

# COMPLETE FLUTTER APP DEVELOPMENT COURSE

**LEARN FLUTTER & DART**

**KICK START YOUR CAREER**

## RALFIZ ACADEMY

We offer internships and courses for young programming enthusiasts, who wish to kick-start a career in the IT industry. Most of our trained students are successfully placed in MNCs like TCS, Infosys, and other companies

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### FLUTTER COURSES

Kick start your mobile app developer career in no time

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We offer support for completing your academic project.

Excellent training, documentation support, mock viva. and lot more

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# **MULTI PLATFORM MOBILE APPLICATION DEVELOPMENT USING FLUTTER**

## **COURSE SUMMARY**

Developing for mobile platforms can be frustrating, and Flutter is Google's solution to make mobile development better. This course will teach you all aspects of Flutter, including building a UI, creating a database app ,API Handling, State management and more.

In this course, you'll learn how to build apps with Flutter, the new mobile platform backed by Google. First, you'll explore how to build a Hello World app with Flutter. Next, you'll build a user interface and add interactivity. Finally, you'll discover how to create a complete database app.

When you're finished with this course, you'll have a foundational knowledge of Flutter that will help you as you move forward to build great and successful mobile apps for Android and IOS with Flutter.

# MULTI PLATFORM MOBILE APPLICATION DEVELOPMENT USING FLUTTER

## LAP 1 MILESTONE 1 AND 2

### MILESTONE 1

3 hrs

#### **Introduction to Mobile App Development**

- What is Mobile Application Development
- Different Mobile App Platforms
- Types of Mobile Apps
- Mobile App Development Life Cycle

#### **Introduction to Flutter- The What's and The Why's?**

- What is Flutter?
- Why using Flutter is a good choice



# MILESTONE 2

10 hrs

## Introduction to Dart

- Dart Programming
- Writing the first Dart Program
- Data types
- Variables
- Conditional statements
- Selection Statements and Loops
- Arrays
- Function
- OOP Concepts
- Lists and Maps
- Threading
- Isolates

## Task/Assignments

CHECK THE DRIVE -  
COMPLETE ALL THE ASSIGNMENTS  
UPLOAD SCREENSHOT OF OUTPUT  
AND CODE

## UpSkill Workouts

REFER THE LAP 1 DRIVE FOLDER

# LAP 2

## MILESTONE 3,4,5

### MILESTONE 3

5 hrs

#### Introduction to Flutter

- Setting up the environment
- Downloading/Cloning the Flutter SDK.
- Installing and Configuring android studio
- Installing Flutter Plugin within VS Code.
- Understanding the structure of a Flutter Project.
- Importance of pubspec.yaml file
- Building a simple app from scratch
- Running app on AVD or Real Device

#### Task/Assignments

##### **TASK 3**

**CREATE AN APP AND RUN**



# MILESTONE 4

15 hrs

## Introducing Widget

- Widgets and their role in a Flutter app.
- Stateless and Stateful widgets
- Build Method and context
- The Material App and Scaffold widget.
- Safe Area
- AppBar.
- Floating ActionButton.
- More widgets - Text, Center and Padding.
- Hot Reload and Hot Restart, the tricks of the trade.
- Recreating the Default Flutter App (UI Only).

## Task/Assignments

### TASK 4

**CREATE AN APP WITH APP BAR**

### TASK 5

**CREATE AN APP WITH FAB**

# MILESTONE 5

20 hrs

## Common Widget in Flutter

- Containers and their role.
- Importing images from a network.
- Importing images as assets.
- Adding icons to widgets.
- Understanding Row and Column.
- ListView and ListTile.
- Building views using ListView.builder.
- Inkwell and its importance.
- Gesture Detector
- Card
- GridView.
- Stack
- SizedBox
- Expanded
- FittedBox
- Dialogues(Alert, SnackBar)

## Task/Assignments

### TASK 6

**CREATE A BUSINESS CARD APP**

### TASK 7

**CREATE A STUDENT LIST APP**



# LAP 3

## MILESTONE 6,7

### MILESTONE 6

3 hrs

#### Introduction to GIT

- Working with git
- Collaborative Project Management

#### Task/Assignments

##### TASK 8

**CREATE A PROJECT AND PUSH TO GIT REPO**

### MILESTONE 7

5 hrs

#### Using 3rd Party Packages

- Introducing Pubdev
- Installing and Importing Packages
- Working with asset images
- Adding custom fonts
- Adding Lottie in Flutter App

#### Task/Assignments

##### TASK 9

**CREATE AN APP WITH LOTTIE ANIMATION**

##### TASK 10

**CREATE AN APP WITH ASSETS IMAGES AND CUSTOM FONTS**



# LAP 4

## MILESTONE 8,9

### MILESTONE 8

5 hrs

#### **Navigating through Screens**

- Navigator Class and different types of routes.
- Passing data between pages

#### **Task/Assignments**

##### **TASK 11**

**CREATE AN APP WITH TWO SCREENS AND APPLY ROUTING**

##### **TASK 12**

**UPDATE STUDENT LIST APP**

### MILESTONE 9

4 hrs

#### **Drawer and Bottom Navigation**

- Drawer and BottomNavigation

#### **Task/Assignments**

##### **TASK 13**

**CREATE AN APP WITH BOTTOM NAVIGATION BAR AND DRAWER**





# LAP 5

## MILESTONE 10,11,12

### MILESTONE 10

4 hrs

#### Building Responsive Apps

- Building responsive UI
- Layout Builder
- Adaptive Navigation
- Navigation Rail

#### Task/Assignments

##### TASK 14

**CREATE A RESPONSIVE APP**

##### TASK 15

**CREATE A RESPONSIVE APP  
WITH ADAPTIVE  
NAVIGATION**

### MILESTONE 11

5 hrs

#### Building reusable widgets

- Writing custom classes
- Applying custom themes
- Darkmode and Light Mode

#### Task/Assignments

##### TASK 16

**CREATE AN APP WITH DARK  
AND LIGHT MODE AND  
HAVING CUSTOM THEME  
AND UTILITY CLASSES**



# MILESTONE 12

4 hrs

## Handling User Input.

- Using TextField.
- Handling changes to a TextField.
- DropDown
- Calendar
- File Picker
- CheckBox
- RadioButton
- Form widget
- Validation

## Task/Assignments

**TASK 17**

**CREATE STUDENT**

**REGISTRATION**

**AND LOGIN SCREEN , UPDATE**

**THE LIST**



## UI CHALLENGE PROJECT 1

APPLY THE SKILLS YOU HAVE  
ACQUIRED TO COMPLETE THE  
DESIGN GIVEN

**Reviews and feedbacks**

**Machine Test**

**Mock-Interview**

**Update your CV**



# LAP 6

## MILESTONE 13,14,15,16

### DATABASE CONNECTIVITY CONNECT FLUTTER APP TO LOCAL DATABASE

## MILESTONE 13

5 hrs

### Introduction to JSON

- What is JSON
- Uses
- Syntax
- Objects
- Arrays

## MILESTONE 14

5 hrs

### Introduction to SQLite

- Installing packages
- Creating model class
- Creating database helper class
- CRUD Operation

### Task/Assignments

#### TASK 18

**BUILD CAR APP, CREATE,  
READ, UPDATE AND DELETE  
CAR DETAILS**



## MILESTONE 15

5 hrs

### Introduction to Hive

- What is Hive Database in a flutter
- When to use the hive database in the flutter app?
- Installing Hive in the flutter project
- How to Implement Hive Database in the flutter app
- Initialization Hive Database
- Open Hive Box – A Data Box in HIVE
- How to Store data in a hive box
- Reading Data from Hive Database
- Delete data from Hive DB
- Real all the data from HIVE Box

### Task/Assignments

#### TASK 19

**BUILD FRUIT APP,  
CREATE, READ, UPDATE  
AND DELETE FRUIT  
DETAILS**

## MILESTONE 16

10 hrs

### Introduction to Firebase

- Firebase Introduction
- Configuration
- Authentication
- Cloud Firestore
- CRUD Operation
- Cloud Storage

### Task/Assignments

#### TASK 20

**BUILD FRUIT APP, CREATE,  
READ, UPDATE AND  
DELETE FRUIT DETAILS**



## ***PROJECT 2 , 3,4***

**APPLY THE DATABASE SKILLS YOU  
HAVE ACQUIRED TO COMPLETE  
THE PREVIOUS PROJECT AND  
UPLOAD IT ON GIT**



# LAP 7

## MILESTONE 17,18

### WORKING WITH API IN FLUTTER

## MILESTONE 17

10 hrs

### Introduction to API

- What is API
- Types of API Architectures
- Sample API

## MILESTONE 18

15 hrs

### API handling in Flutter

- Get the API URL and endpoints.
- Add relevant packages to the app (http, dio, etc.).
- Create a constant file that stores URLs and endpoints.
- Create a model class to parse the JSON.
- Create a file that handles the API call, and write specific methods to fetch and parse data.
- Use the data in your app.

### Task/Assignments

#### TASK 21

**BUILD PIZZA APP,  
CREATE, READ, UPDATE  
AND DELETE ORDER  
USING API**



## LAP 8

### MILESTONE 19,20,21,22,23

# SHARED PRFERENCES & STATE MANAGEMENT IN FLUTTER

## MILESTONE 19

5 hrs

### Introduction to Shared preferences

- Installing dependencies
- Setting shared preference
- Getting value

### Task/Assignments

**TASK 22**

**BUILD THE COUNTER**

**APP**

**AND MANAGE STATE**

**USING SHARED**

**PREFERENCES**

## MILESTONE 20

10 hrs

### Maintaining state using Getx

- Installing dependencies
- Managing State with GetX

### Task/Assignments

**TASK 23**

**BUILD THE COUNTER APP**

**AND MANAGE STATE**

**USING GETX**



## MILESTONE 21

15 hrs

### Maintaining state using Cubit

- Installing dependencies
- Types
- Working with cubit

### Task/Assignments

**TASK 24**

**BUILD THE COUNTER**

**APP**

**AND MANAGE STATE**

**USING CUBIT**

## MILESTONE 22

15 hrs

### Maintaining state using BloC

- Installing dependencies
- Important BLoC concepts
- Working with cubit

### Task/Assignments

**TASK 25**

**BUILD THE COUNTER**

**APP**

**AND MANAGE STATE**

**USING BLOC**

## MILESTONE 23

5 hrs

- Playstore Configuration
- Key Generation
- APK and AppBundle
  
- Appstore Configuration
- Key Generation





## **BONUSES 1**

5hrs

### **Integrating Google Map**

- Installing dependencies
- Fetching live location
- Markers

## **BONUSES 2**

5 hrs

### **Integrating Payment in Flutter**

- Installing dependencies

## **BONUSES 3**

5 hrs

### **Integrating Printing in flutter**

## **BONUSES 4**

5 hrs

### **Prototyping using Figma and Xd**



## **BONUSES 5**

5hrs

### **Animations in widget**

- AnimatedContainer
- AnimatedBuilder
- Hero etc

## **BONUSES 6**

5 hrs

### **Layout widgets**

- CustomScrollView
- Sliver widgets

## **BONUSES 7**

5 hrs

### **Mixins in Dart**

## **BONUSES 8**

5 hrs

### **Push notifications**



# FINAL PROJECT WORK & INTERVIEW PREPARATION

## IDEA MAKING

- Make an idea
- Design the app
- Code it
- Test it
- Deploy it



**GET THE  
CERTIFICATE &  
READY TO FLY HIGH**