

# **Reactive Programming with RxJS**

# **Audience Course Reactive Programming with RxJS**

The course Reactive Programming with RxJS is intended for JavaScript Developers who want to learn how to use the reactive RxJS library in frontend applications.

### **Prerequisites Course Reactive Programming with RxJS**

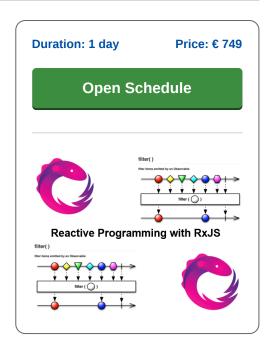
Experience with JavaScript and Web Applications is required to participate in this course. Knowledge of how asynchronous code works helps with understanding.

# **Realization Training Reactive Programming with RxJS**

The course Reactive Programming with RxJS is a hands-on course. Theory is interchanged with demos and practical exercises and is explained with the use of presentation slides.

# **Certification course Reactive Programming with RxJS**

After successfully completing the training, attendants will receive a certificate of participation in the course Reactive Programming with RxJS.



# **Content Course Reactive Programming with RxJS**

The course Secure C# Web Development covers how C# web applications can be optimally secured and the best practices therein. Attention is paid to the top 10 OWASP security vulnerabilities, their consequences, their prevention and also how security can be implemented programmatically.

# **Intro Security**

The course Secure C# Web Development starts with a discussion of the main security risks as identified by the Open Worldwide Application Security Project (OWASP).

# **Broken Access Control**

Subsequently security risks associated with access control through authentication and authorization are treated. Role Based Access Control, Access Control Lists and the implementation of Session Management are the topics that are covered.

# **Cryptographic Failures**

Security problems with encryption are also on the course schedule. Attention is paid to problems with the use of weak keys, hard coding of secrets, insufficient verification of signatures and possible side-channel attacks.

#### **Injection risks**

An important security threat is the various forms of injection that are lurking. SQL Injection, Cross-Site Scripting and XPath injection are discussed, as well as prevention measures.

# **Incorrect Design**

Then attention is paid to security problems that are the result of incorrect design, such as the lack of input validation and unsafe session management. Insufficient protection against Cross Site Request Forgery is treated as well.

# **Configuration Errors**

Errors in the configuration can lead to security problems also. Various examples of this, such as the use of default credentials and weak password policies, are covered.

# **Obsolete Components**

Security risks resulting from components that are no longer up to date, incorrectly configured or malicious packages and cryptographic weaknesses, are also on the program of the course Secure C# Web Development.

#### **Authentication errors**

Attention is also paid to common errors in authentication, such as weak password policies, overly permissive access controls and the lack of multi-factor authentication. And finally security flaws in monitoring and logging are discussed.

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# **Modules Course Reactive Programming with RxJS**

Module 1 : Intro Reactive Programming	Module 2 : RxJS Fundamentals	Module 3 : RxJS Operators
What is Reactive Programming?	RxJS Intro	from
What is Reactive?	Observable and Observer	Observables with from
Reactive Systems	Observer next Callback	map and map Properties
Reactive Manifesto	Observer error Callback	interval, filter and of
What is Reactive Programming?	Observer complete Callback	startWith and endWith
Rx Library Family	Subscribe and Unsubscribe	pairwise
Streams	Operators in RxJS	take and takeUntil
Observing Streams	of and map Operators	pluck
Reactive Extensions	pipe, filter and map	bufferCount and bufferTime
Subscribing to Observables	bufferWhen Operator	debounceTime
Rx Operators	Handling HTTP Requests	distinctUntilChanged
Asynchronous Listening	switchMap Operator	tap or do
Observer Pattern	Combining Observables	delay
Why Reactive Programming?	RxJS Subjects	ajax
Functional Reactive Programming	Unicasting and Multicasting	catch or catcherror
Module 4 : Combination Operators		
merge and mergeAll		
mergeMap or flatMap		
Why mergeMap?		
switchMap		

merge and mergeAll
mergeMap or flatMap
Why mergeMap?
switchMap
Why switchMap?
concatMap
concat and zip
scan
sequenceEqual
iif and share
shareReplay
combineAll
combineLatest
forkJoin
withLatestFrom