**Experiment No.: 04**

**Title:** Demonstrate structural directives in angular

**Objectives:**

1. To demonstrate ngif, ngfor and ngswitch for conditionally render the html element.

**Theory:**

In Angular, structural directives are a type of directive that alters the structure of the DOM (Document Object Model). They allow you to add, remove, or manipulate elements in the DOM based on certain conditions or data.

Three commonly used structural directives in Angular are:

1. \*ngIf: This directive adds or removes an element from the DOM based on a condition.
2. \*ngFor: This directive repeats a section of HTML for each item in an iterable collection.
3. \*ngSwitch: This directive is used for conditional rendering similar to a switch-case statement.

**1. NgIf:**

When structural directives are applied they generally are prefixed by an asterisk, \*, such as \*ngIf. This convention is shorthand that Angular interprets and converts into a longer form. Angular transforms the asterisk in front of a structural directive into an <ng-template> that surrounds the host element and its descendants.

For example, let's take the following code which uses an \*ngIf to display the hero's name if hero exists:

*<div \*ngIf="hero" class="name">{{hero.name}}</div>*

Angular creates an <ng-template> element and applies the \*ngIf directive onto it where it becomes a property binding in square brackets, [ngIf]. The rest of the <div>, including its class attribute, is then moved inside the <ng-template>:

*<ng-template [ngIf]="hero">*

*<div class="name">{{hero.name}}</div>*

*</ng-template>*

Note that Angular does not actually create a real <ng-template> element, but instead only renders the <div> element.

**2. NgFor:**

<ul>

<li \*ngFor="let item of items">{{ item }}</li>

</ul>

In this example, the li element will be repeated for each item in the items array, displaying the value of each item.

**3. NgSwitch:**

*<div [ngSwitch]="color">*

*<p \*ngSwitchCase="'red'">Red Color</p>*

*<p \*ngSwitchCase="'blue'">Blue Color</p>*

*<p \*ngSwitchCase="'green'">Green Color</p>*

*<p \*ngSwitchDefault>Another Color</p>*

*</div>*

In this example, the paragraph element inside the div will be displayed based on the value of the color variable. If color is 'red', the first paragraph will be displayed; if it's 'blue', the second one, and so on. If color doesn't match any case, the default paragraph will be displayed.

**Key Concept:** Stuctural directives, ngif, ngfor, ngswitch

**Steps:**

1. Create Angular App with name my-first-app.

2. Use ngif to conditionally show the div element.

3. Use ngfor to display elements from the array

4. Use ngswitch to select the one case from the available options.