Communicating with the Server Using HTTP, Observables, and Rx

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Agenda

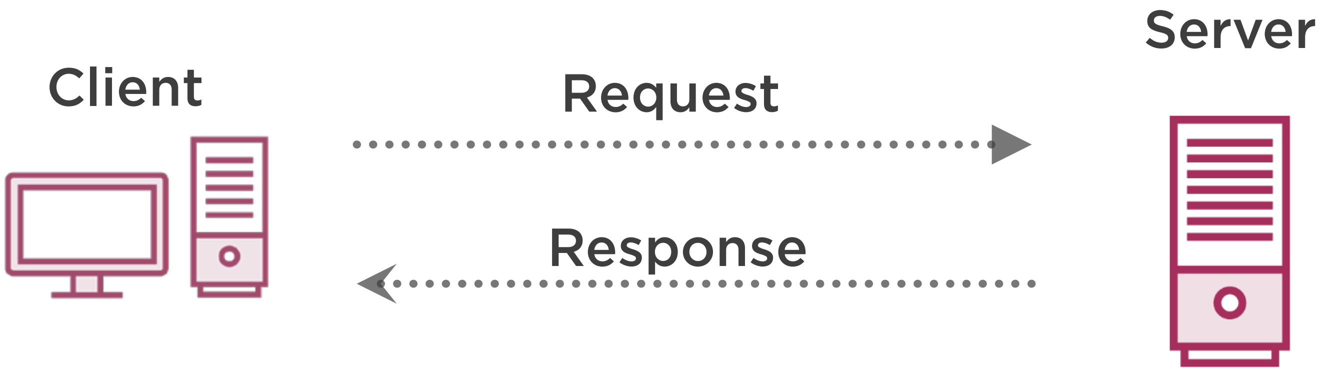
Introduction to RxJS

Moving Data Storage to the Server

- Events Service
- Voter Service

Authentication

HTTP Communication



Callbacks

```
Server.request(requestData, function(responseData) {
   // asynchronously handle the data.
});

// this will execute before the callback
doMoreThings()
```

Promises

```
var promise = http.get(url, data);
promse.then(function(responseData) {
   // handle response
})

// this will execute before the then function
doMoreThings()
return promise;
```

Observables

```
var obs = http.get(url, data);
// manipulate the observable if desired
obs.subscribe(function(responseData) {
   // handle response
});
doMoreThings()
return obs;
```

Promises vs Observables

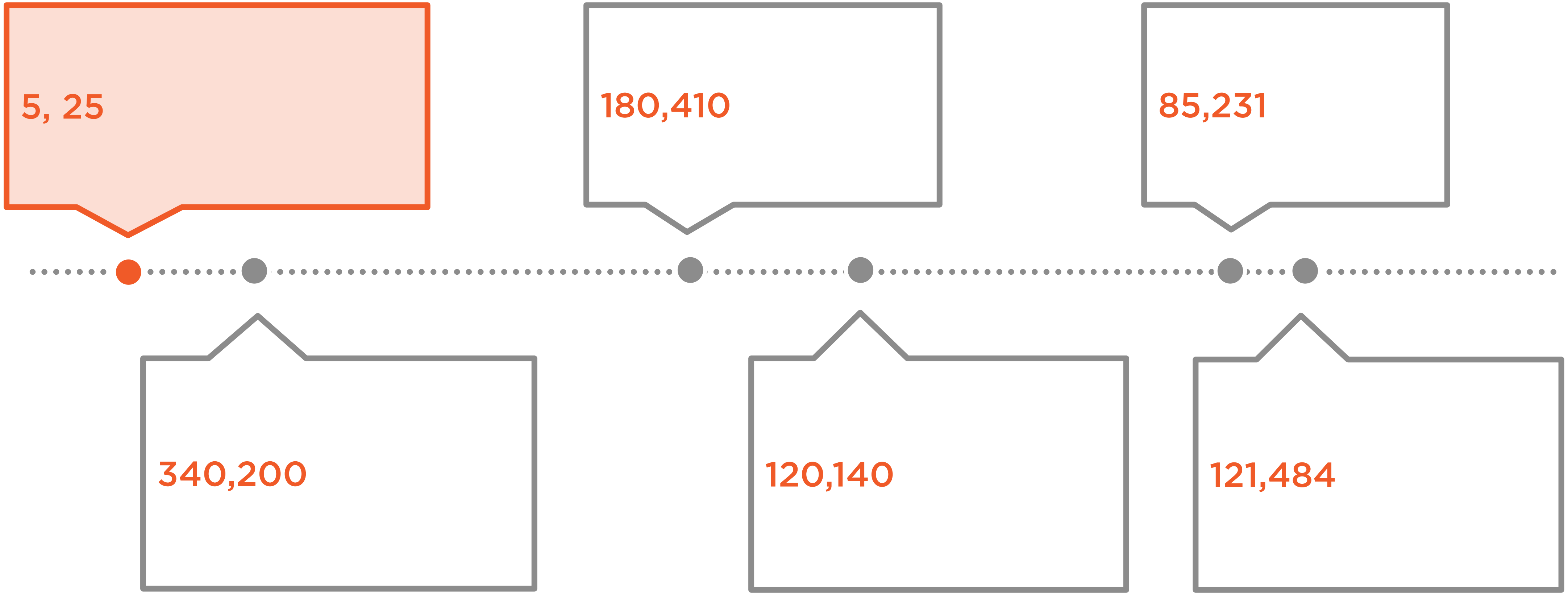
Promises

Represent a single value in the future

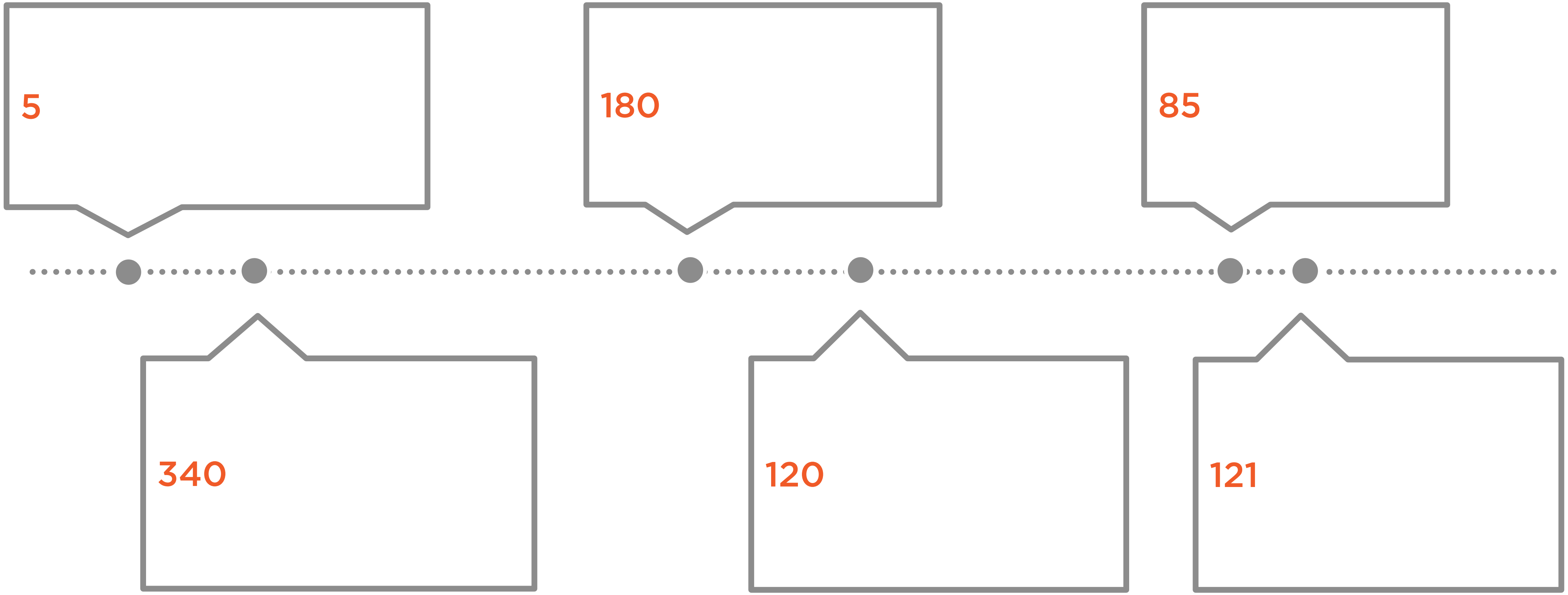
Observables

Represent 0 or more values now or in the future

Timeline of Events



Timeline of Events



Other Observable Features

Can Be Synchronous

Improved Error Handling

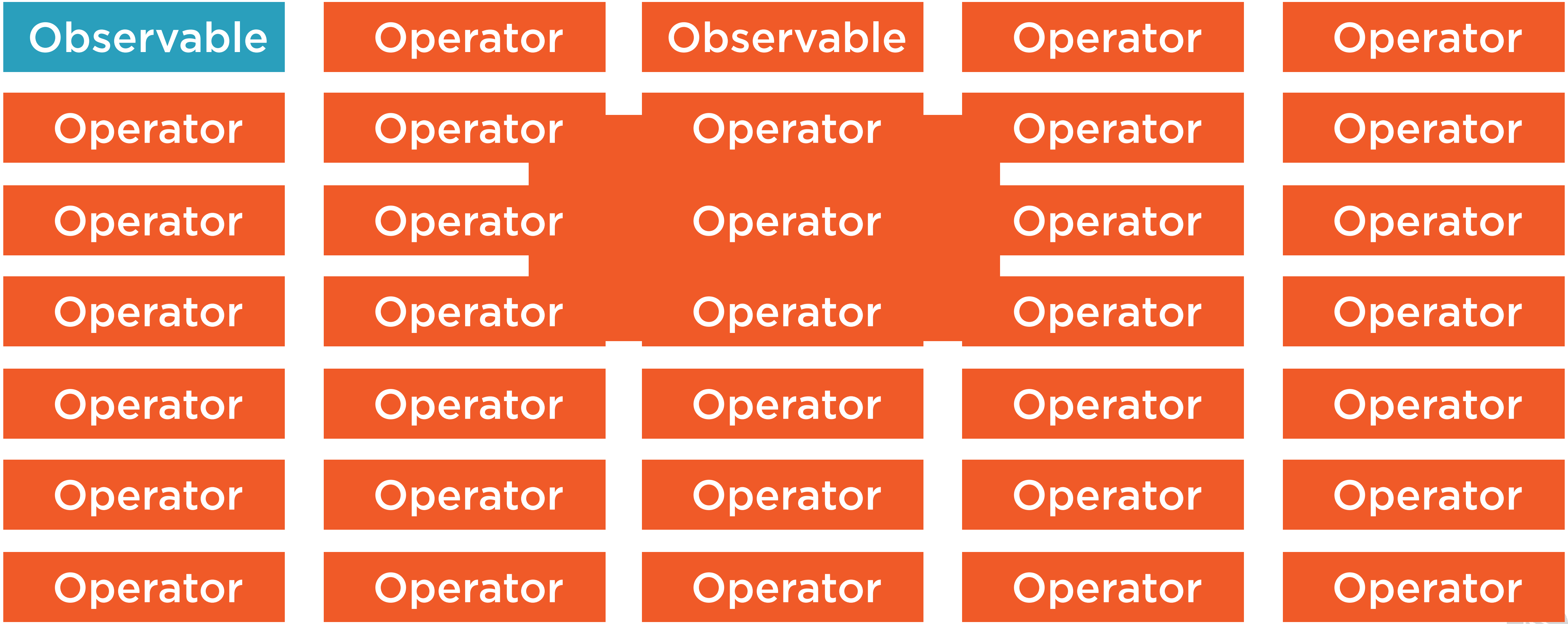
Can be Closed Independently of Returning a Value

Can Deal with Time

Advanced Operations

- Mathmetical Aggregation
- Buffering
- Debounce
- Distinct
- Filtering
- Combining Observables
- Retry

RxJS Library Requests



Observable	Operator	Observable	Operator	Operator
Operator	Operator	Operator	Operator	Operator
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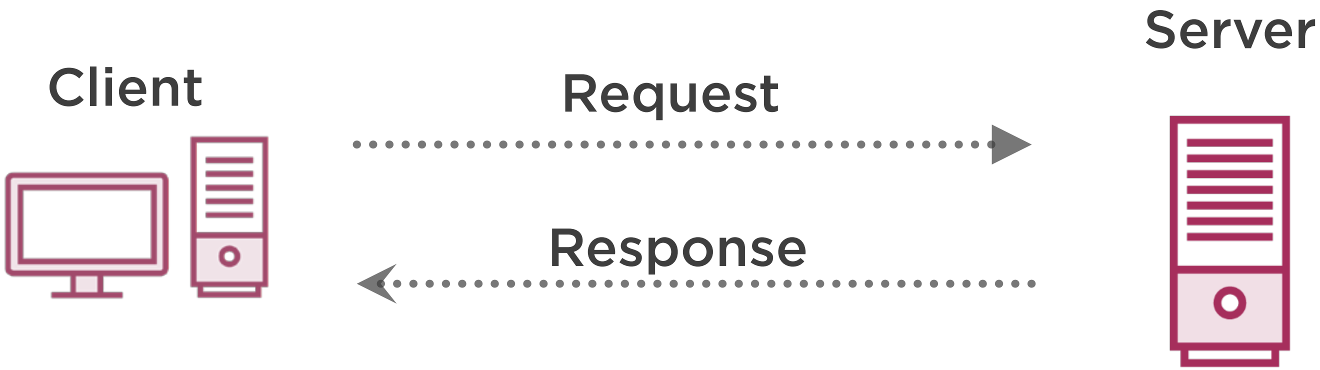
HTTP Communication



Client

Request

Response

Server

One Key Feature

`toPromise()`

Choose What’s Best For You

Summary

Observables

Data Storage on Server

Authentication