Angular 2.0 for JEE

Lesson 04 : Data Binding

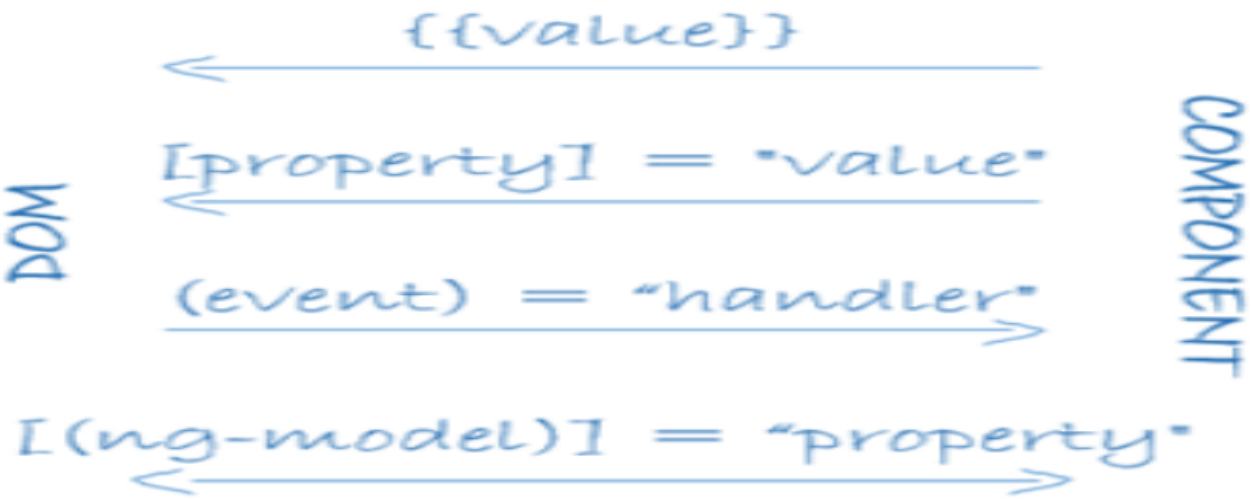
Capgemini

Lesson Objectives

- Introduction of Data binding
- One way data binding
- Two way data binding
- Nested components
- Event Binding
- @Input,@output

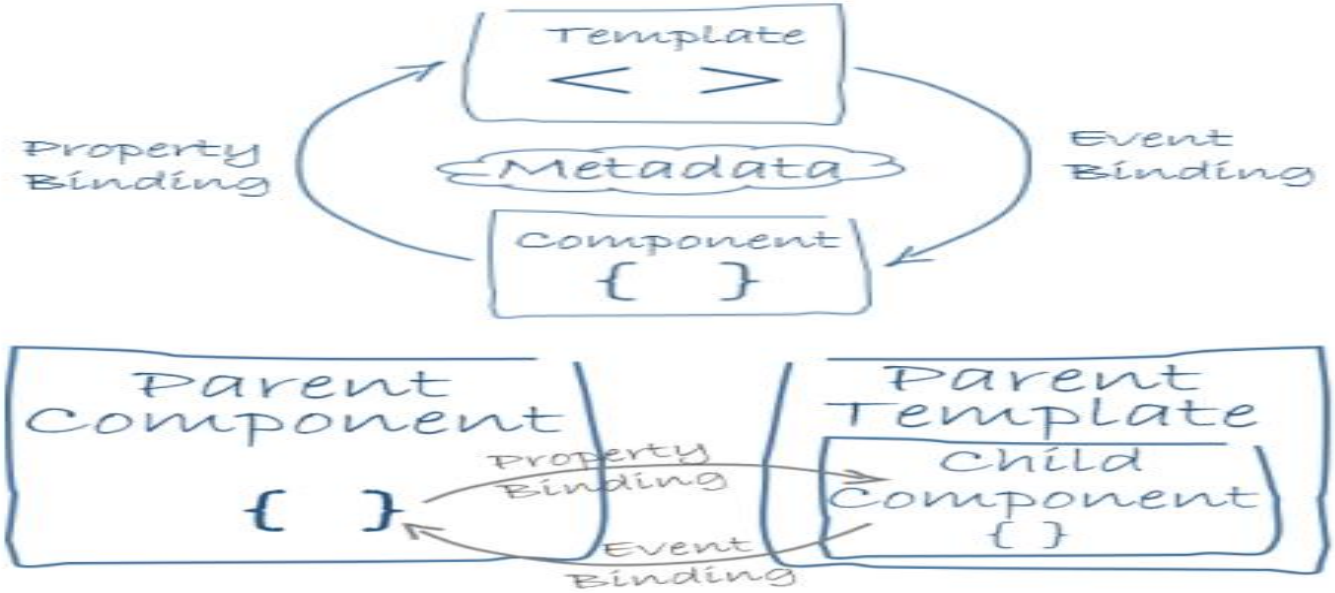
Data binding

- Angular supports **data binding**, a mechanism for coordinating parts of a template with parts of a component.
- Add binding markup to the template HTML to tell Angular how to connect both sides.
- Each form has a direction — to the DOM, from the DOM, or in both directions.



Data binding

- Data binding plays an important role in communication between a template and its component.
- Data binding is also important for communication between parent and child components.



Interpolation(One-Way binding)

- We met the double curly braces of interpolation, {{ and }}
- The syntax between the interpolation curly braces is called as template expression.
- Angular evaluates that expression using the component as the context.
  - Angular looks to the component to obtain property values or to call methods.
  - Angular then converts the result of the template expression to a string and assigned that string to an element or directive property
- Interpolation is used to insert the interpolated strings into the text between HTML elements.
  - {{hero.name}}
  - The sum of 1 + 1 is {{1 + 1}}
  - The sum of 1 + 1 is not {{1 + 1 + getVal()}}

Demo

- Demo One Way Binding

Property Binding

- The template expressions in quotes on the right of the equals are used to set the DOM properties in square brackets on the left.

  [target]="expression"

  - Example
  - <img [src]="user.img">
  - <span [hidden]="isUnchanged">changed
- Like interpolation property binding is one way from the source class property to the target element property
- Property binding effectively allows to control the template DOM from a component class.
- The general guideline is to prefer property binding all for interpolation. However to include the template expression as part of a larger expression then use interpolation

Demo

- Demo Property Binding

Event Binding

- When an event in parentheses on the left of the equals is detected, the template statement in quotes on the right of the equals is executed.
  - <button (click)="onSave()">Save</button>
- The string in quotes is a *template statement*.
- Template statements respond to an event by executing some JavaScript-like code.
- The name of the bound event is enclosed in parentheses identifying it as the target event.
- Template statement is often the name of a component class method enclosed in quotes.

Demo

- Demo Event Binding

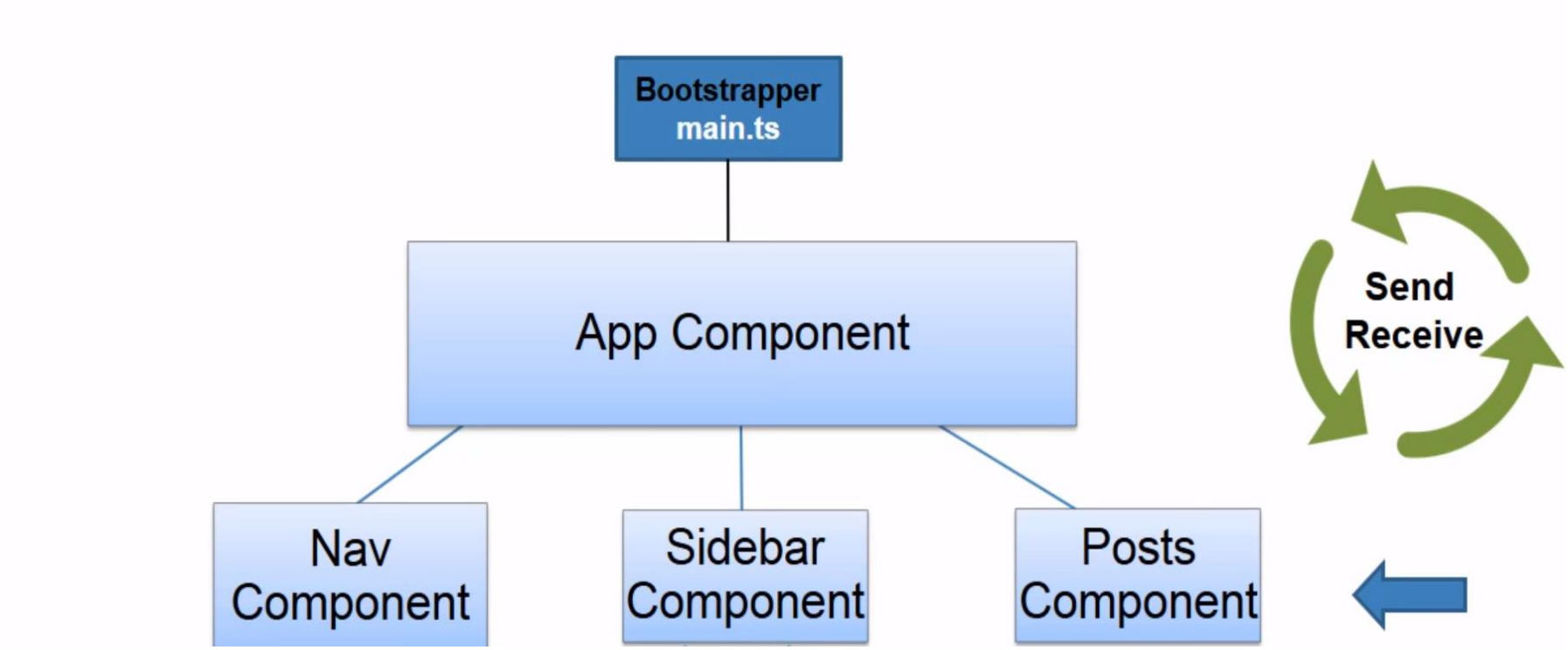
Two-way Binding

- To display a component class property in the template and update that property when the user makes a change with user entry HTML elements like input element two-way binding is required.
- In Angular ***ngModel*** directive is used to specify the two way binding.
  - [(target)]="expression"
  - input type="text" [(ngModel)]="name">
- ngModel in square brackets is used to indicate property binding from the class property to the input element
- Parentheses to indicate event binding to send the notification of the user entered data back to the class property

Demo

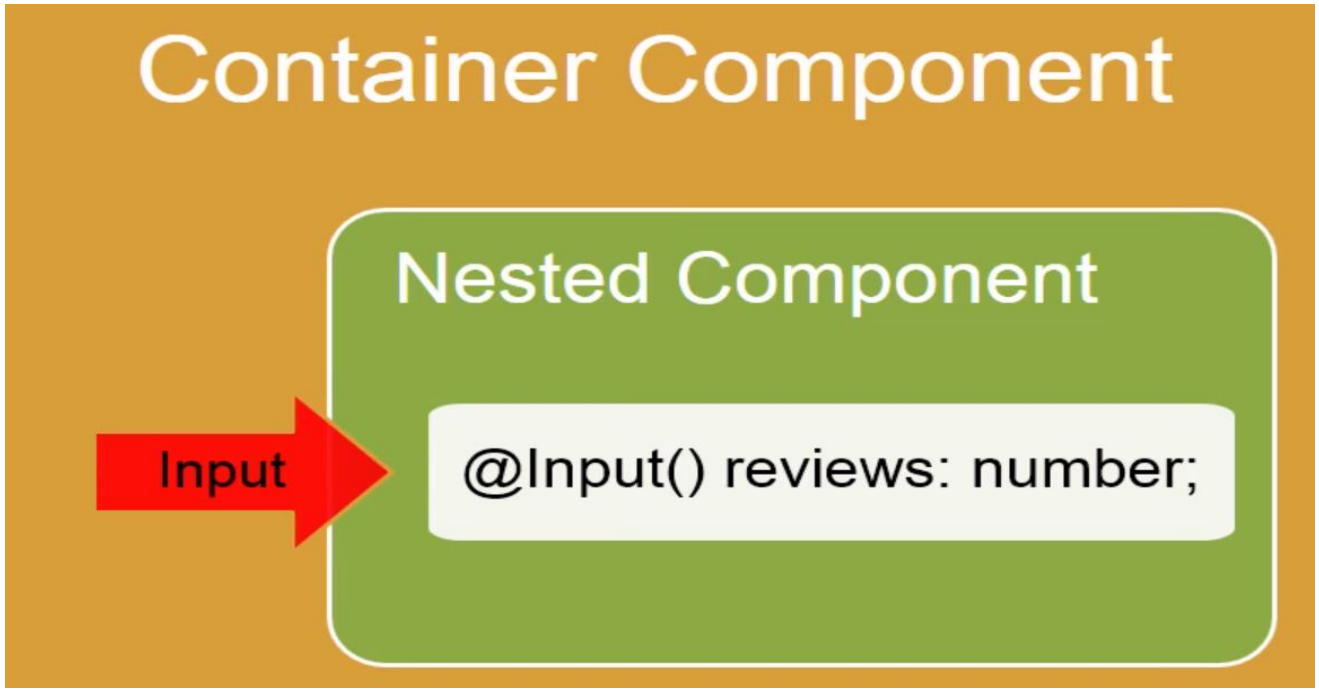
- Demo Two Way Binding

Nested Components



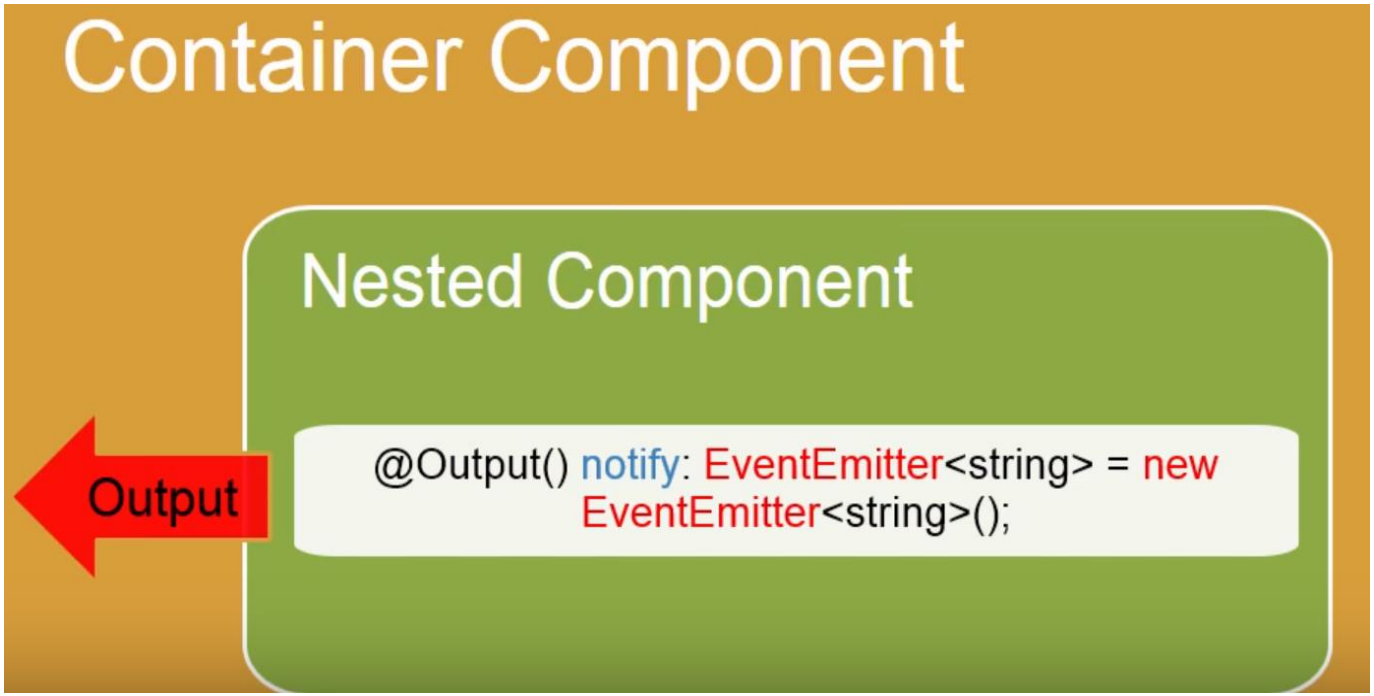
Using @Input and @Output

- @Input –Allows data to flow from parents component to child component
- @Input allows you to pass data into your controller and templates through html and defining custom properties.



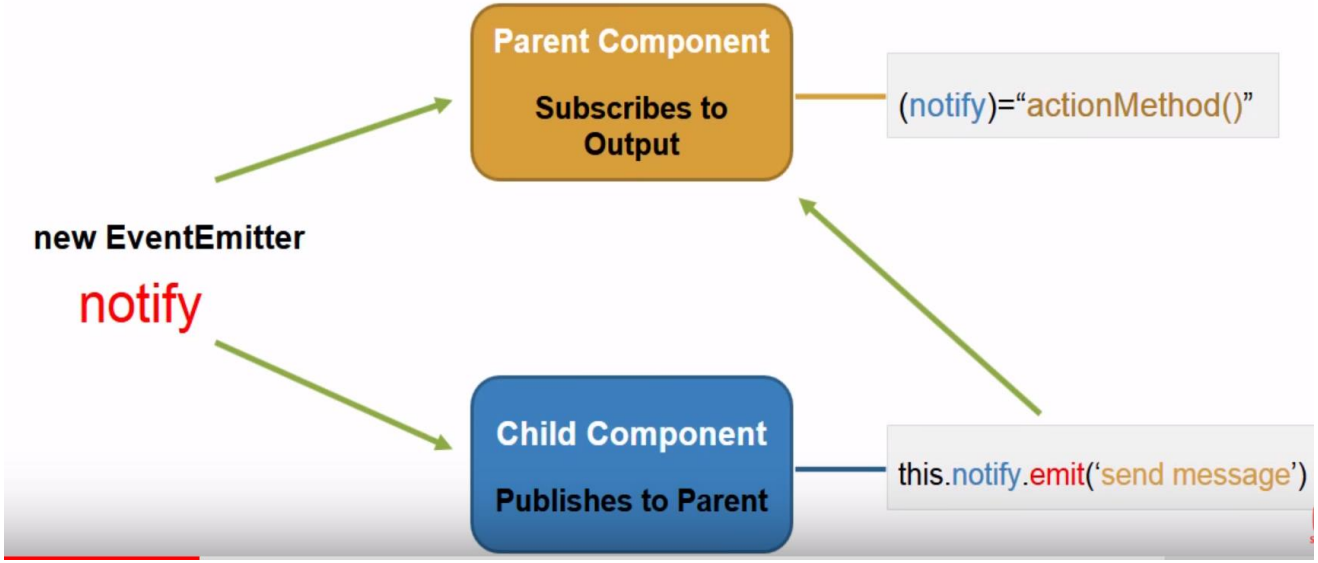
Using @Input and @Output (Contd…)

- @Output that pass data from child component to ParentComponent
- Components push out events using a combination of an @Output and an EventEmitter. This allows a clean separation between reusable Components and application logic.



Using @Input and @Output (Contd…)

- EventEmitter-Listen for something to happen & emit a event when triggered
- emit() method is used to trigger the event by emitting data from inner component to outer component which can be accessed via $event
- Nested component receives information from its container using input properties(@Input) and outputs information back to its container by raising events(@Output).



Demo

- Demo Nested Components input output

Summary

- The template expressions in quotes on the right of the equals are used to set the DOM properties in square brackets on the left.
- To display a component class property in the template and update that property when the user makes a change with user entry HTML elements like input element two-way binding is required.

Lab

- Lab 1.2