

# Flutter Dev.Certification Course

Course Duration : 90 Days

## Topics & Details

### Introduction to Flutter App Dev:

#### ★ Introduction to Flutter

- Overview of Flutter and its advantages.
- Installation of Flutter SDK and setting up development environments (Android Studio, VS Code).

#### ★ Dart Programming Language

- Basic syntax and concepts (variables, data types, functions, control structures).
- Object-oriented programming in Dart (classes, inheritance, polymorphism)

#### ★ Flutter Basics

- Creating your first Flutter app (Hello World).
- Understanding the project structure (main.dart, pubspec.yaml).
- Widgets and the widget tree concept.
- Stateless vs Stateful widgets.

#### ★ Layouts and Widgets

- Exploring different layout widgets (Container, Row, Column, Stack, etc.).
- Styling widgets with themes and using custom fonts.

#### ★ Navigation and Routing

- Navigating between screens (using Navigator, MaterialPageRoute).
- Passing data between screens.

#### ★ Networking and Data Handling

- Making HTTP requests with Dart (using packages like `http`).
- Parsing JSON data and displaying it in your app.

#### ★ State Management

- Exploring different state management approaches (setState, Provider, Bloc, Riverpod).
- Implementing state management in a sample app

#### ★ Persistent Storage

- Working with local databases (SQLite) or key-value stores (shared\_preferences) for data persistence.



### ★ **Advanced UI**

- Custom painting and animations.
- Using gestures for interactivity (e.g., GestureDetector, InkWell)

### ★ **Platform Integration**

- Accessing platform-specific features (camera, geolocation, sensors) using plugins.
- Handling permissions

### ★ **Testing and Debugging**

- Writing unit tests and widget tests.
- Debugging techniques and tools (Flutter DevTools).

### ★ **Deployment**

- Building release versions of your app for Android and iOS.
- Publishing your app to Google Play Store and Apple App Store

### ★ **Additional Topics (Optional)**

- Flutter Web
- Building and deploying Flutter apps for the web.
- Flutter Desktop
- Developing cross-platform desktop applications using Flutter.
- Advanced Dart Features
- Asynchronous programming with Dart (async/await).
- Generics and mixins.

