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| Signal (available v16) =  Data value + change notification  -It’s a Reactive Primitive: fundamental building block that allows developers to create systems that responds changes in data | -New way for our code to observe data, notify, react when data changes  -Share data between components/services  -Improved change detection  -Think of it as a box |
| Signals (holds a value) | -Always unsubscribe to help avoid memory leaks and to find bugs  -Often on ngDestroy() |
| Observer  -is an object that observes and responds to notifications specified as methods (next, error, complete <-callback)  Callback function: a function that you give to another function to run later  -When you order a pizza and say call me when its done | -Not a common way, use this if we want to react to all notifications  -Subscribe takes only one argument, so if we only want to react to next notifications, omit err, complete |
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|  | Why use Observables? |
|  | Multiline      - Map, if you just want customer |
| Map  -transformation operator  -use the spread operator to include all of the object’s properties  --It thinks { } is a function but we are trying to say object so put ( ) around it | Tap  -utility operator |
| -No code in subscriber method, helpful for later advanced techniques  -can also hover over tap | Filter/ Tap (filtering operator, easy to understand)  -Filter: useful for filtering out null |
| Standalone Components  -lets you build without using Angular Module  -add to the import[] inside Component  -need to define service in app.config  -Create a service to encapsulate HTTP requests to share data  -Take advantage of the observable pipeline, to manipulate items, handle errors or gather related data before emitting the item |  |
| Errors |  |
| Higher Order Observable  -observable that emits an observable  -Issue is that we aren’t subscribing to the inner observable  HOO Operators | concatMap  -relay race, waits for each inner observable to complete before processing next  -concatenates results in sequence |
| mergeMap  -800 meter race, process items in parallel (order doesn’t matter) | switchMap  -coach changing the runner |
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