

Training program:

Asynchronous JavaScript

Info:

Name:	Asynchronous JavaScript
Code:	JS-async
Category:	JavaScript
Target audience:	architects developers
Duration:	3 days
Format:	50% lecture / 50% workshop

Training program

1. JavaScript Functional Programming

1.1. Functions, Function Objects

1.2. Contexts

1.3. Pure Functions, Side Effects

1.4. Scopes: Function vs Lexical

1.5. Closures

2. Asynchrony

2.1. 3 Programming Models: Synchronous, Asynchronous, Parallel

2.2. JavaScript inside browsers and node.js

2.3. Event Loop, Message Queue, WEB APIs

2.4. Run to Completion Rule

2.5. Race Conditions

2.6. Patterns: Callbacks, Events, Promises, RxJS

3. Callbacks

3.1. Synchronous and Asynchronous Callbacks

3.2. Callback Hell

3.3. Events

4. Promises

4.1. Promise Design Pattern

4.2. States, State Transitions

4.3. Chaining

4.4. Values

4.5. Error Handling

4.6. Advanced Patterns and Usecases (Combining Promises)

4.7. Promise Anti-patterns

5. Promise Implementations

5.1. Promises/A+ Specification

5.2. ECMAScript 6: Promise, Arrow Functions, Destructuring

5.3. Bluebird Promises

5.4. jQuery Promises and Deferreds

6. RxJS

6.1. Reactive Functional Programming

6.2. Observable Pattern

6.3. Sequences, Operators, Marble Diagrams

6.4. Error Handling

6.5. Subjects

6.6. Schedulers

6.7. Observables vs Promises: differences and similarities