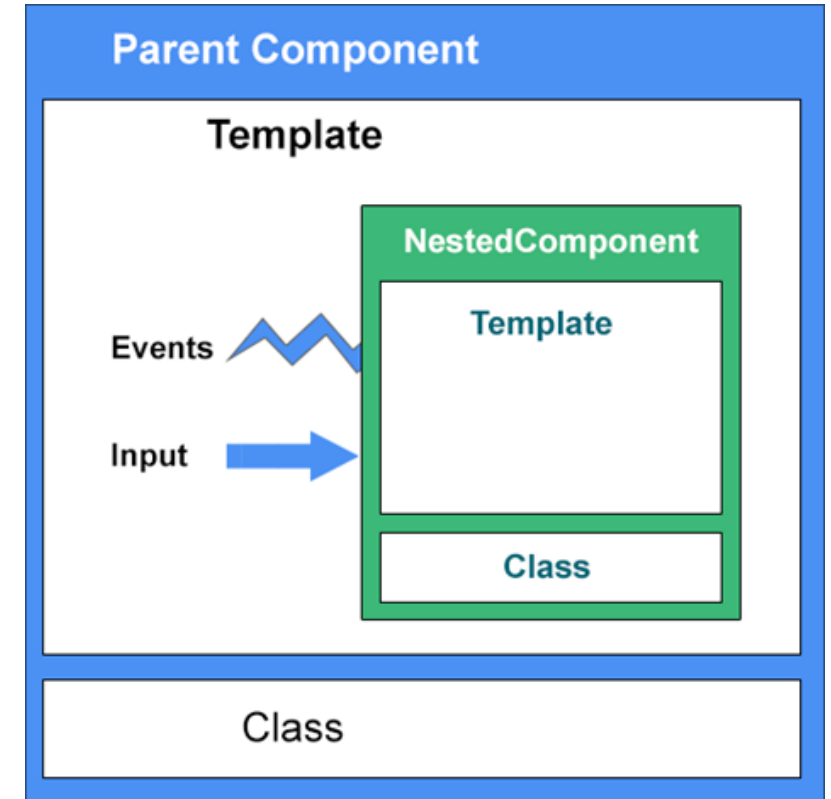
Advanced Components

Components Inheritance

- Introduced with Angular 2.3 and covers :
 - **Metadata:** Metadata (Input, Component etc.) defined in derived class will override base class metadata, else the base class metadata will be used.
 - **Constructor:** The base class constructor will be used if the derived class doesn't have one. This means that all the services injected in parent constructor will be inherited to child component as well.
 - **Lifecycle hooks:** Parent component lifecycle hooks (ngOnInit, ngOnChanges etc.) will be called when they are not defined in derived class.

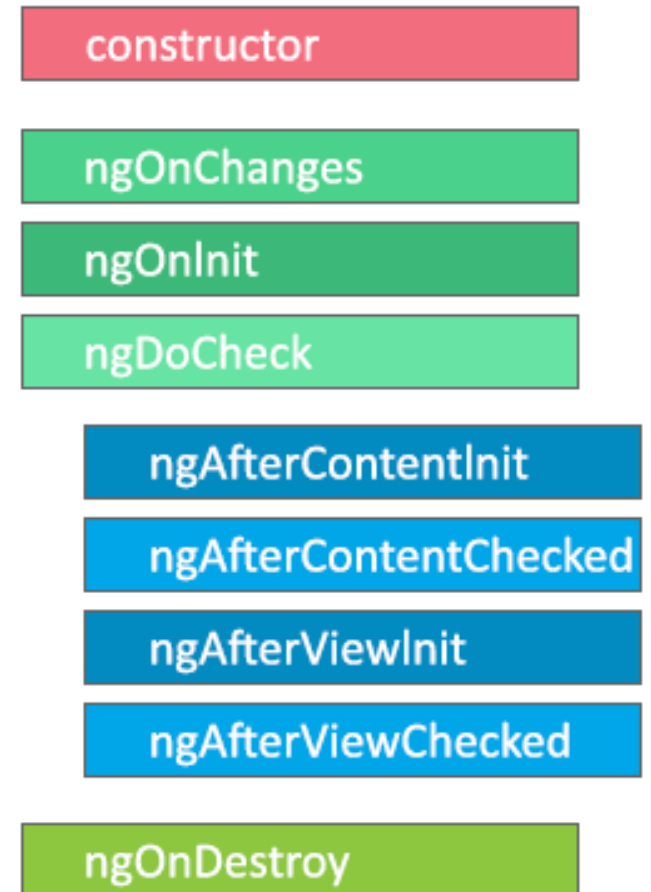
Nested Components

- Nested components can be created to create master/detail view
- `@Input` decorator is used to pass data from parent to child component
- `@Output` decorator is used to pass data from child to parent component with the help of events



Component Lifecycle Hooks

- Component lifecycle is managed by Angular itself
- Angular manages creation, rendering, data-bound properties etc.
- Angular offers given lifecycle hooks that allow you to execute custom logic
- The hooks are executed in the order as shown in fig.



Hooks for the Component

- **constructor** - Invoked when Angular creates a component or directive by calling *new* on the class.
- **ngOnChanges** - Invoked every time there is a change in one of the input properties of the component.
- **ngOnInit** - Invoked when given component is initialized. This hook is only called once after the first ngOnChanges.
- **ngDoCheck** - Invoked when the change detector of the given component is invoked. It allows us to implement our own change detection algorithm for the given component.
- **ngOnDestroy** - Invoked just before destroying the component. Useful to unsubscribe observables & detach event handlers to avoid memory leaks.

Hooks for the Component Child

- **ngAfterContentInit** - Invoked after the content of the given component is initialized.
- **ngAfterContentChecked** - Invoked each time the content of the given component is checked by the Angular change detection mechanism.
- **ngAfterViewInit** - Invoked after the component's view(s) is initialized.
- **ngAfterViewChecked** - Invoked each time the view of the given component is checked by the Angular change detection mechanism.
- **Note** - These hooks are only called for components and not for directives.