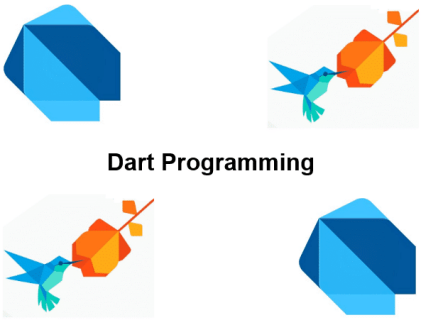
Dart Programming

Duration: 3 days Price: € 1999

Open Schedule



Audience Course Dart Programming

The course Dart Programming is intended for anyone who wants to learn programming in the programming language Dart.

Prerequisites Course Dart Programming

In order to participate in this course basic knowledge of programming in another programming language is beneficial to understanding but is not required.

Realization Training Dart Programming

The theory is discussed on the basis of presentation slides. The theory is explained further through demos. After discussing a module there is the possibility to practice. Course times are from 9.30 to 16.30.

Certification Dart Programming Course

Participants receive an official Dart Programming certificate after successful completion of the course.

Content Course Dart Programming

The Dart programming language is a general purpose language originally developed by Google. Dart is open source and now an ECMA standard. This promotes the development of an active ecosystem around the language. The strength of Dart lies mainly in the development of web applications and it is expected that browsers will support Dart directly. Dart is also the foundation of the Flutter Framework for mobile applications.

Dart Intro

In the Dart Programming course participants learn the features of application development with Dart. We discuss the Dart SDK and the transpiler dart2js which generates a JavaScript equivalent of Dart Script.

Dart Syntax

Next attention is paid to data types, generics and control flow in Dart. Dart is type safe, supports type inference and prevents null pointer exceptions with a null safety mechanism.

Functions and Data Structures

The characteristics of functions and data structures in Dart are also discussed. For example data structures from the core library, runes and the mirror system are treated and optional parameters and lambda functions in functions as well.

Classes and Objects

Dart is an object-oriented language and the implementation of constructors, interfaces, exceptions and inheritance in Dart are treated. Extension methods are also covered here.

Concurrency

Finally concurrency in Dart is extensively discussed, whereby parallel tasks can be performed by multiple concurrent threads. Attention is also paid to asynchronous I/O with Dart Futures and the Async Package.

Modules Course Dart Programming

Module 1 : Dart Intro	Module 2 : Language Syntax	Module 3 : Data Structures
What is Dart?	Type Syntax	Core Library
Install Dart SDK	Numbers	Fixed Length List
Dartpad Editor	Strings	Growable List
IDE Support	Booleans	List Operations
Dart to JavaScript	Dynamic Types	Map Literals
dart2js	Final and Const	Map Constructor
Program Execution	Operators	Dart Symbols
Static checker	Type Test Operators	Runes
Checked Mode	Iterations with Loops	Enumerations
Dart Keywords	Selections with If	String.codeUnits
Dart Identifiers	Using Labels	MirrorSystem
Module 4 : Functions and Interfaces	**Module 5 : Classes and Objects**	**Module 6 : Collections and Generics**
Function Definition	Declaring Classes	Dart Collections
Calling Functions	Fields and Methods	Set and Queue
Passing Parameters	Getters and Setters	Iterating Collections
Return Values	Constructors	Optional Typing
Optional Parameters	Named Constructors	Type Safeness
Recursive Functions	this Keyword	Parameterized Types
Lambda Functions	Class Inheritance	Generic Map
Interfaces	Types of Inheritance	Generic List
Implementing Interface	Method Overriding	Isolates
Multiple Interfaces	static and super	TypeDefs
Module 7 : Packages	**Module 8 : Exceptions**	**Module 9 : Concurrency**
Packaging Programming Units	Exception Handling	Parallel Tasks
Package Manager pub	try Block	Multiple Threads
Package Metadata	on/catch block	Isolates versus Threads
pubsec.yaml	finally Block	Isolate Class
Installing Packages	ON Block	spawn Method
pub get Command	Exception Class	Dart Futures
Importing Libraries	Built-in Exceptions	Async Package
Encapsulation	Throwing Exceptions	Asynchronous I/O
Custom Libraries	Custom Exceptions	readLineSync Method

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