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VERSION 17

New features and
updates



WHAT'S NEW?

- Angular 17 introduces a refreshed brand and a new documentation website, making it easier for developers to learn and use Angular.
- Angular 17 introduces a new control flow syntax `@if`, `@for` and `@switch` that simplifies template iteration, making it more natural and faster.
- Angular 17's "defer views" feature allows for lazy loading of components, improving page loading times and user experience.
- Hydration in Angular is now stable for server-side rendering, and Hybrid Rendering with SSG is enhanced in v17
- Standalone apps by default, esbuild, and Vite integration lead to faster build times and performance improvements.

NEW DOCUMENTATION

Angular 17 offers an interactive tutorial, video tutorial, and standard documentation to cater to different learning preferences. All information there is revised and updated.

Now Angular.dev is the new home for Angular development. It provides an interactive web container on the website where developers can try Angular and a step-by-step interactive tutorial to learn the framework.

The screenshot displays the Angular Playground interface, which is a web-based environment for testing and learning Angular. The interface is divided into three main sections:

- Left Sidebar:** Contains navigation links for "BETA DOCS", "Docs", "Tutorials", "Playground", and "Reference".
- Code Editor:** Displays the source code for a component named `main.ts`. The code includes imports for `Component`, `FormsModule`, and `bootstrapApplication` from the Angular framework. It defines a `DemoComponent` with a selector `app-root`, a standalone property set to `true`, and a template that includes a text input and a `h1` element displaying the component's `name` property. The component is then bootstrapped using `bootstrapApplication(DemoComponent)`.
- Preview Window:** Shows the rendered output of the component. It features a text input field with the placeholder text "Enter a name here" and a large `h1` element displaying the text "Hello !".
- Console Window:** Displays the output of the application. It shows the initial chunk files and their sizes: `polyfills.js` (82.89 kB), `main.js` (2.12 kB), and `styles.css` (150 bytes). The total initial size is 85.16 kB. The console also shows the message "Application bundle generation complete. [1.351 seconds]" and "Reloading client(s)..." followed by two messages from Vite: "[vite] ✨new dependencies optimized: @angular/forms" and "[vite] ✨optimized dependencies changed. reloading".



NEW CONTROL SYSTEM

Angular v17 introduces a new control flow syntax that significantly enhances the way developers can write if statements, for loops, and switch statements within their templates. This new syntax not only simplifies the process but also makes reading and writing logic and templates more intuitive.

The new control flow syntax in Angular uses template keywords starting with an @ symbol, making the code clearer and more robust compared to NgIf-based syntax.

@if

@switch

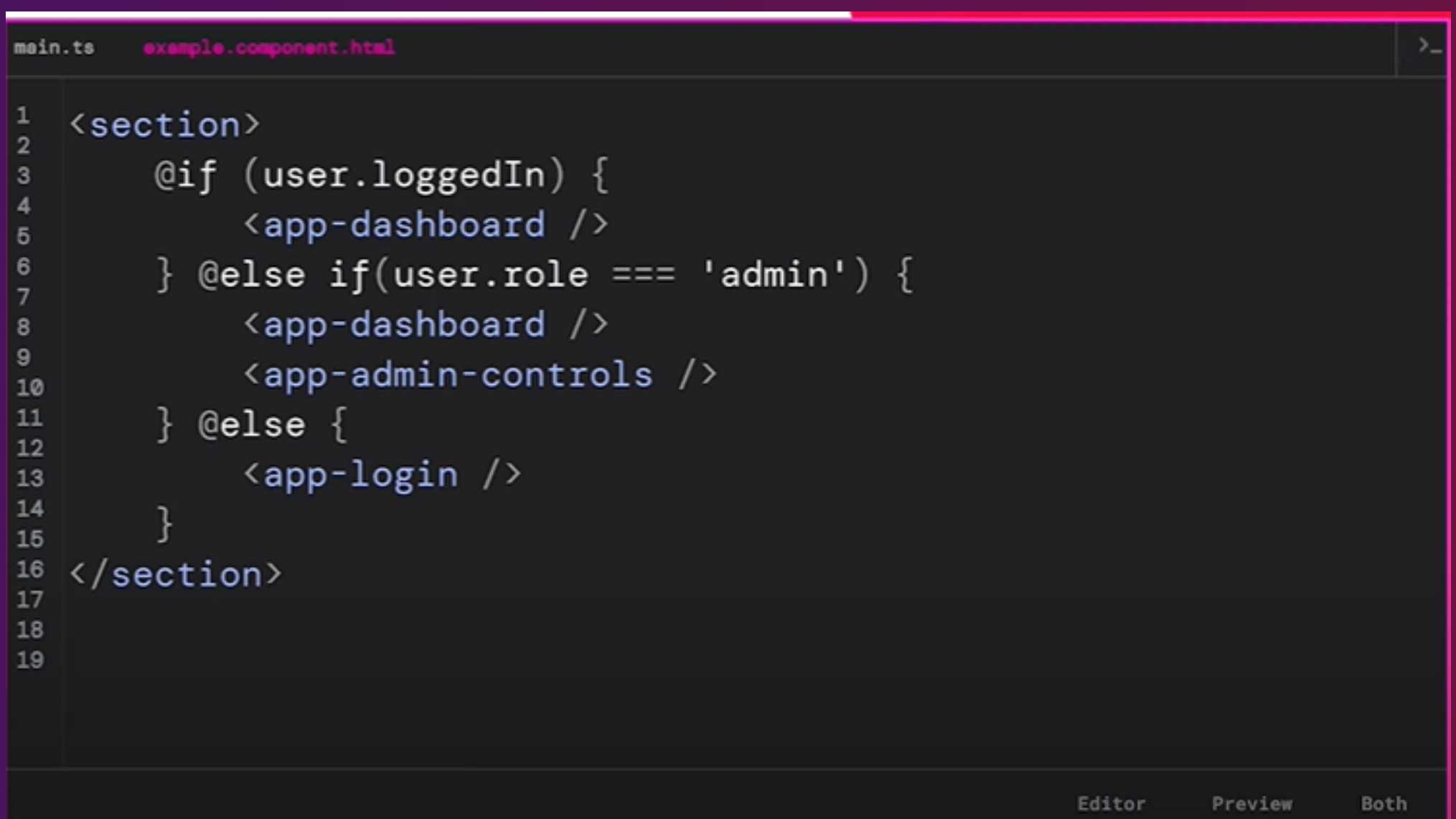
@for

@IF

Traditionally, Angular used NgIf for conditional rendering, but it had its limitations, particularly in handling complex conditional logic and rendering multiple elements. The new "@if" syntax addresses these issues head-on.

This new approach mirrors the simplicity and intuitiveness of JavaScript's if statement, making it instantly familiar to developers.

What makes this update more exciting is the introduction of "else if" and "else" support, which was a much-requested feature. Now, developers can handle multiple conditions seamlessly without resorting to additional Ng templates.



```
main.ts  example.component.html  >_
1  <section>
2
3      @if (user.loggedIn) {
4          <app-dashboard />
5      } @else if(user.role === 'admin') {
6          <app-dashboard />
7          <app-admin-controls />
8      } @else {
9          <app-login />
10     }
11
12 </section>
13
14
15
16
17
18
19
```

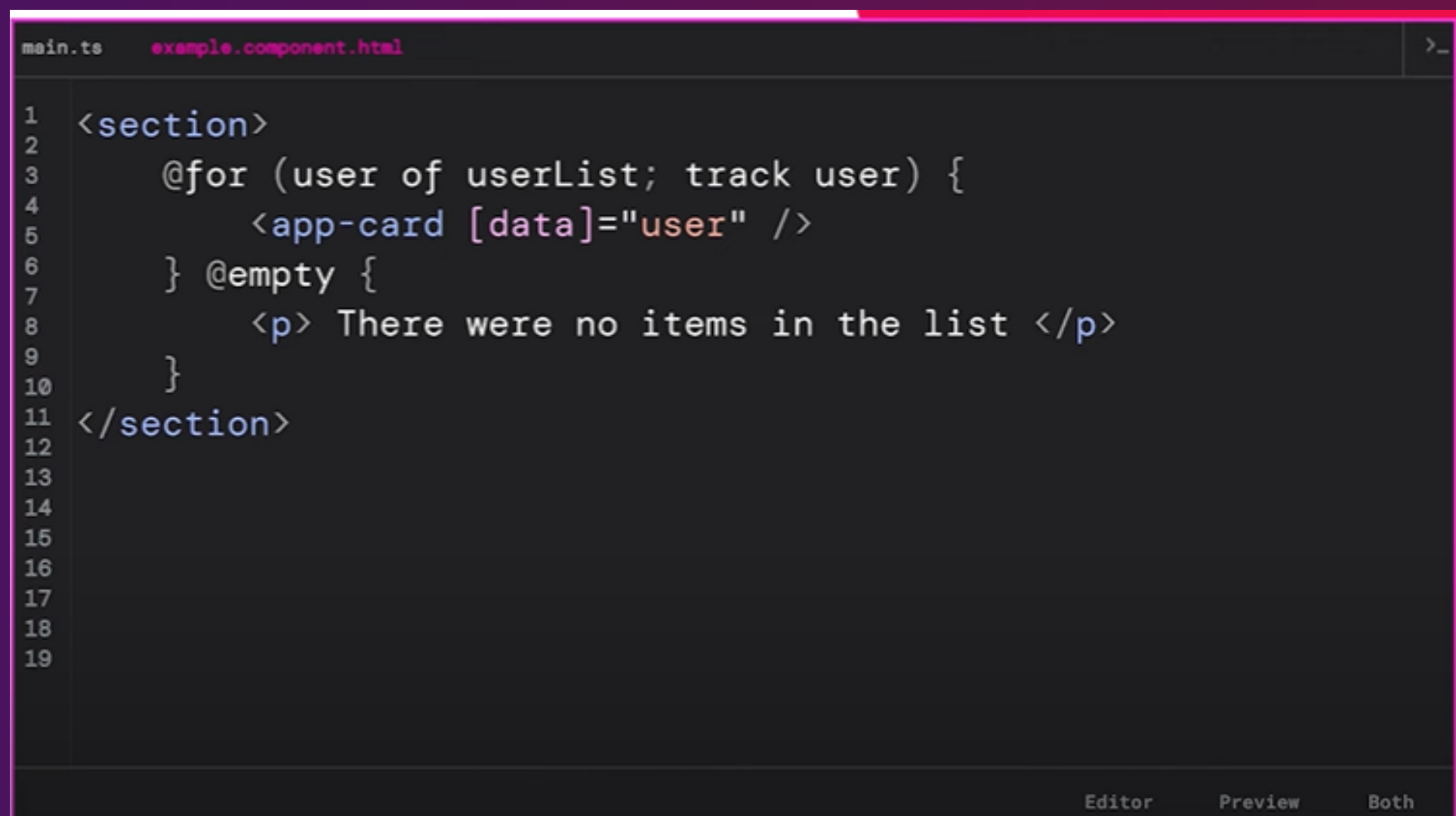
Editor Preview Both

@FOR

Looping in Angular templates has been updated too with Angular v17's **@for** syntax.

In previous Angular versions, developers often faced challenges with loop efficiency, especially when dealing with dynamic lists. The **@for** syntax addresses this by allowing for more optimized rendering of lists.

This change significantly speeds up loop execution and makes handling list updates more efficient. Additionally, Angular v17 introduces the **@empty** syntax, a convenient way to handle scenarios where lists are empty. This eliminates the need for complex conditional templates and further streamlines development.

A screenshot of a code editor with a dark theme. The editor has two tabs at the top: 'main.ts' and 'example.component.html', with the second tab being active. On the right side of the tab bar is a '>_ ' icon. The code is written in the 'example.component.html' tab and is as follows:

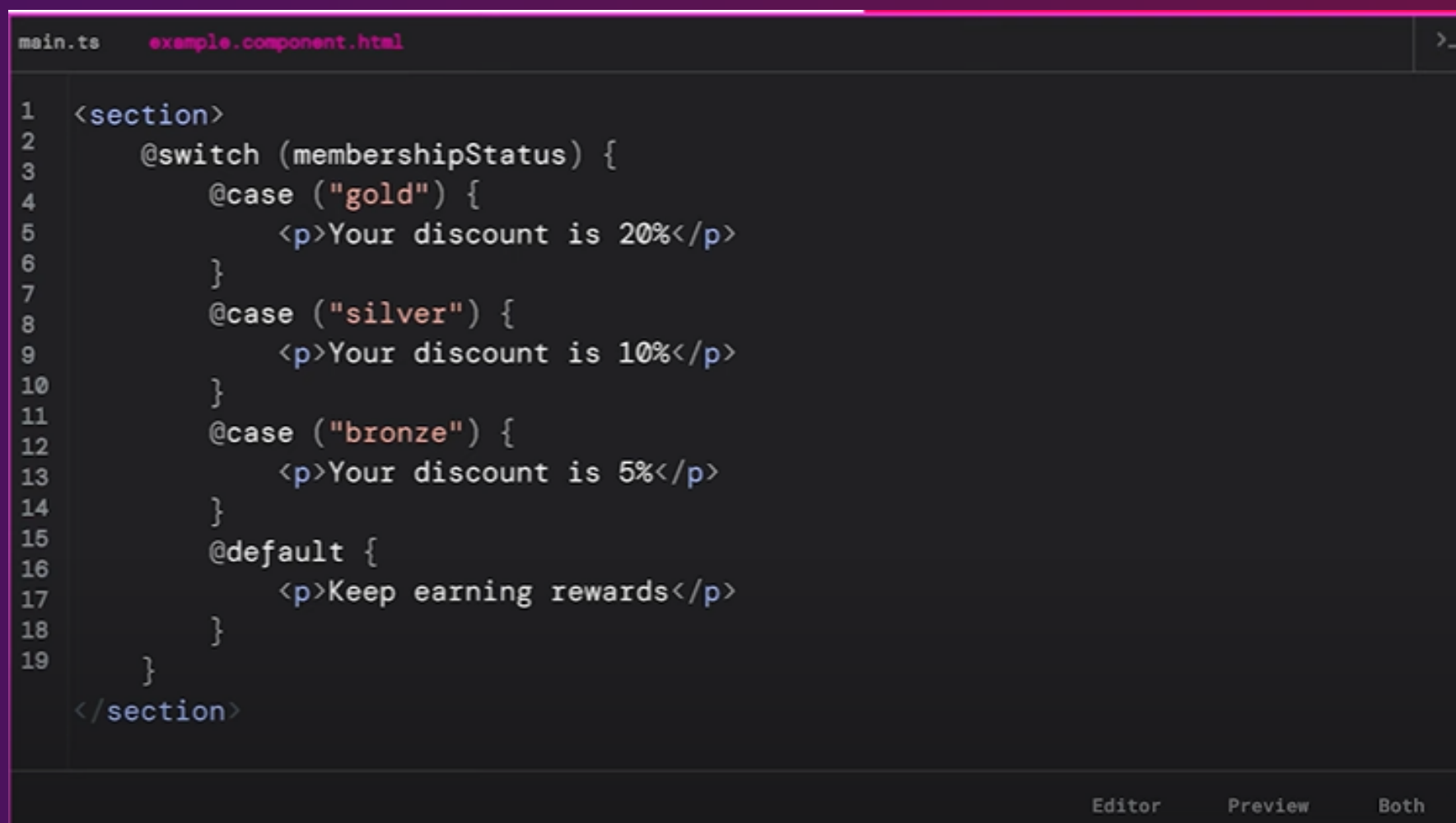
```
1 <section>
2   @for (user of userList; track user) {
3     <app-card [data]="user" />
4   } @empty {
5     <p> There were no items in the list </p>
6   }
7 </section>
```

Line numbers 1 through 19 are visible on the left side of the editor. At the bottom of the editor, there are three buttons: 'Editor', 'Preview', and 'Both'. The 'Editor' button is currently selected.

@SWITCH

Switch statements in Angular templates have been made more robust and intuitive with the **@switch** syntax in Angular v17. Previously, implementing switch-case logic in templates could be cumbersome and less readable. The new **@switch** syntax directly addresses these issues by closely mirroring JavaScript's switch statement structure.

This syntax uses **@case** and **@default** keywords, allowing developers to clearly define various cases within their templates.

A screenshot of an Angular IDE interface. The top bar shows two tabs: 'main.ts' and 'example.component.html', with the latter being the active tab. The editor area displays a template snippet with line numbers 1 through 19 on the left. The code uses the '@switch' directive to handle 'membershipStatus'. It has three '@case' blocks for 'gold', 'silver', and 'bronze', each containing a paragraph element with a discount. A final '@default' block contains a paragraph about earning rewards. The bottom of the IDE has a dark bar with 'Editor', 'Preview', and 'Both' tabs, with 'Editor' currently selected.

```
1 <section>
2   @switch (membershipStatus) {
3     @case ("gold") {
4       <p>Your discount is 20%</p>
5     }
6     @case ("silver") {
7       <p>Your discount is 10%</p>
8     }
9     @case ("bronze") {
10      <p>Your discount is 5%</p>
11    }
12    @default {
13      <p>Keep earning rewards</p>
14    }
15  }
16 </section>
```

This syntax is not only more straightforward but also improves the readability and maintainability of the code. Developers can now implement switch-case logic directly within their templates, making the code cleaner and more concise.



DEFERRED LOADING

The new "defer block" feature, now available in developer preview, simplifies this process. It allows developers to designate specific chunks of content within a component's template for deferred loading. This feature is particularly useful for large components that are not needed as part of the initial bundle.

To implement this, Angular introduces a block syntax for templates. Within this block, developers can use various triggers to specify when deferred loading should occur.

These triggers include:

- **defer on viewport:** Triggers loading when an element enters the viewport.
- **defer on idle:** Loads content when the browser is idle.
- **defer on interaction:** Loads upon user interactions like clicks or focus.
- **defer on hover:** Triggers when the mouse hovers over a specified area.
- **defer on timer:** Loads after a set timeout period.
- **defer on immediate:** Immediately loads after rendering the defer block.

Furthermore, developers have the flexibility to create custom triggers with the "when" clause, ensuring that deferred loading perfectly aligns with the specific needs of their applications.

@DEFER

Angular v17's deferred loading extends beyond basic functionality, offering developers enhanced control over the loading process. This includes the ability to prefetch dependencies using 'prefetch' on or 'prefetch when', preparing resources in advance based on specified conditions or custom criteria.

The defer blocks also provide sections for various loading phases.

For instance:

- **@placeholder:** Shows a placeholder before the deferred content loads.
- **@loading:** Displays a loading spinner during content fetching, with options to set minimum and maximum display times to enhance user experience.
- **@error:** A designated area for displaying content if an error occurs during loading.

```
main.ts  app.component.html  >_

1  <button #trigger>...</button>
2
3  @defer (on interaction(trigger)) {
4    <recommended-movies />
5  } @placeholder (minimum 500ms) {
6    
7  } @loading (after 500ms; minimum 1s) {
8    <spinner />
9  } @error {
10   <p>Oops, something went wrong</p>
11
12 }
```

Editor Preview Both

HYDRATION FEATURE

Hydration has now achieved stability and is production-ready in Angular version 17. This marks a significant milestone for Angular, offering improved performance and a superior developer experience.

Key updates:

- **hydration is production ready:** Teams can now leverage the full capabilities of Hydration in their production environments.
- **smoother experience:** Creating server-side rendering and Hydration-enabled applications is now more streamlined. Developers can directly use the `--ssr` flag with during application setup. This eliminates the need for additional steps to add SSR support later.
- **enhanced setup process:** If the `--ssr` flag is omitted, you will be prompted with its inclusion, ensuring a seamless setup process.
- **ESM support and performance upgrades:** Server builds now support ESM modules, catering to the growing demand for modern JavaScript standards. Furthermore, there are significant improvements in server bundle builds and SSR development server performance.

**Do you want to
know more?**

