

ElementRef and Renderer2

The `Renderer` is a class that is a partial abstraction over the DOM. Using the `Renderer` for manipulating the DOM doesn't break server-side rendering or Web Workers (where direct access to the DOM would break).

`ElementRef` is a class that can hold a reference to a DOM element. This is again an abstraction to not break in environments where the browser's DOM isn't actually available.

If `ElementRef` is injected to a component, the injected instance is a reference to the host element of the current component.

There are other ways to acquire an `ElementRef` instance

like `@ViewChild()`, `@ViewChildren()`, `@ContentChild()`, `@ContentChildren()`. In this case `ElementRef` is a reference to the matching element(s) in the template or children.

`Renderer` and `ElementRef` are not "either this or that", but instead they have to be used together to get full platform abstraction.

`Renderer` acts on the DOM and `ElementRef` is a reference to an element in the DOM the `Renderer` acts on.