



Custom Components



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Custom Components



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■ Making a Component



- What if we want to teach the browser new tags?
 - What if we wanted to have a `<weather>` tag that shows the weather?
 - OR
 - What if we want to create a `<login>` tag that shows a login panel?
- One of the big ideas behind Angular is the idea of components.
- To add a component to the application use the `ng` command as follows:

```
ng generate component <component-name>
```

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■ Making a Component



```
ng generate component <component-name>
```

- The command will go and create a new folder and add **FOUR** files by default.
 - Unit test file
 - HTML template
 - The CSS file
 - The component code
- One of the big ideas behind Angular is the idea of components.
- An Angular **application** is a basically a **collection of components**.

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■ Component Decorators



- Think of **decorators** as **metadata** added to our code.
- They always start with @ character

```
@Component({  
  selector: 'app-hello-user',  
  templateUrl: './hello-user.component.html',  
  styleUrls: ['./hello-user.component.css']  
})
```

- The **selector** property indicates which DOM element this component is going to use
- The **templateUrl** OR **template** indicates where/what is the UI
- The **styleUrls** indicate where to look out for CSS

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■ Loading Our Component



- To load the component in the application, use the **selector** property as the tag in the application UI / template.

```
<h1>Components and Directives</h1>  
<app-hello-user></app-hello-user>
```

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■ Adding Data to Component



- To add data to components, we need to specify the instance/**property** variable(s) in the component class.
- **Syntax:** property_name: <data_type>;// TS syntax
- We can initialize the property in the **constructor** as follows: this.property_name = <value>;

```
export class HelloUserComponent implements OnInit {  
  // Properties  
  name: string;  
  age: number;  
  gender: string;  
  
  constructor() { // Initialization  
    this.name = "Mukthar";  
    this.age = 54;  
    this.gender = "M";  
  }  
}
```

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■ Adding Data to Component



- The complete component **class** could look as shown below:

```
export class HelloUserComponent implements OnInit {  
  // Properties  
  name: string;  
  age: number;  
  gender: string;  
  
  constructor() { // Initialization  
    this.name = "Mukthar";  
    this.age = 54;  
    this.gender = "M";  
  }  
  
  ngOnInit(): void {  
  }  
}
```

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Data Binding



- When a component has property, we can access the property in our UI / template using `{{ }}`
- This is termed as **Data Binding**.

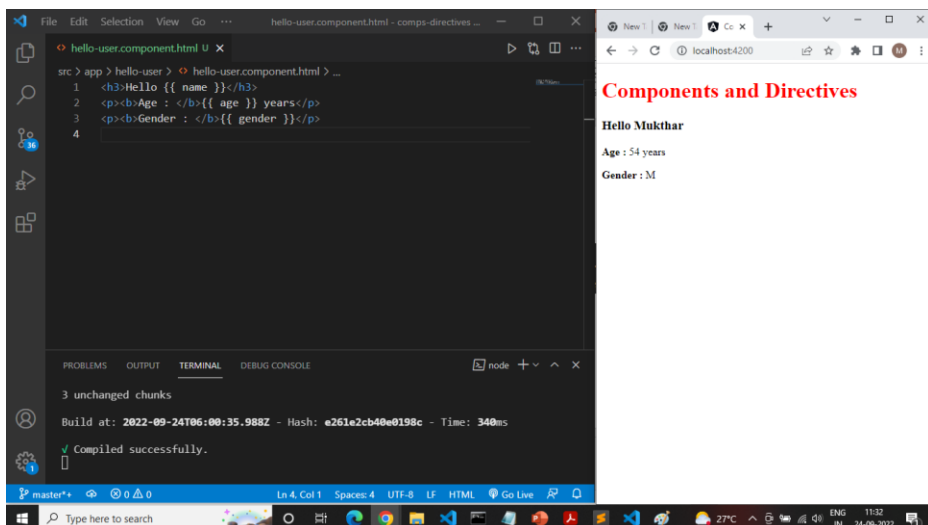
```
1 <h3>Hello {{ name }}</h3>
2 <p><b>Age : </b>{{ age }} years</p>
3 <p><b>Gender : </b>{{ gender }}</p>
```

- It a technique to link the data to the UI (view).
- Data Binding is a communication with TS component code and template i.e. HTML
- AKA **String Interpolation**

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Data Binding - Example



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Property Binding



- Is the association / mapping of **DOM** element **attribute** with the **property** of a component
- This is termed as **Property Binding**.
- In HTML the appropriate tag attribute should be enclosed in [] brackets and the component property is enclosed in double quotes.
- **Syntax:** <html_tag [attribute] = "comp_property">

```
export class AppComponent {  
  title = 'Property and Event Bindings';  
  imgUrl = 'https://picsum.photos/640/360';  
  
  handleClick() {  
    console.log('Clicked the button...');  
  }  
}
```

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Event Binding



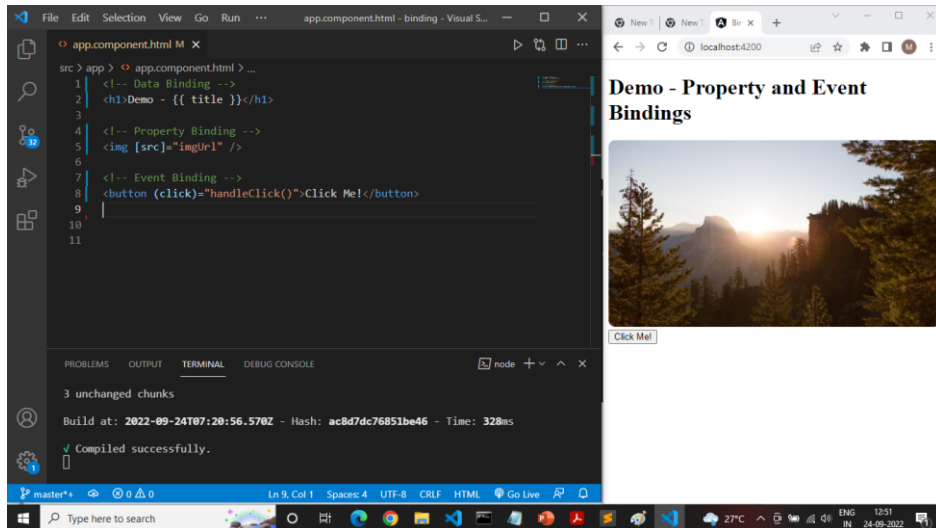
- Is the association / mapping of **DOM** element **event** name with the **property** of a component
- This is termed as **Event Binding**.
- In HTML the appropriate event name should be enclosed in () parenthesis and the function name is enclosed in double quotes.
- **Syntax:** <html_tag (event) = "handler()">

```
export class AppComponent {  
  title = 'Property and Event Bindings';  
  imgUrl = 'https://picsum.photos/640/360';  
  
  handleClick() {  
    console.log('Clicked the button...');  
  }  
}
```

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Different Bindings



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Working with Arrays

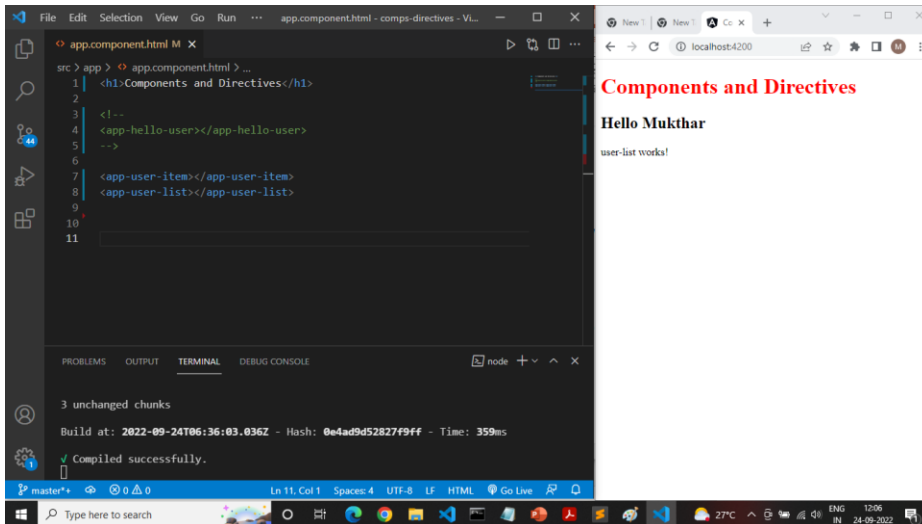


- The **property** of a class can even be of Array type.
- Recall the **TypeScript** syntax to create an Array.
- We can initialize the Array in the constructor.

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User List Component



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