

## **Flutter Mobile Development**

#### **Audience Course Flutter Mobile Development**

The course Flutter Mobile Development is meant for developers that want to learn how to develop cross platform mobile apps with the Flutter Framework and the Dart programming language.

#### **Prerequisites Course Flutter Mobile Development**

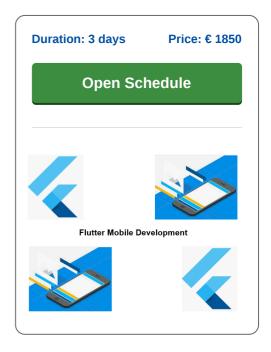
Programming experience in an preferable Object Oriented language is required to participate in the course Flutter Mobile Development and knowledge of Mobile App development is beneficial for understanding the concepts.

#### **Realization Training Flutter Mobile Development**

The subject matter is treated on the basis of presentation slides. Demos are used to clarify the theory. Theory and exercises are interchanged during the course. The course material is in English. The course times are from 9.30 up and to 16.30.

#### **Certification Flutter Mobile Development**

Participants receive an official certificate Flutter Mobile Development after successful completion of the course.



### **Content Course Flutter Mobile Development**

In the course Flutter Mobile Development you will learn how to use Google's open source UI toolkit <u>Flutter</u> to develop mobile applications for iOS and Android in the Dart programming language. The same code base is also suitable for web and desktop applications.

#### **Flutter Intro**

The Flutter Framework comes with a large number of ready-to-use and customizable widgets that take into account all platform differences in scrolling, navigation, icons and fonts. Flutter applications are also instantly translated into native code by hot reloading with the Dart native compilers.

#### **Flutter Architecture**

After an introduction to the Flutter Architecture, the Flutter SDK, Flutter packages and the Flutter package manager are discussed. The main widgets and widget composability are also treated.

#### **Dart Language**

Next the main features of the Dart programming language are reviewed such as data types, dynamic variables and classes and objects.

#### **Flutter Widgets**

Attention is also paid to the design of the User Interface with Flutter widgets and the differences between the various types of widgets are discussed, such as stateful versus stateless widgets, container widgets, layout widgets and listener widgets.

#### State and Routing

Also important topics in the course are how Flutter applications deal with state and how navigation and routing can be implemented.

#### **Flutter Database Access**

Finally attention is paid to database access. This involves accessing SQLite and Firebase databases and the usage asynchronous calls to a REST API.

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# **Modules Course Flutter Mobile Development**

Module 1 : Flutter Intro	Module 2 : Application Architecture	Module 3 : Dart Language
Mobile Apps	Flutter Packages	Dart Variables
Platform Independence	Flutter Package Manager	Data Types
Dart Language	Directory Structure	Numbers and Strings
Flutter Framework	Everything is a Widget	Lists and Maps
Flutter SDK	Composability Feature	Booleans
Flutter Architecture	Gestures	Dynamic Variables
Android Studio	Widget State	Decision Making
Rendering UI	Layers	Loop Statements
Flutter Widgets	Android Layer	Functions
Reactive Programming	iOS Layer	Classes and Objects
Flutter Performance	Rendering Layer	Constructors
Installing Flutter	Flutter Native Layer	Fields and Methods
Flutter Doctor	Core Platform Code	Getters and Setters
Module 4 : GUI Design	Module 5 : State Management	Module 6 : Data Access
Stateless Widgets	Importance of State	Accessing Databases
Stateful Widgets	App Life Cycle	SQLite and Firebase
Scaffolds	Ephemeral State	arflita Daaltara
	Ephemeral State	sqflite Package
Widget Build Visualization	Application State	Open Database
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Widget Build Visualization	Application State	Open Database
Widget Build Visualization Platform Specific Widgets Images and Text	Application State  Model and Scoped Model	Open Database Execute SQL Query
Widget Build Visualization Platform Specific Widgets Images and Text	Application State  Model and Scoped Model  ScopedModelDescendant	Open Database Execute SQL Query await and Futures
Widget Build Visualization Platform Specific Widgets Images and Text Layout Widgets Types	Application State Model and Scoped Model ScopedModelDescendant Navigation and Routing	Open Database Execute SQL Query await and Futures Advanced Queries
Widget Build Visualization Platform Specific Widgets Images and Text Layout Widgets Types Single Child Widgets	Application State Model and Scoped Model ScopedModelDescendant Navigation and Routing URL Patterns	Open Database Execute SQL Query await and Futures Advanced Queries Cloud Firestore
Widget Build Visualization Platform Specific Widgets Images and Text Layout Widgets Types Single Child Widgets Container Widgets	Application State Model and Scoped Model ScopedModelDescendant Navigation and Routing URL Patterns Pattern Matching	Open Database Execute SQL Query await and Futures Advanced Queries Cloud Firestore Firebase Console
Widget Build Visualization Platform Specific Widgets Images and Text Layout Widgets Types Single Child Widgets Container Widgets Multiple Child Widgets	Application State Model and Scoped Model ScopedModelDescendant Navigation and Routing URL Patterns Pattern Matching MaterialPageRoute	Open Database Execute SQL Query await and Futures Advanced Queries Cloud Firestore Firebase Console Asynchronous Calls