

# Angular -8

## Components

**Presentation by RAJ PRUDHVI**

Contact us: <https://training.uplatz.com>

Email: [info@uplatz.com](mailto:info@uplatz.com)

Phone: +44 7836 212635



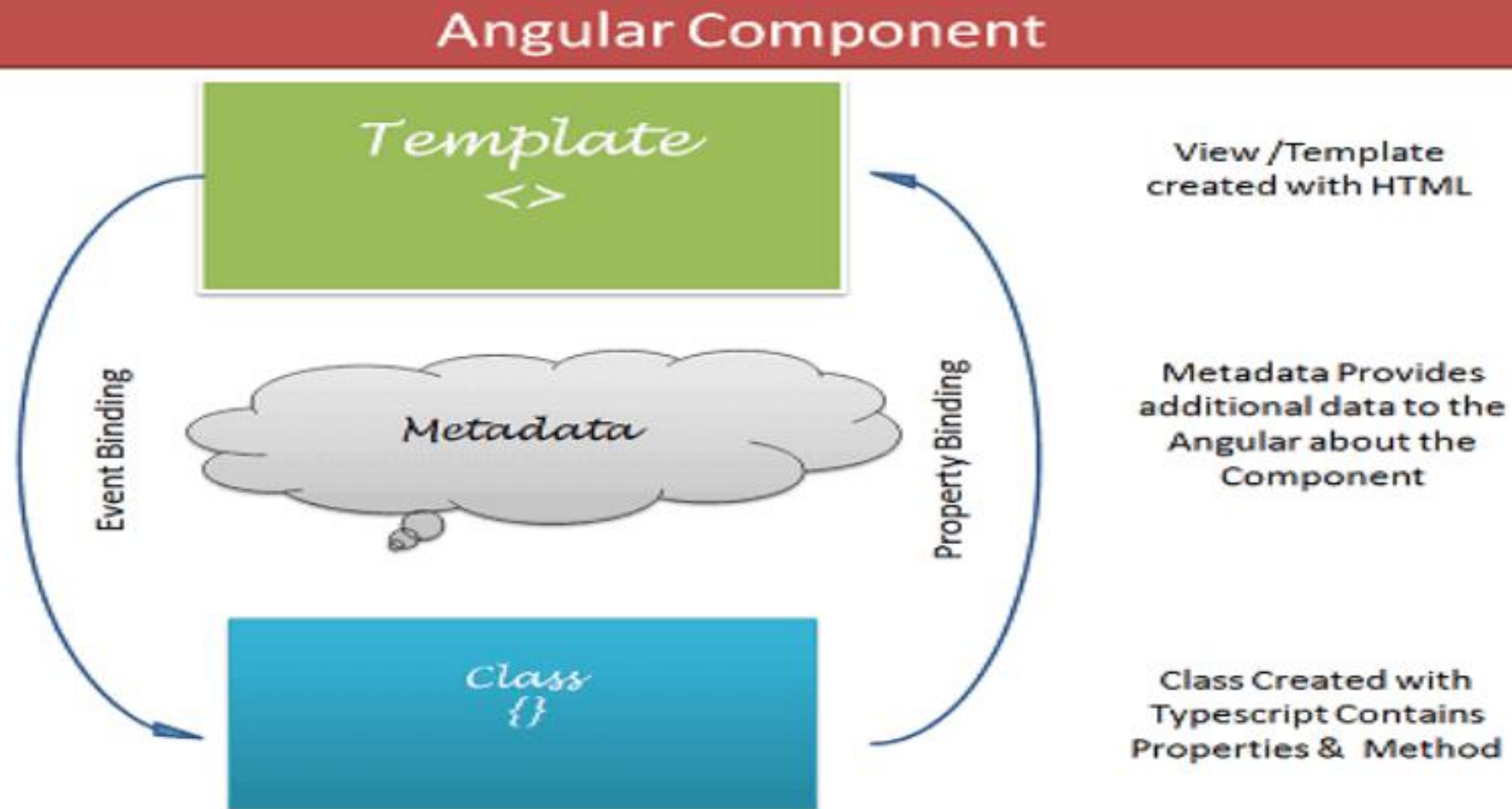
# What is an Angular Component

- The Component is the main building block of an Angular Application.
- The component contains the data & user interaction logic that defines how the View looks and behaves. A view in Angular refers to a template (HTML).
- The Angular Components are plain javascript classes and defined using @component Decorator. This Decorator provides the component with the View to display & Metadata about the class
- The Component is responsible to provide the data to the view. The Angular does this by using data binding to get the data from the Component to the View. This is done using the special HTML markup known as the Angular Template Syntax. The Component can also get notified when the View Changes.

# What is an Angular Component

- The Angular applications will have lots of components. Each component handles a small part of UI. These components work together to produce the complete user interface of the application
- The Components consists of three main building blocks
  - ❖ Template
  - ❖ Class
  - ❖ MetaData

# What is an Angular Component



# Building blocks of the Angular Component

## Template (View)

- The template defines the layout of the View and defines what is rendered on the page. Without the template, there is nothing for Angular to render to the DOM.
- The Templates are created with HTML. You can add Angular directives and bindings on the template.
- There are two ways you can specify the Template in Angular.
  - ✓ Defining the Template Inline
  - ✓ Provide an external Template

# Building blocks of the Angular Component

## Class

- The class is the code associated with Template (View). The Class is created with the Typescript, but you can also use javascript directly in the class. Class Contains the Properties & Methods.
- The Properties of a class can be bind to the view using Data Binding.

```
export class AppComponent  
{  
    title : string ="Welcome to Uplatz"  
}
```

**Note:**The Component classes in Angular are prefixed with the name “Component”, To easily identify them.

# Building blocks of the Angular Component

## Metadata

- Metadata Provides additional information about the component to the Angular. Angular uses this information to process the class. The Metadata is defined with a decorator.
- A decorator is a function that adds metadata to class, its methods & to its properties. The Components are defined with a `@component` class decorator. It is `@component` decorator, which defines the class as Component to the Angular

## @Component decorator

A class becomes a Component when Component Decorator is used. A Decorator is always prefixed with `@`. The Decorator must be positioned immediately before the class definition.

# Building blocks of the Angular Component

## Important Component metadata properties

### Selector

Selector specifies the simple CSS selector, where our view representing the component is placed by the Angular.

### Providers

The Providers are the services, that our component going to use. The Services provide service to the Components or to the other Services.



# Building blocks of the Angular Component

## Important Component metadata properties

### Styles/styleUrls

The CSS Styles or style sheets, that this component needs. Here we can use either external stylesheet (using styleUrls) or inline styles (using Styles). The styles used here are specific to the component

### template/templateUrl

The HTML template that defines our View. It tells Angular how to render the Component's view. The templates can be inline (using a template) or we can use an external template (using a templateUrl). The Component can have only one template. You can either use inline template or external template and not both

# The component selector

- The Angular renders the components view in the DOM inside the CSS selector, that we defined in the Component decorator

```
@Component(  
{  
  selector: 'app-root',  
})
```

- The selector <app-root></app-root> is in the index.html (under src folder)
- When we build Angular Components, we are actually building new HTML elements. We specify the name of the HTML element in the selector property of the component metadata. And then we use it in our HTML.

# Types of component selector

- The Angular, when instantiating the component, searches for the selector in the HTML file and renders the Template associated with the component.

## Using the CSS class name

```
@Component({ selector: '.app-root' })
```

- In the index.html use the following code

```
<div class="app-root"></div>
```

# Types of component selector

## Using the attribute name

```
@Component ({ selector: '[app-root]' })
```

➤ In the index.html use the following code

```
<div app-root></div>
```

# Types of component selector

## Using attribute name and value

```
@Component({  
  selector: 'div[app=app1]'  
})
```

➤ In the index.html use the following code

```
<div app="app1"></div>
```



Thank You

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