

BLENDED (LIVE + SELF-PACED) COURSE

FLUTTER APP DEVELOPMENT COURSE



COURSE OVERVIEW

In this comprehensive Flutter development course, you will learn how to build beautiful and functional cross-platform mobile applications using the Flutter framework. Flutter, developed by Google, allows developers to write code once and deploy it on both iOS and Android platforms, saving time and effort. Throughout the course, you will gain a solid foundation in Flutter development by diving into the fundamental concepts, best practices, and industry-standard techniques. You will start by setting up your development environment and understanding the Flutter architecture, widgets, and layout system. As you progress, you will explore topics such as state management, navigation, user input handling, and data persistence. You will learn how to leverage Flutter's extensive widget library to create engaging user interfaces with animations, gestures, and custom styling. The course will also cover the integration of APIs, accessing device features, and handling asynchronous operations. Furthermore, you will delve into advanced topics, including working with external packages and plugins, implementing platform-specific functionality, and optimizing app performance. You will also explore techniques for debugging and testing your Flutter applications to ensure they are robust and reliable.

COURSE OBJECTIVE

This course aims to equip learners with advanced knowledge and techniques to build beautiful and functional cross-platform mobile applications using the Flutter framework. Flutter, developed by Google, allows developers to write code once and deploy it on both iOS and Android platforms, saving time and effort.

WHAT YOU WILL LEARN

By the end of this course, you will have developed the skills to confidently build and deploy your cross-platform mobile applications using Flutter. Whether you are a beginner or an experienced developer looking to expand your mobile app development repertoire, this course will equip you with the knowledge and practical experience to create high-quality apps for a global audience.



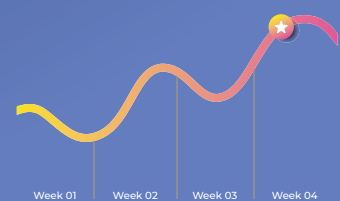
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01 02 03 04 05 06 07 08 09 10 11 12



4,5K



Week 01 Week 02 Week 03 Week 04



Speed Agility Strength

COURSE SKILL SET.

Flutter App Development, Dart Programming, Understanding and implementing Object-Oriented Programming (OOP) concepts, Debugging, and error handling in Flutter, Working with widgets and their role in Flutter, Navigation and routing in Flutter, Styling, and theming Flutter applications, Handling user input and forms, Working with APIs and parsing JSON data, Handling authentication and user login/signup, Building responsive layouts and UI components, Animations and transitions in Flutter, Managing state in Flutter using the set State() method, Working with packages and plugins in Flutter, Integrating Firebase services (e.g., Firebase Authentication, Firebase Realtime Database), Push notifications in Flutter.

PROGRAM HIGHLIGHTS

Instructor- Dr. Priti Maheshwary

Access - 1 Year

Duration - 2 Months

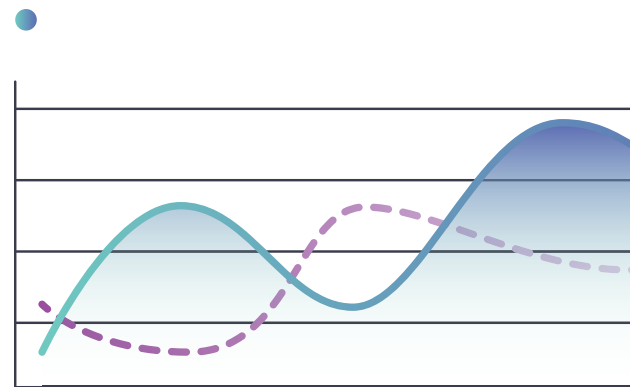
Eligibility- Any graduate with a Science stream

No. of Modules - 23 modules

Language - English

Shareable certificate - Yes

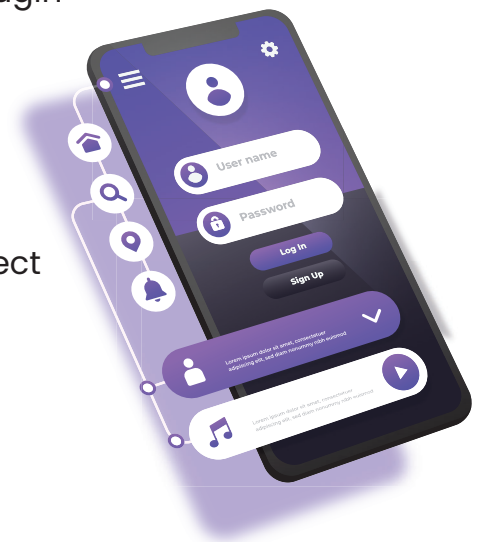
Webinar- Yes



CURRICULUM

Module 1 Introduction to Flutter
session 1 Introduction to Flutter
session 2 What is Dart?
session 3 Installing Visual Studio Code and the Dart Plugin
session 4 Installing Dart SDK
session 5 Writing the first Dart Program

Module 2 Setting up Flutter
session 1 Installing Flutter Plugin within VS Code
session 2 Understanding the structure of a Flutter Project
session 3 Building a simple app from scratch



Module 3 Dart Programming – Syntax
session 1 Introduction
session 2 Dart Variables – String, Number, Boolean
session 3 Dart Variables – List
session 4 Set & Map
session 5 Late variable and final keyword
session 6 If – Else Statement
session 7 Loops, break, continue & Switch Case
session 8 String Operation & functions
session 9 Spread Operator
session 10 Collection operators: Collection-if & Collection-for

Module 4 Dart Functions & OOP
session 1 Functions in Dart
session 2 Creating a Function
session 3 Function Return Data Types
session 4 Void Function
session 5 Object-Oriented Programming (OOP)



Module 5 App Running & debugging on different devices
session 1 Module Introduction
session 2 Running the App on a Real Android Device
session 3 Working with the Emulators / Using the Emulators
session 4 Understanding Error Messages & and Fixing Errors
session 5 Using the Debugger

Module 6 Widgets
session 1.1 Widgets and their Role Part 1
session 1.2 Widgets and their Role Part 2
session 1.3 Widgets and their Role Part 3
session 2.1 The Material App and Scaffold Widget Part 1
session 2.2 The Material App and Scaffold Widget Part 2
session 3 AppBar
session 4 Floating Action Button
session 5 More widgets – Text, Centre, and Padding
session 6 Examples of Widgets

Module 7 Widgets Style
session 1.1 Styling a Container Part 1
session 1.1 Styling a Container Part 2
session 1.2 Styling Text Part 1
session 1.2 Styling Text Part 2

- session 1.3 Configuring & Using Themes Part 1
- session 1.3 Configuring & Using Themes Part 2
- session 1.4 Custom Fonts & Working with Text Themes Part 1
- session 1.4 Custom Fonts & Working with Text Themes Part 2

- Module 8 Common Widget in Flutter
- session 1 Containers and their Role Part 1
- session 2 Containers and their Role Part 2
- session 3 Containers and their Role Part 3
- session 4 Importing Images & and adding Icon to Widgets
- session 5 Understanding Row and Column Part 1
- session 6 Understanding Row and Column Part 2
- session 7 Understanding Row and Column Part 3
- session 8 List View and List Tile Part 1
- session 9 List View and List Tile Part 2
- session 10 List View and List Tile Part 3
- session 11 Building views using List View. builder Part 1
- session 12 Building views using List View. Builder Part 2

- Module 9 Stateless and Stateful Widgets
- session 1.1 Stateless vs. Stateful Widgets Part 1
- session 1.2 Stateless vs. Stateful Widgets Part 2
- session 1.3 Stateless vs. Stateful Widgets Part 3
- session 2.1 Defining a 'State' Part 1
- session 2.2 Defining a 'State' Part 2
- session 2.3 Defining a 'State' Part 3
- session 3.1 The set State () method Part 1
- session 3.2 The set State () method Part 2
- session 3.3 The set State () method Part 3
- session 4 Returning to the Default Flutter App.

- Module 10 Navigation
- session 1 Navigator and routes.
- session 2 Applying push () using Material Page Route.
- session 3 Applying pop ()
- session 4 Declaring parameter-less routes (push Named ()) in the Material App widget.
- session 5 Navigating to a New Page
- session 6 Example

- Module 11 User Interface
- session 1 Applying Theme Data.



session 2 The Basic Screen Layout.
session 3 Applying Custom Font.

Module 12 Asynchronous Functions
session 1 The 'Future' function.
session 2 'async' and 'await'.
session 3 Example

Module 13 State Management
session 1 Flutter Block

Module 14 Working with Remote Data
session 1 The 'http' package.
session 2 Model Class and JSON parsing.
session 3 Displaying Remote Data. (NEWS API).

Module 15 Using 3rd Party Packages
session 1 The 'URL launcher' package.
session 2 Adding on Tap() to NEWS API.

Module 16 Shared preferences
Module 17 Adding User Authentication
session 1 The 'URL launcher' package.
session 2 Adding on Tap() to NEWS API.

Module 18 Environment setup and App building
Module 19 Animation
session 1 Using the "Animated Builder" Widget
session 2 Working with the "Animated Container"
session 3 More Built-in Animation & Transition Widgets

Module 20 Native Device
session 1 Managing Data and images via the Provider Package
session 2 Using Image Picker & The Device Camera
session 3 Handling Errors



Module 21 Working with user input & form
session 1 Snack bars
session 2 Showing Alert Dialogs
session 3 Adding an Image Preview
session 4 Submitting Forms

Module 22 Firebase, Image upload, Push notification
session 1 Image Upload
session 2 Firebase
session 3 Push Notification

Module 23 Create an Application
session 1 Planning the App
session 2 Defining a Data Model
session 3 Working on the "Products" Grid and item Widgets
session 4 Styling & and Theming the App
session 5 Adding Navigation to the App



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