

### @Component

template	define template (using ` `)
templateUrl	define template
host	the element in which a component is attached to

### helpers

(click)	is default, propagates the click event to <b>all</b> the parent components. So if want to not allow this, return false
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### syntax

```
<inventory-app></inventory-app>
// or
<div inventory-app></div>
input: ['name'] // or
@Input() name: string // or
input: ['inside: outside'] //
avoid
@Input('outside') inside:
string // avoid
// set classes conditionally
[class.selected]="isSelected(myProduct)"
// (pl22/644)
src="{{product.imageUrl}} //
wrong
[src]= "product.imageUrl"
// right
```

### best practices

use `template` when the view is not much & vice versa. the drawback of using `template` is not having syntax highlight

using the `host` option is nice because it means we can **encapsulate** the `angular` template **within** our component. By using the `host` option, we're able to configure our **host element** from **within** the component.

**isolate** the data structures from the component code

**law of demeter** a given object should assume as little as possible about the structure or properties of other objects

### fat models, skinny controllers

when building a new angular app, mockup the design & then break it down into components

normally, author wouldn't pass more than 5 arguments to a function.

### cli

watchman	OSX: brew, Linux: embercli, Window: native Nodejs watcher
ng new app	create a new ng2 app
ng serve	run app through http built in. Window: --host 0.0.0.0
ng generate component component	create a new component

### resources

[Angular Style Guide](#)

[Observer Pattern](#)

### terminology

`#newtitle` is called `resolve`. makes the variable `newtitle` available to the **expressions** within the **view**. `newtitle` is an **object** (typeof `HTMLInputElement`) that represents this input DOM element

`newtitle`

template variable

`Article[]` or `Array<Article>`

generics

`{{ }}`

template binding

`private currentProduct: Product`

local component state

### knowledge

- one of the big ideas behind Angular is the idea of components.
- the fundamental idea behind components: we'll teach the browser **new tags** that have custom functionality.
- components are the **new** version of directives `ng-1`

angular1's **dependency injection** used the **annotation** concept behind the scenes

when boot an Angular app, you're not booting a component directly, but instead you create an `NgModule` which points to the component you want to load.



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### knowledge (cont)

you have to declare **components** in a `NgModule` before you can use them in your templates

Angular 1, **directives** match globally.

Angular 2, need to **explicitly** specify **which components** you want to use

JavaScript, **by default**, **propagates** the `click` event to **all the parent components**

`href=""` (empty link) === **reload page**

an angular2 is nothing more than a **tree of components**. **top level Component** is the application itself. that's what the browser will render when **booting** (a.k.a **bootstrapping**) the app.

`@Component` annotation is where you configure your component. Primary, `@Component` will configure how the **outside world** will interact with your component.

`[]:input, ():output`.

**Data flows in** to your component via **input bindings** and **events flow out** of your component through **output binding**.

Think of the set of **input + output bindings** as defining the **public API** of your component.

In Angular, you send data out of components via **outputs**.

`(onProduceSelected):` the name of the **output** we want to **listen** on

`produceWasSelected:` the function we want to call when **something new** is on this **output**

`$event`: special variable that represents the thing emitted on the **output**

### knowledge (cont)

when we specify that a **component** takes an **input**, it is expected that the definition class will have an **instance variable** that will receive the value

```
<button (click)="increment()" >Increment</button>
```

In this case, the **event** is **internal** to the **component**. we can also expose **public event** (component **output**) that allow the component to talk to the **outside world**

An `EventManager` is simply an **object** that helps you implement the `Observer Pattern`. That is, it's an object that can maintain a list of **subscribers** and **publish** events to them.

When we assign an `EventManager` to an **output** Angular **automatically subscribes** for us. But can add subscriptions by **our own**.

every component must be declared in one `NgModule` before it can be used in a template

The **recommended way** in Angular 2, and in many modern web frameworks (such as React), is to adopt a pattern of **one-way data binding**. That is, your **data flows only down through components**. If you need to **make changes**, you **emit events** that cause changes to happen **at the top** which then trickle down.



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