

Course Outline

Flutter Certified
Application
Developer

Flutter Application Development

Chapter	Topics	Objectives
Chapter 1	Introduction to Flutter and Dart Programming Language	<ul style="list-style-type: none">• Introduction• Importance of Flutter• Introduction to Dart• Writing Dart code• DartPad• Installing Dart SDK• IntelliJ IDEA
Chapter 2	Dart Programming - Syntax	<ul style="list-style-type: none">• Introduction• main() function• Dart Variables• Dart Data Types• Input of Information to Dart Program• Writing Comments• Dart Conditional Operators• If Statement• If – Else Statement• If...Else and Else...If... Statement• If Else and Logical Operators• For Loops• While Loops• Do-while Loops• Break Statement• Switch Case Statement• Lab: Create a Pizza Order Program
Chapter 3	Dart Functions & Object-Oriented Programming (OOP)	<ul style="list-style-type: none">• Functions• Object-Oriented Programming (OOP)• Dart Project Structure and Dart Libraries• Lab: Create a Small Overtime Payment Program
Chapter 4	introduction to Flutter	<ul style="list-style-type: none">• Understanding Flutter• Flutter Framework• Android Studio• Flutter SDK• Installing and Configuring Flutter SDK• Creating a New Flutter Project• Setup an Android Virtual Device• Run a Flutter App• Installing Flutter on MaC• Test Your Flutter App on iOS Phone with Windows O.S• Android Studio Sugar and Spice

		<ul style="list-style-type: none"> • Run your Apps on a Hardware Device (Physical Phone) • Emulator Debug Mode • Introduction to Flutter Widgets • Creating a Flutter App Using Widgets • What is a Material App widget? • Lab: Creating a Simple Flutter App
Chapter 5	Flutter Widgets Fundamentals	<ul style="list-style-type: none"> • Scaffold Widget • Image Widget • Container Widget • Column and Row Widgets • Icon Widget • Layouts in Flutter • Card Widget • App Icons for iOS and Android Apps • Hot Reload and Hot Restart • Stateful and Stateless Widgets • Use a Custom Font • Lab: Creating a Restaurant Menu
Chapter 6	Navigation and Routing	<ul style="list-style-type: none"> • Button Widget • App Structure and Navigation • Navigate to a New Screen and Back • Navigate with Named Routes • Send and Return Data Among Screens • Animate a Widget Across Screens • WebView Widget in Flutter • Lab: Navigation and Routing a Pizza Store App
Chapter 7	visual, Behavioral, and Motion-Rich Widgets implementing Material Design Guidelines - Part 1	<ul style="list-style-type: none"> • Introduction • BottomNavigatorBar Widget • DefaultTabController, TabBar, and TabBarView Widgets • ListTile Widget • ListView Widget • Drawer Widget • DataTable Widget • SelectableText Widget • Stack Widget
Chapter 8	visual, Behavioral, and Motion-Rich Widgets implementing Material Design Guidelines - Part 2	<ul style="list-style-type: none"> • Input and Selections • Dialogs, Alerts, and Panels • Lab Creating a Hotel Reservation App
Chapter 9	Firebase	<ul style="list-style-type: none"> • Introduction • What is the JSON ? • How does Firebase Database work? • Firebase authentication (Signup and Login to Flutter App) • Configure Your App to use Firebase Services • Configuring Firebase Authentication • Firebase Database

Chapter 10	Location-Aware Apps: Using GPS and Google Maps	<ul style="list-style-type: none">• Introduction• What is GPS and how does it work?• The Camera Position• Adding Google Maps to a Flutter app•
Chapter 11	App Testing & Publishing	<ul style="list-style-type: none">• Testing and Feedback for Your App• Publishing Flutter Apps• Publishing Android App on Google Play Store• Publishing iOS app on Apple Store