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Angular Observables and Observable Streams

In Angular, Observables and Observable Streams are powerful concepts that play a vital role in handling asynchronous operations and managing data flow within an application. Understanding these concepts is crucial for building responsive and reactive applications.

Observables are a fundamental part of the RxJS library, which is heavily used in Angular. They represent a stream of data that can be observed over time. Observables can emit multiple values asynchronously and provide a way to handle and manipulate those values.

“The important thing to have in mind is, observable is not a stream. It just a blueprint of the stream. It describes a set of streams, also how they are connected with operations. In another glance, a new primitive type defines how to create streams, how to subscribe to them, how to react to new values, and how to combine streams to create new streams” (Bandara, 2020).

Observable Streams, on the other hand, are a sequence of Observables. They allow us to combine and transform data from multiple sources and create a pipeline of operations. With Observable Streams, we can perform various operations like filtering, mapping, and reducing data, enabling us to handle complex asynchronous scenarios easily.

One of the key advantages of using Observables and Observable Streams in Angular is their ability to handle asynchronous operations in a declarative manner. Instead of dealing with callbacks or managing complex event handling, we can use operators provided by RxJS to compose and transform our data streams.

Observables also offer great flexibility and can be easily integrated with other Angular features like components, services, and HTTP requests. We can subscribe to an Observable within a component to receive data updates and react accordingly. This makes it easier to build reactive UI components that automatically update when the underlying data changes.

Resources:

Bandara, S. (2020, May 10). *Streams vs Observables in Angular RXJS*. Medium. https://medium.com/@pramodyasachin/streams-vs-observables-in-angular-rxjs-c54f523236e3

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*Angular*. (n.d.). Angular.io. https://angular.io/guide/observables

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