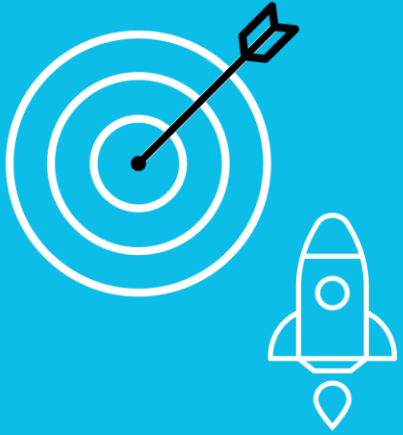


Angular 8

Lesson 4: Directive and Data-Binding

KEY OBJECTIVES



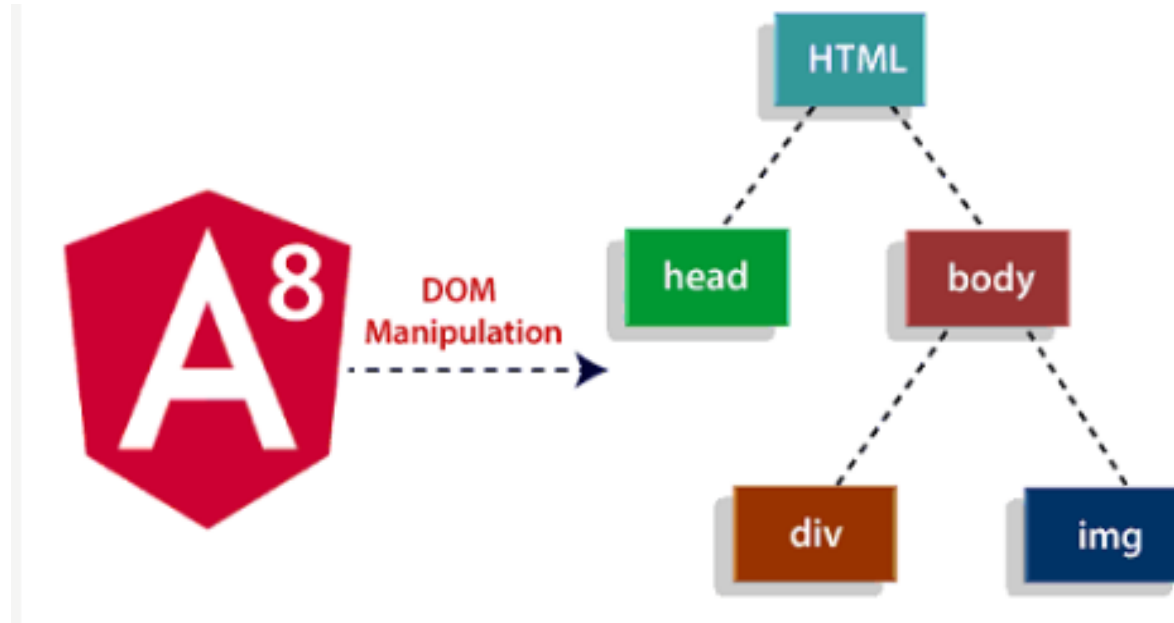
At the end of this lesson, you will be able to:

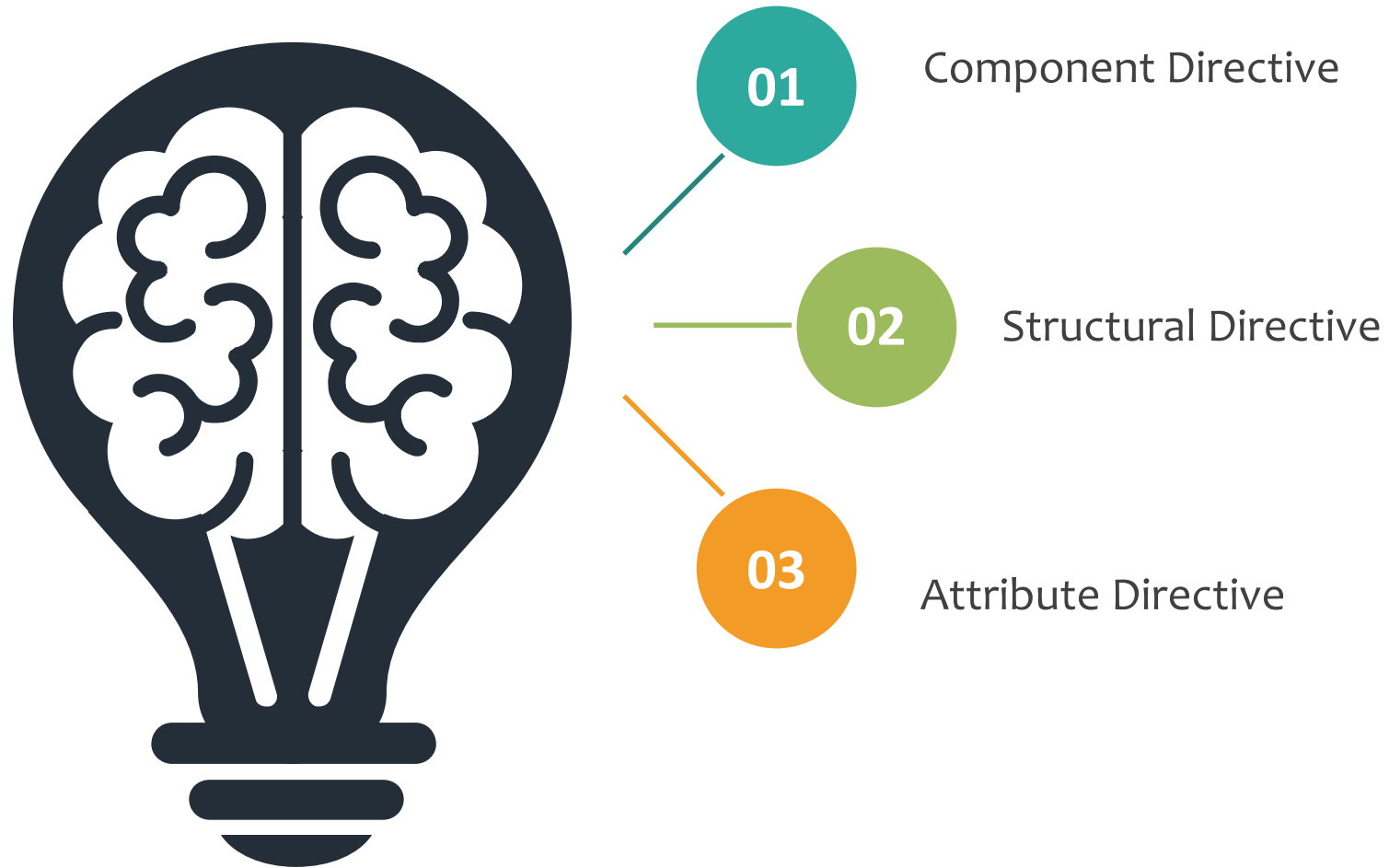
- Discuss what are directives and its types
- Discuss about the component router
- Discuss about ngIf, ngFOR, ngSwitch, ngClass, and ngStyle modules
- Discuss about Data-binding
- Explain one-way binding and two –way binding
- Discuss the types of binding

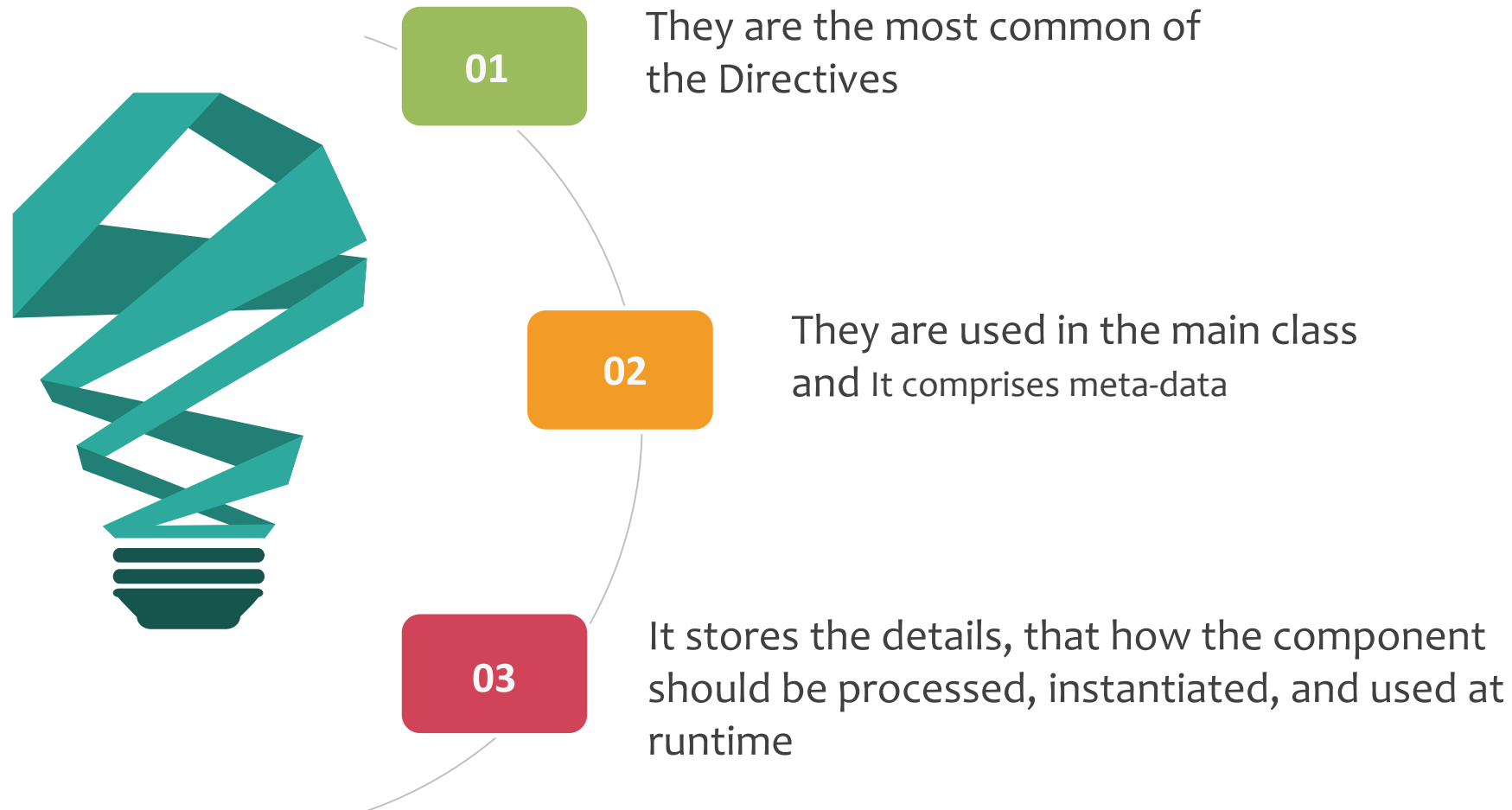
Directive and Data-Binding

Directive

- Directives are used to manage the DOM(Document Object Model)
- Angular Directives are used to change the appearance, behavior or the layout of a DOM







- Structural directives are stated with a * sign
- They are used to manipulate and change the structure of the DOM in the element
- For example:

***ngIf Directive:**

They allow to Add or Remove DOM Element

***ngSwitch Directive:**

They allow to Add or Remove DOM Element and is similar to a switch statement of C#

***ngFor Directive:**

They are used to repeat a portion of the HTML template once for each item from an iterable list (Collection)



- They deal with the modification of the looks and behaviors of the DOM element
- For example :

NgClass Directive:

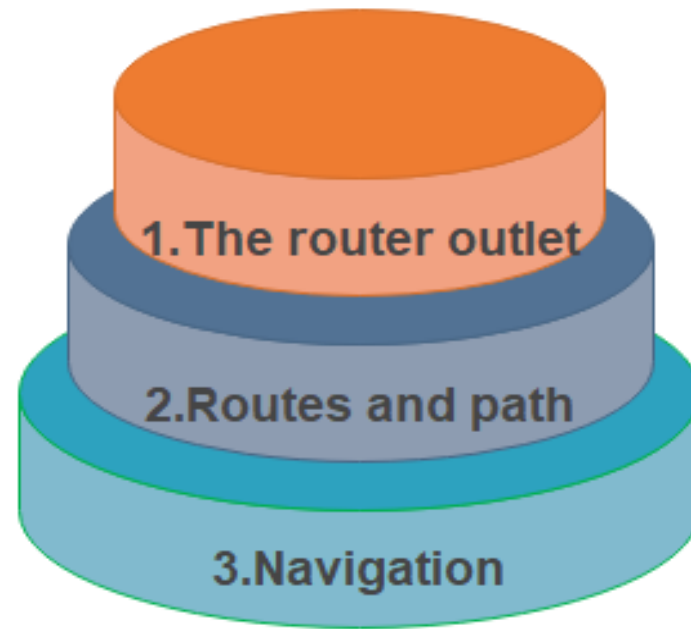
This directive is used to add or remove CSS classes to an element



NgStyle Directive:

- This Directive helps to change the style of an HTML element using the expression.
- We can also use the ngStyle directive to change the style of the HTML element dynamically.

- Angular has many improved modules to the Angular ecosystem, and this includes a new router called component router
- The component router is a highly configured and feature-packed router
- The concept linked to the router are:



THE ROUTER OUTLET

- The router-outlet: It is directive accessible from the router library where the router inserts the component and gets matched based on the current browser's URL
- **SYNTAX:**
`<router-outlet>`
`</router-outlet>`

ROUTES AND PATHS

- Routes and paths: Routes are comprised of a path and a component attribute
- The path suggested to the URL that determines a unique view that can be displayed
- It also indicates to the Angular component that requires to be associated with a path
- In component, each route maps a URL path
- **SYNTAX:**
`{path: 'contacts',`
`component:`
`ContactListComponent}`

NAVIGATION

- The Angular router gives a router link directive to build the navigation links
- This directive creates the path associated with the component to navigate
- **SYNTAX:**
`<a[routerLink]= "`
`'/contacts'`
`">Contacts.`

This expression returns a Boolean value

ngif directives is used to add or remove HTML components according to the expression

ngif directives are the most straight forward structural directive and easy to understand



In this directive, the element is removed if the expression is false and inserted if it is true

Syntax:

```
<p *ngIf="statement">  
Statement is true and ngIf is true.
```

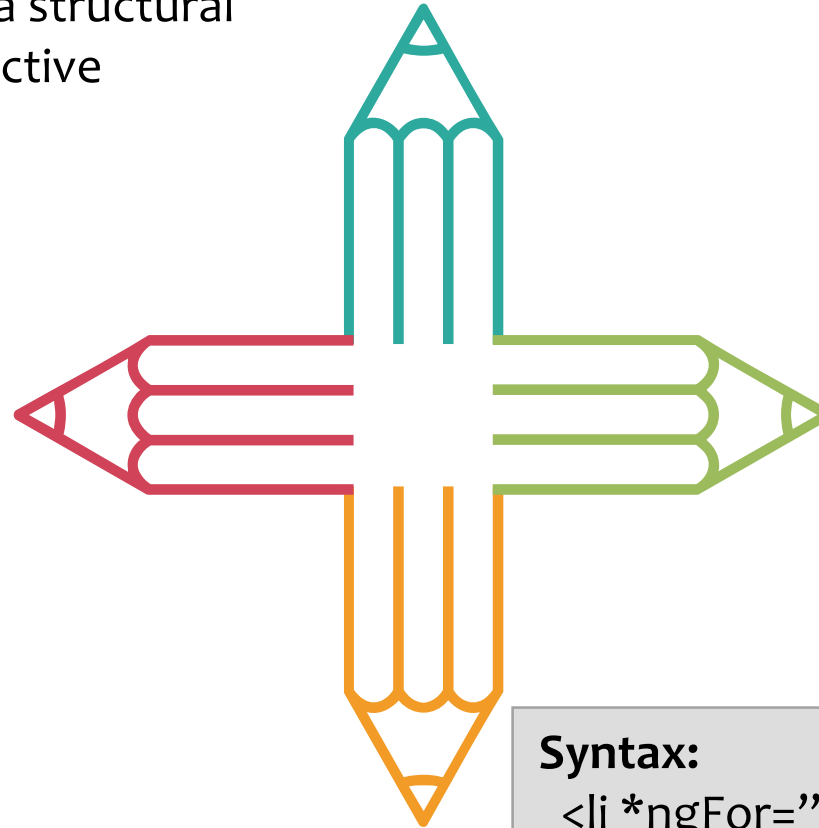
```
</p>
```

```
<p *ngIf="!statement">  
Statement is false and ngIf is false.
```

```
</p>
```

ngFOR is a structural directive

ngFOR directive is used to repeat a part of HTML template one by one from the collection



The local variables like index, first, last, odd and even are exported by ngFOR directive

Syntax:

```
<li *ngFor="let item of items ;">...</li>
```

It is similar to switch statement in c#

ngSwitch directives hide and show the HTML elements depending on an expression

ngSwitch is a structural directives

Syntax:

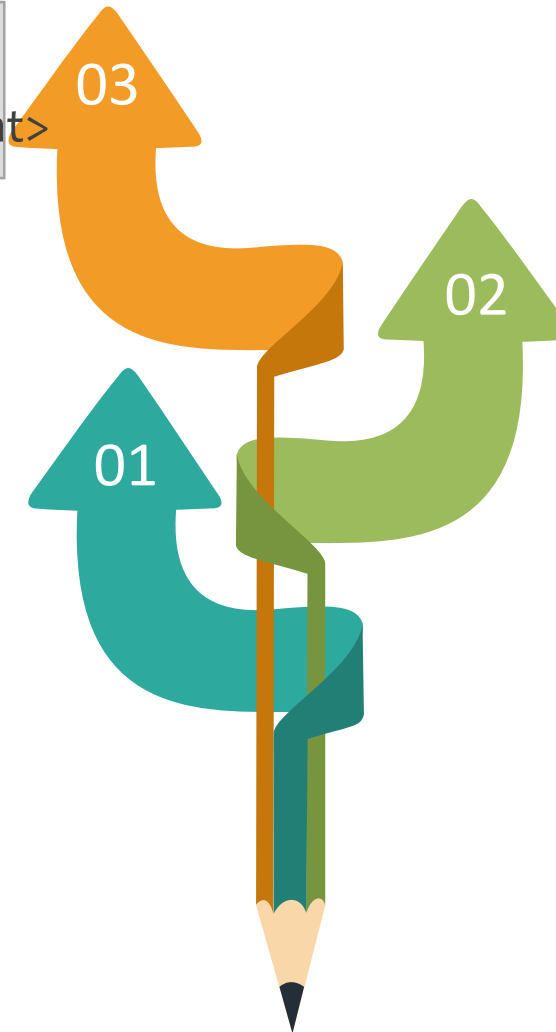
```
<element ng-switch="expression">  
<element ng-switch-when="value"></element>  
<element ng-switch-when="value"></element> <element ng-switch-default></element> </element>
```

Syntax:

```
<element ng-class=""value""></element>
```

ngClass directive is a part of an attribute directive

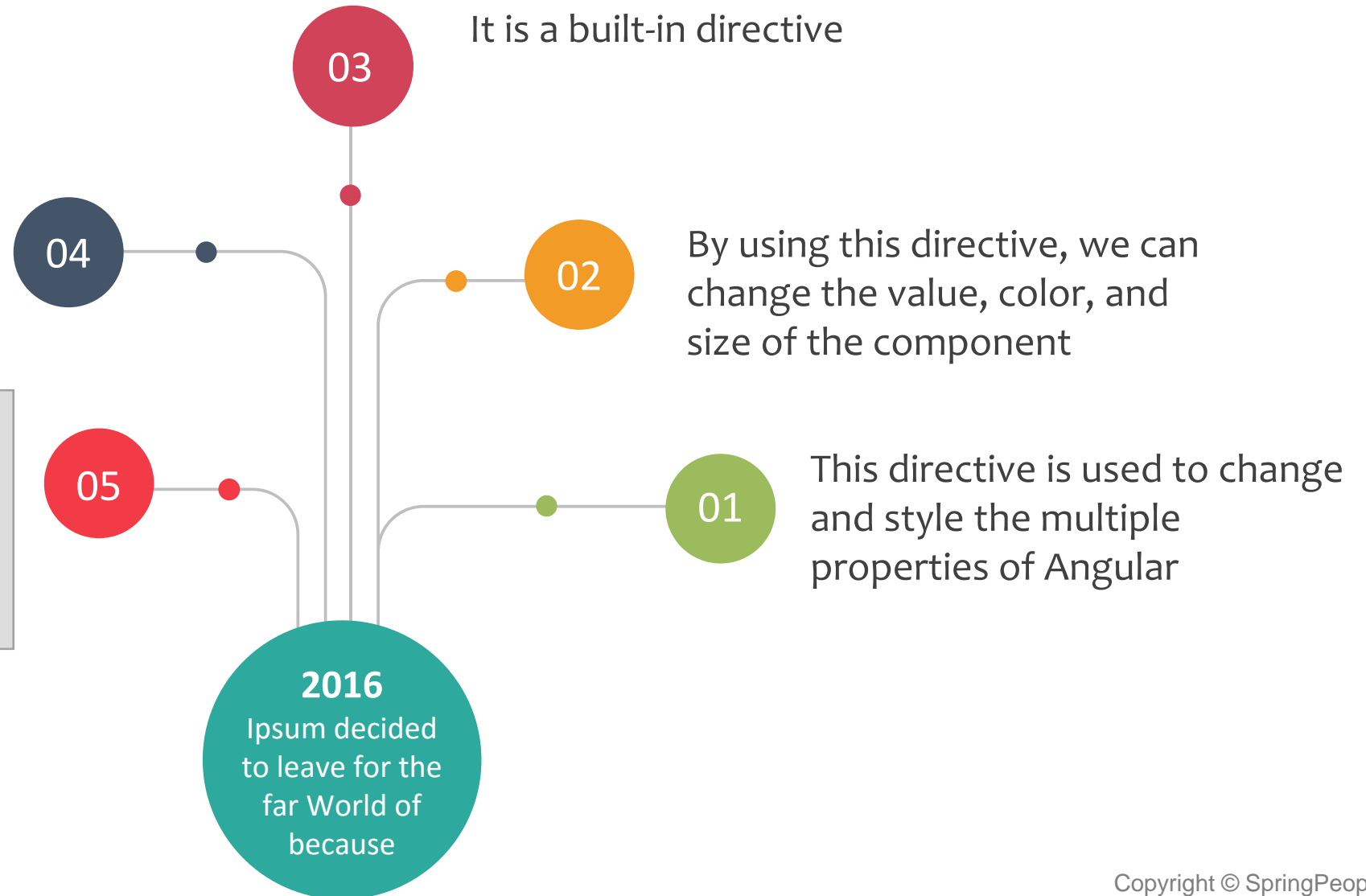
ngClass directive allows using CSS classes based on expression evaluation



It specifies the attributes of the HTML element, and it consists of CSS properties and value key-value pairs

Syntax:

```
<element  
  ngstyle="""character""">  
</element>
```



CHECK POINT



Name the directive used to manipulate and change the structure of DOM element?

1. Attribute Directive
2. Component Directive
3. Structural Directive
4. Component Router

CHECK POINT



Name the directive used to manipulate and change the structure of DOM element?

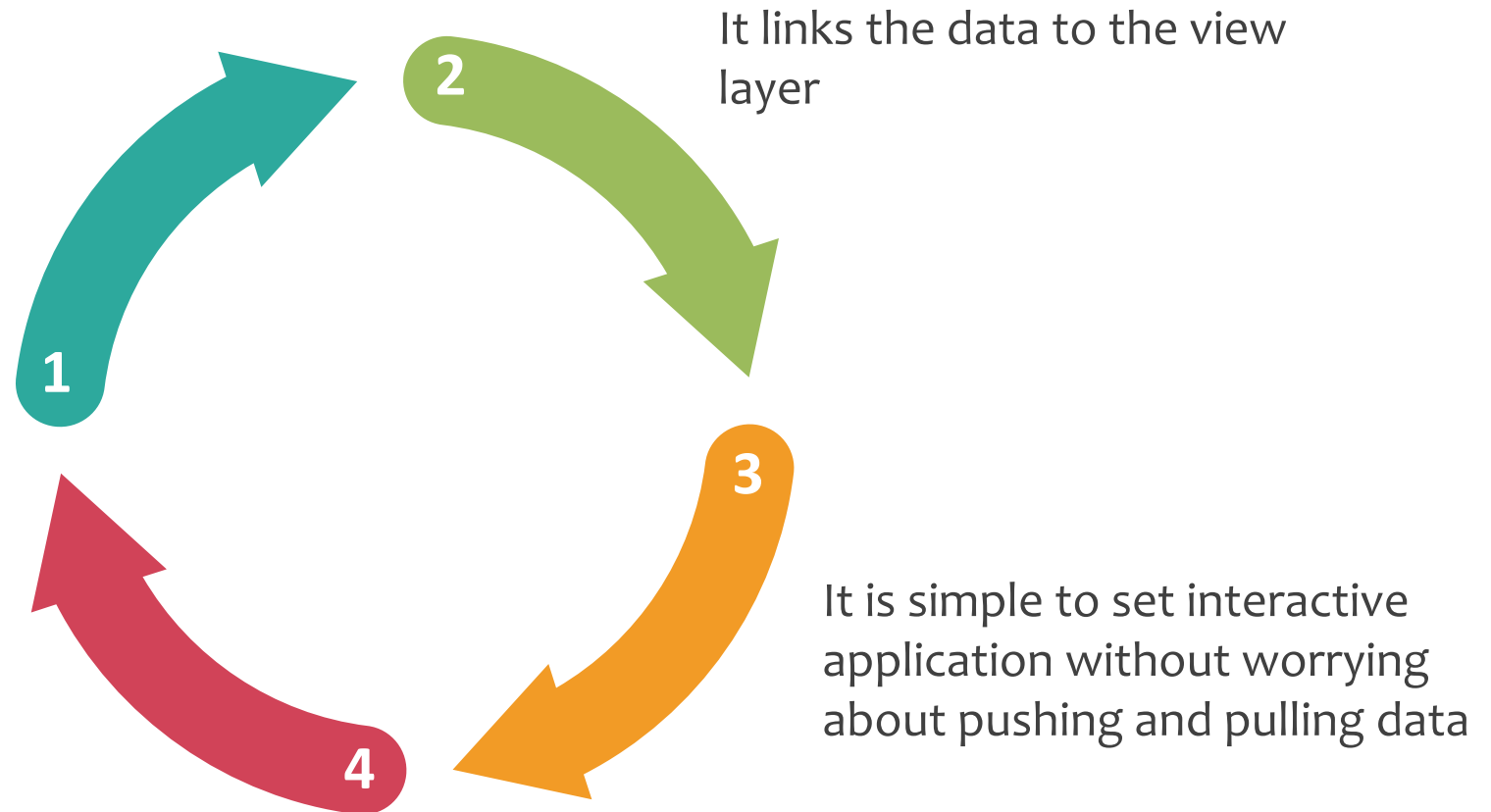
1. Attribute Directive
2. Component Directive
3. **Structural Directive**
4. Component Router

Directive and Data-Binding

Data Binding

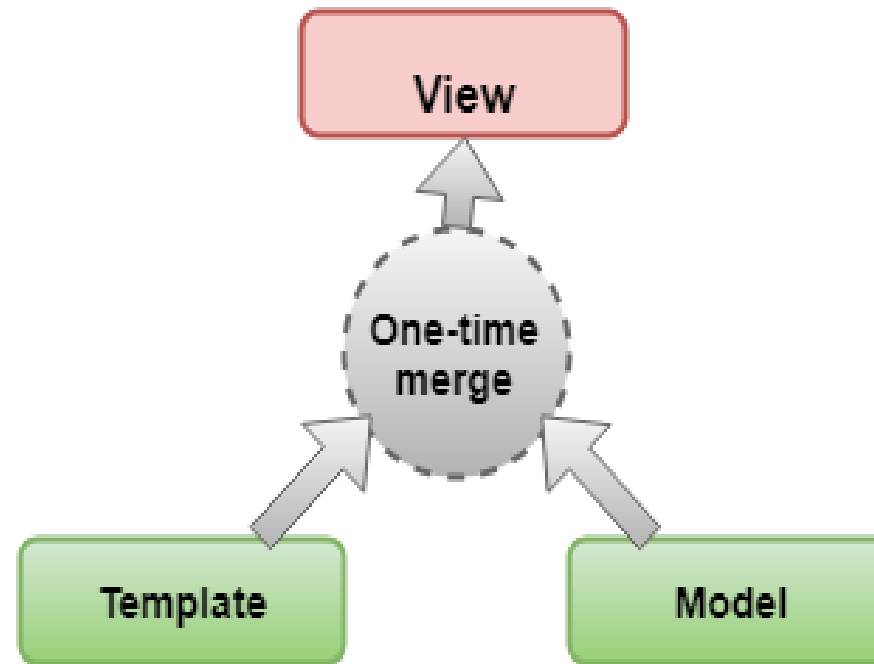
Data binding is an essential concept of Angular 8, and it defines the communication between a component and the DOM

It can be either in one-way binding or two-way binding



One-Way Binding

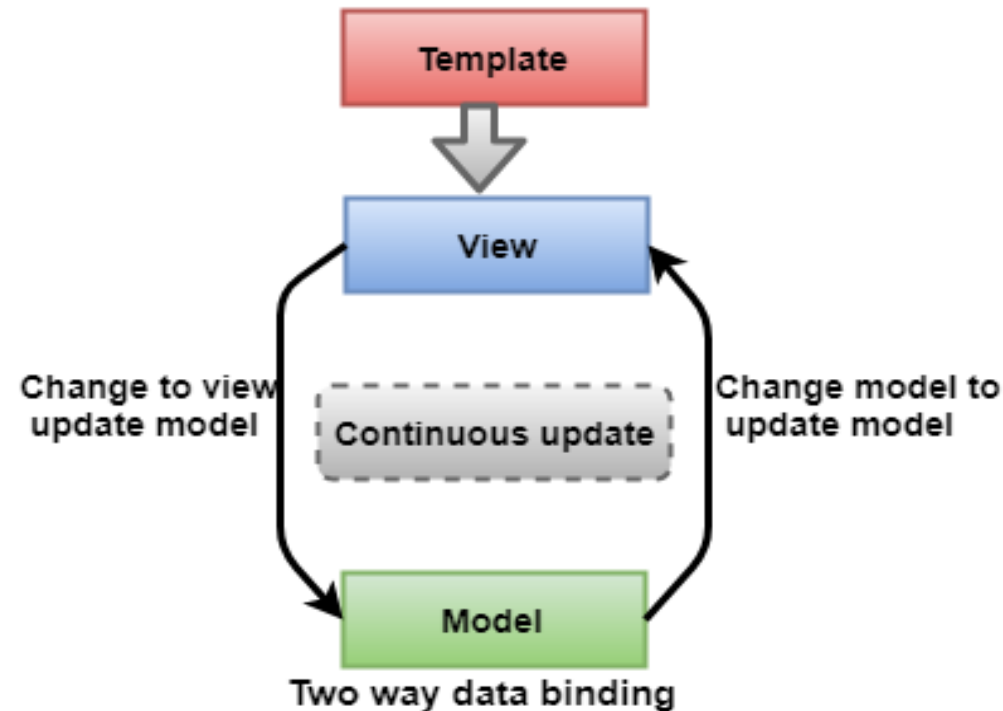
- It is a simple one-way communication
- The HTML template is changed when there is a change in the typescript code
- Examples are: Property binding, Event binding, and String binding



One-way data binding

Two-Way Binding

- Automatic synchronization of data happens between the model
- Changes made are reflected in both the components (view and model)
- The change happens immediately and automatically, when the HTML template and the typescript code are updated all the time

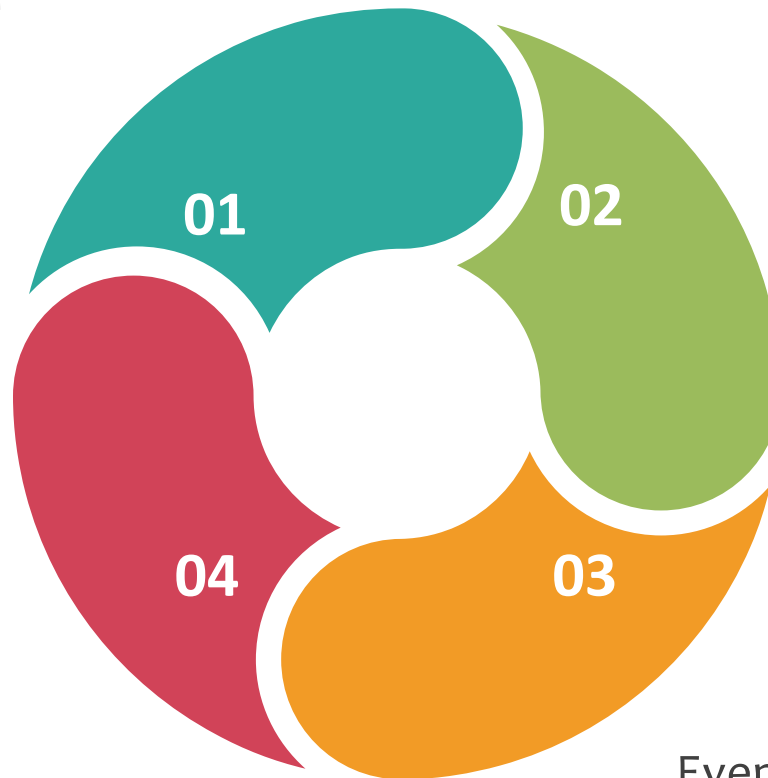


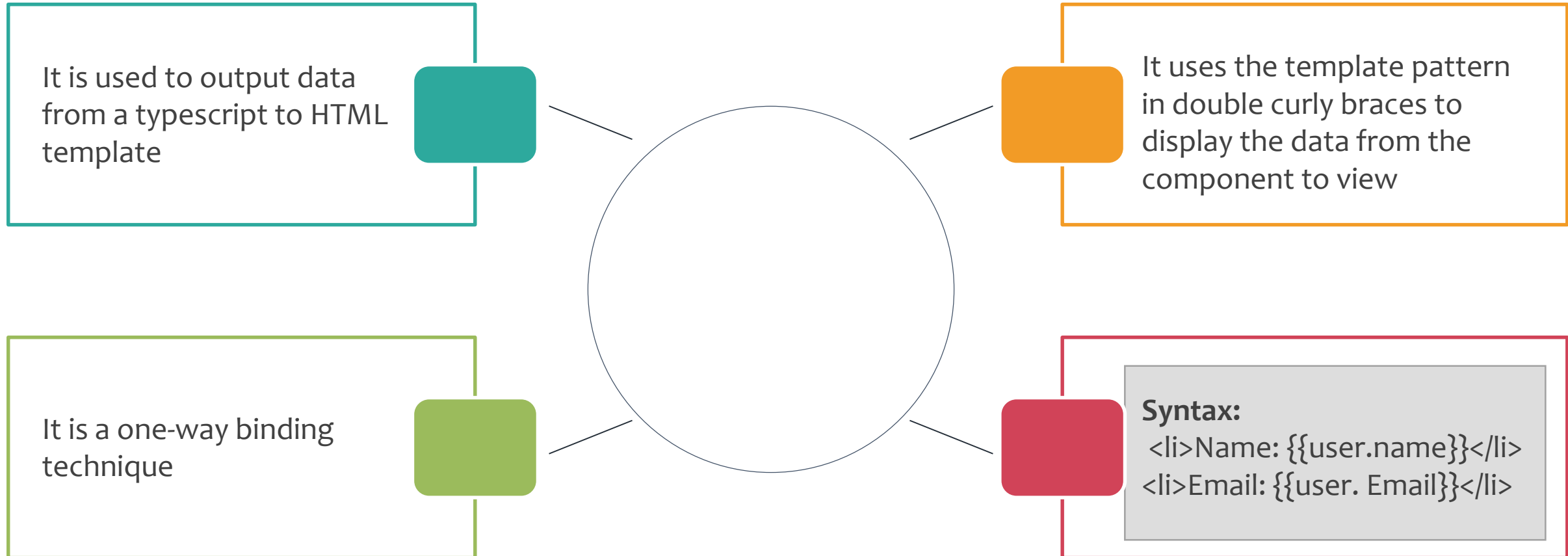
String Interpolation

Two-way Binding

Property Binding

Event Binding







01

This technique assists in binding the values to the property of the HTML element

02

It is a one-way data-binding technique

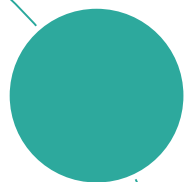
03

It binds the characteristics of a DOM element in the field that defines the properties of the typescript code

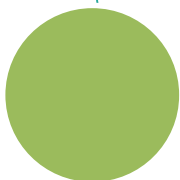
04

Syntax:

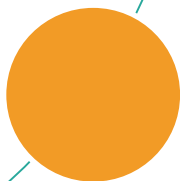
```
<input type=""email"[value]="user.email"">
```

It is used to hold the events lifted from DOM, such as button click, mouse move, etc..

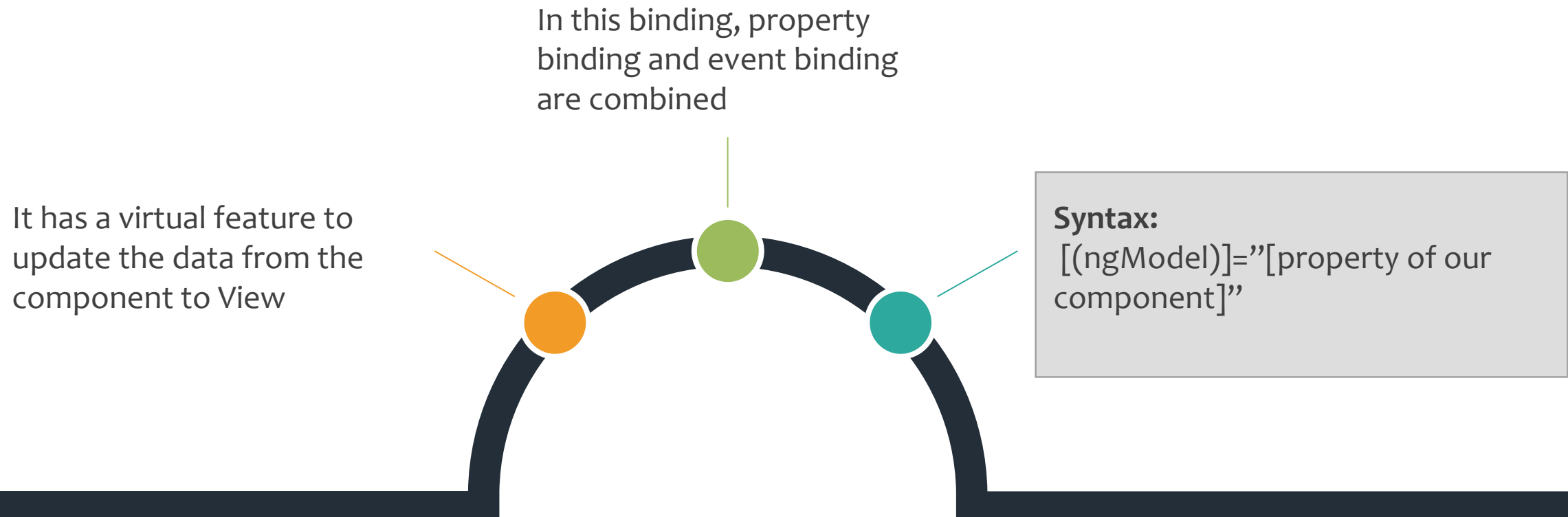


DOM event like, click, change, etc..
happens it calls the specified method in the component



Example:

```
<</code>button (click)="cookBacon()"></button>
```



CHECK POINT



The technique that assists in binding the values to the property of the HTML Element is?

1. Event Binding
2. String Binding
3. Two-way Binding
4. Property Binding

CHECK POINT

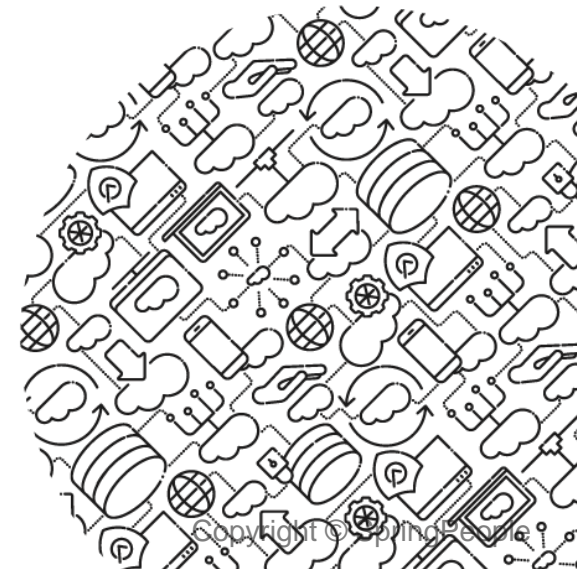


The technique that assists in binding the values to the property of the HTML Element is?

1. Event Binding
2. String Binding
3. Two-way Binding
4. **Property Binding**

DOUBT'S

We wish you to take nothing except “Pure Learning.” Leave the doubt's to us.





LET'S SUMMARIZE

- Directives are used to manage the DOM and also used to change the appearance, behavior or the layout of a DOM
- Component, Structural, and Attribute Directives are the types of Directives
- Data binding is an essential concept of Angular 8, and it defines the communication between a component and the DOM
- It can be either in one-way binding or two-way binding

THANK YOU

