



#### **RALFIZ ACADEMY**

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

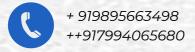
#### **WE OFFER**

#### **FLUTTER COURSES**

Kick start your mobile app developer career in no time

Tailor made by industry experts, excellent placement record

#### CONTACT

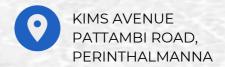




### ACADEMIC PROJECT SUPPORT

We offer support for completing your academic project.

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







#### **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, Statemeanagement 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



#### **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



#### **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**

## Drawer and Bottom Navigation

• Drawer and BottomNavigation

#### 4 hrs

#### 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



#### **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-Inerview

Update your CV



## LAP 6 MILESTONE 13,14,15,16 DATABSE 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**

### Introduction to Shared preferences

- Installing dependencies
- Setting shared preference
- Getting value

#### Task/Assignments

TASK 22

**BUILD THE COUNTER** 

APP

5 hrs

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



