MOBILE APP DEVELOPMENT MADE EASY

MASTERING FLUTTER & DART FOR BEGINNERS

Discover how to create stunning, high-performance mobile apps from scratch, empowering you to launch your first app with ease & turn your ideas into reality

Flutter

Course Duration

📺 TOTAL HOURS: 100

📋 WEEKLY SCHEDULE: 2 SESSIONS (2-HOUR EACH)

About The Instructor:

MARAWA TALAAT

A software engineer with **over 15 years** of experience in the world of programming, specializing in mobile application development.

She holds a **Master of Science degree in Software Engineering** and has attended multiple training courses and diplomas with major global companies.

S**he has a proven track record** of leading numerous software development projects for major Arab and international companies. Additionally, she possesses expertise in several programming languages, along with a deep understanding of software engineering, design patterns, and best practices.

trained a very large number of individuals interested in mobile application development in Egypt and the Arab world.

taught thousands of trainees in various Egyptian and Arab institutions to help them start their careers in programming.

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Why do you need to attend this course?

In today's tech-driven world, mobile applications are at the heart of businesses and innovation. Flutter and Dart enable you to develop high-performance apps with a single codebase, saving time and effort while delivering an exceptional user experience.

Do you face these challenges?

- Struggling with cross-platform app development?
- Difficulty managing state and building scalable architectures?
- Unsure how to integrate Firebase or consume REST APIs?
- Overwhelmed by UI design complexities?

This course is designed to address these challenges, providing you with hands-on experience and advanced skills to excel in mobile development.

How will this course transform you?

- Master Dart Syntax: Control flow, functions, error handling, and OOP principles.

- Build Flutter UIs: Work with widgets, layouts, and interactive components.

- State Management:Learn Provider, Bloc, and Riverpod for efficient app architecture.

- Firebase Integration: Authentication, database management, storage, and push notifications.

- REST API Integration: Consume APIs and display real-time data effectively.

- Local Storage Solutions: SQFlite, Shared Preferences, and Hive.

- Advanced Features: Google Maps, localization, animations, and transitions.

- Capstone Projects: Build apps like Notes, Weather, Famous Places, and an E-Commerce platform.

Course overview:

Flutter is currently one of the most popular cross-platform frameworks among developers, allowing them to target multiple platforms using a single codebase. In this course, you will learn how to build apps for both Android and iOS by utilizing Flutter's core components.

Additionally, you will master the syntax and essential features of the Dart programming language, which is the foundation of Flutter projects.

The course begins with a comprehensive introduction to Dart, starting from the basics. Dart is a powerful, optimized language tailored for Flutter development. You will explore numerous features of Dart, with a focus on those essential for Flutter development. Key topics include Lambda Expressions for functional programming, and Null Safety, which protects your code from crashes caused by null pointer exceptions. You'll also cover important object-oriented programming concepts like Inheritance, Polymorphism, Abstraction, and Mixins, which enable modular coding.

Next, you will dive into Widgets, the fundamental building blocks of Flutter. Mastering Widgets is key to mastering Flutter. You'll also learn how to select the right Widgets with performance in mind, refactor code, and create reusable Widgets and methods. Additionally, you'll explore the difference between Stateful and Stateless Widgets, when and where to use them, and how they impact state management.

The course will introduce you to Provider, Bloc, and Riverpod You'll understand how this approach can make your project more scalable and maintainable, and learn to identify and manage app states efficiently. State management is a critical aspect of Flutter development, and this course will guide you through selecting the right approach for your specific needs and avoiding common pitfalls.

You'll also learn about data persistence, covering local storage and cloud solutions. You'll work with SQLite for local databases, learning CRUD operations and migrations. you'll also work with hive. On the cloud side, you'll use Firebase, a powerful Google-backed platform, to handle authentication, real-time databases, storage, messaging, and functions. Both free and paid Firebase services will be covered.

Additionally, the course will teach you how to make web requests, fetch JSON data, and convert it to Dart objects using Dart's convenient networking packages.
Throughout the course, you'll also practice writing clean, maintainable code, and adhering to best practices, principles, and design patterns.

By the end of the course, you will have the skills to build any type of mobile application using Flutter and possess a solid foundation in both Flutter and Dart

What you will learn?

- Dart Programming Language in-depth

- Fundamental concepts in programming: variables, types, control flow, collections, functions, classes, asynchronous programming & more

- Dart Function, Lambda Expression, Optional Parameters

- Class Object and Constructor, Named Constructor, Inheritance, Polymorphism, Abstraction, Mixin

- Asynchronous Dart, Future, Async Await

- Flutter Widgets - Layout Widgets, Multi Child Layout Widgets, Theme Widgets, Scrollable Widgets, Input Widgets, Drag and Drop Widgets, Code Refactoring

- Flutter Networking - Consume REST API, How to write clear and effective code using best practices

- Use features like Google Maps, the device camera, authentication, and much more!

- State Management with Provider, Bloc, and Riverpod

- Learn how to upload images and how to send manual and automated push notifications

- Firebase - Authentication (Email Password & Google), Cloud Firestore, Storage, Cloud Messaging, Cloud Function

Course Content :

Dart	
Introduction to Dart	04:00
Print Statement	04:00
Comments	01:0
Variable declaration and initialization	03:2
Basic Types	15:00
Conversions between types	3:00
Null Safety	08:0
Constants and Dynamic Types	25:0
Operators	30.00
String operations	20:0
Control Statements	2:00:00
Functions	1:30:00
Classes	45:00
Constructors and methods	20:00
Setter & getters	12:00
Inheritance	1:30:00
Abstract class & interfaces	1:00:00

Course Content :

Singleton Design Pattern	20:00
Enum Vs. Sealed class	30:00
Exception Handling	45:00:00
Generic	20:00
List	42:00
Sets	15:00
Map	30:00
Queues	20:00
Flutter	
Introduction to Flutter	15:00
Demo Flutter app	1:00:00
Introduction to Widgets	15:00
Layout Widgets - Column, Row, Container, Stack	, 3:00:00
Scaffold, Material App	20:00
Image, Icons, Colors, Text	45:00
AppBar	40:00
TabBar & TabBarView	30:00
PageView	20:00

Course Content :

Project Onboarding Screen	45:00
BottomNavigationBar	20:00
ListView and GridView	01:00:00
Project Famous Places App	25:00
Buttons	42:00
TextField	45:00
Drawer	40:00
Checkbox	30:00
Radio	30:00
Date & Time Pickers	20:00
Dialogs	40:00
Gestures	15:00
Navigation & routing	1:30:00
Shared Preferences & Secure Storage	1:00:00
SQLite	2:00:00
Project Note App	1:30:00

Course Content :

Hive	2:00:00
Project Note App V2	1:30:00
Files	45:00
Project: Azakar App	30:00
Accessing REST API	50:00
Accessing REST API- http	40:00
Project: Quote App	20:00
Accessing REST API - Dio	50:00
Project: Weather App	40:00
Accessing REST API- Retrofit	30:00
Project: Refactor Weather App	40:00
State Management - Provider	12:00
Project: Dice App	30:00
Project: Refactor Weather App	40:00
State Management-River pod	15:00
State Management -Bloc & cubit	1:00:00
Project: Movie App with clean architecture	3:00:00
Firebase - Authentication	20:00
Firebase - Firestore	30:00
Firebase - RealTime Database	15:00
Firebase - Storage	30:00
Firebase - Messaging with local notification	1:00:00
Localizations	40:00
Google Map	2:30:00
Final Project: E-Commerce App	5:00:00