

# 10 Weeks Flutter Training Syllabus

## WEEK 1: INTRODUCTION TO FLUTTER

- Introduction to Flutter and Dart
- Setting up Flutter development environment
- Creating your first Flutter app

## WEEK 2: DART PROGRAMMING BASICS

- Variables, Data Types, and Operators
- Control Flow and Loops
- Functions and Scope

## WEEK 3: FLUTTER WIDGETS

- Introduction to Flutter Widgets
- Stateless vs Stateful Widgets
- Commonly used Widgets

## WEEK 4: FLUTTER LAYOUTS AND NAVIGATION

- Understanding Flutter Layouts (Row, Column, Stack, etc.)
- Navigation and Routing in Flutter
- Passing Data between Screens

## WEEK 5: STATE MANAGEMENT

- Local State Management
- State Management using Provider Package
- State Management using Riverpod

## WEEK 6: NETWORKING AND API INTEGRATION

- Making HTTP requests with Flutter
- Handling JSON data

- Error Handling and Exception

#### WEEK 7: DATABASE AND LOCAL STORAGE

- Introduction to SQLite in Flutter
- CRUD operations
- Shared Preferences for local storage

#### WEEK 8: ADVANCED UI/UX

- Custom Painters and Animations
- Gesture Detection and Touch Events
- Responsive Design with MediaQuery and LayoutBuilder

#### WEEK 9: TESTING AND DEBUGGING

- Writing Unit and Widget Tests
- Debugging Techniques
- Performance Profiling

#### WEEK 10: DEPLOYMENT AND BEYOND

- Building and Publishing your Flutter App
- App Store Optimization (ASO) and Best Practices
- Introduction to Continuous Integration and Continuous Deployment (CI/CD)

#### AFTER COURSE ASSIGNMENTS:

1. Flutter App Development: Students will develop a complete Flutter application of their choice. This could be a mobile game, utility app, or any other creative idea they have. They should focus on implementing the concepts learned during the course.
2. Personal Portfolio Website: Students will create a personal portfolio website showcasing their Flutter projects, skills, and resume. This will help them in presenting their work to potential employers or clients.

3. **Code Review and Refactoring:** Students will choose one of their projects or assignments and perform a thorough code review and refactoring. This assignment will help them improve their code quality and understand the importance of clean and maintainable code in the industry.

By the end of this course and assignments, students should be well-equipped with the skills required to develop professional Flutter applications and be ready to start their careers in the IT industry.

