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VERSION 6

PROFESSIONAL

MOBILE APP DEVELOPER FLUTTER & DART, REACT NATIVE

ELYSIUM ACADEMY

MOBILE APP DEVELOPER FLUTTER & DART, REACT NATIVE

SR. CODE

EAPL/PROF/PRTC13

COURSE CODE

EAPFM

SUB CATEGORY

MOBILE APP DEVELOPMENT

TOTAL DURATION	THEORY TAKEN	PRACTICAL TAKEN
90 HOURS	35 HOURS	55 HOURS

ELYSIUM ACADEMY MOBILE APP DEVELOPER

COURSE DESCRIPTION

With the help of this course, you will be able to utilise Flutter to create high-performance, attractive, and user-friendly apps. You will also learn how to leverage Flutter widgets, state management, asynchronous programming, network integration, and other key topics to construct practical applications.

COURSE GOALS

1. Exact setup instructions for Windows and macOS
2. A comprehensive introduction to widgets, Dart, and Flutter
3. A description of the default widgets and instructions for adding your own
4. Debugging tricks and tips
5. Stack-based navigation, side drawers, and tabbed page navigation
State management options, number six
7. Taking care of and verifying user input
8. Sending HTTP requests to connect your Flutter app to backend servers
9. User verification
10. Incorporate Google Maps

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FUTURE SCOPE

The Flutter framework, which differs from other frameworks thanks to a special set of characteristics, is the way cross-platform or mobile app development will be done in the future. A wonderful developer experience, native-like performance, an intuitive programming style, quick development times, and customisable widgets are all features of this framework. These characteristics make this framework a more popular option for app developers, and it is anticipated that demand for Flutter will increase in the years to come. Developers can alter real-time code because to the quick development time offered by this Flutter application development platform.

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01 CHAPTER

1. Introduction to Dart

1. SDK Installation
2. Comments
3. Variables
4. Operators
5. Standard Input Output

30 MINS

01 HRS

02 CHAPTER

2. Data Types

1. Numbers
2. Strings
3. Sets
4. Map
5. Queues
6. Data Enumeration

30 MINS

1.5 HRS

03 CHAPTER

3. Control Flow

1. Switch Case
2. Loops
3. Control Statements
   - 3.1. Break
   - 3.2. Continue
4. Labels

01 HRS

02 HRS

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04
CHAPTER

4. Key Functions

1. Anonymous Function
2. Main () Function
3. Common Collection Methods
4. Getters and Setters

30 MINS
02 HRS

05
CHAPTER

5. Object Oriented Programming

1. Classes and Objects
2. Encapsulation
3. This Keyword
4. Static Keyword
5. Super and This Keyword
6. Inheritance
7. Abstraction
8. Polymorphism
9. Instance and class methods
10. Method Overriding
11. Builder Class
12. Interface

1.5 HRS
04 HRS

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06 CHAPTER

6. Introduction to Flutter

01 HRS

03 HRS

1. Comparison with other Mobile app Framework
2. Compilation
3. Rendering
4. Widgets

07 CHAPTER

7. Handling User Input & working with Forms

30 MINS

03 HRS

1. Side Drawer
2. Module Introduction
3. Setup & A challenge for you
4. Challenge Solution 1- Building & Using Models
5. Challenge Solution 1- Building the list UI
6. Adding a "New Item" Screen
7. The Forms & Text Form Field Widgets
8. A form –aware Dropdown Button
9. Adding Buttons to a Form
10. Adding Validation Logic
11. Getting Form Access via a Global Key
12. Extracting Entered Values
13. Passing Data Between Screens

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CHAPTER 08

8. Theme & Styling

30 MINS | 02 HRS

- 9.1. Material Design
- 9.2. IOS Cupertino
- 9.3. Theming Fonts
- 9.4. Dynamic Style with Media Query and Layout Builder

CHAPTER 09

9. Configure Virtual Networks

1.5 HRS | 03 HRS

- 1.1. Button Widget Floating Action Button
- 1.2. Raised Button, Flat Button, and Icon Button
- 1.3. Dropdown Button
- 1.4. Outline Button
- 1.5. Button Bar
- 1.6. Popup Menu Button
- 1.7. App Structure and Navigation
- 1.8. Navigate to a New Screen and Back
- 1.9. Navigate with Named Routes
- 1.10. Send and Return Data among Screens
- 1.11. Animate a Widget across Screens
- 1.12. Web View Widget in Flutter

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CHAPTER 10

10. Firebase Plugins

1. Introduction to Firebase
2. Firebase Authentication
3. NoSQL database with Cloud Firestore
4. Cloud Storage with Firebase Storage
5. Ads with firebase AdMob

30 MINS
3.5 HRS

CHAPTER 11

11. Developing Your own Flutter Plugins

1. Create a package/plugin
2. Structure of project plugin
3. Adding documents to the packages

01 HRS
2.5 HRS

CHAPTER 12

12. Accessing Device Features from the Flutter App

1. Launching a URL from the app
2. Managing App permission
3. Importing Contacts from the mobile
4. Integrating Mobile Camera

01 HRS
3.30 HRS

CHAPTER 13

13. Platform Views and Map Integration

1. Displaying a map
2. Adding markers to the map
3. Adding map interactions
4. Using the Google Places API

1.30 HRS
03 HRS

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14

CHAPTER

14.Connecting a Backend & Sending HTTP Requests

30 MINS

03 HRS

1. Module Introduction
2. What's Backend? And why would you want one?
3. What is HTTP & How does it works?
4. Setting up a Dummy Backend (Firebase)
5. Adding the HTTP package
6. Sending a POST Request & wait9ing for the response
7. Fetching & Transforming Data
8. Avoiding Unnecessary Request
9. Managing the Loading State
10. Error response handling
11. Sending DELETE requests
12. Handling the "No Data" Case
13. Better Error Handling

15

CHAPTER

15.React Native Introduction

01 HRS

01 HRS

1. What is React Native?
2. Expo CLI vs React Native CLI
3. Creating, Analyzing Native Project
4. Setting up a local Development Environment

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16

CHAPTER

16.React Native Basics

30 MINS

06 HRS

1. Exploring Core Components & Component Styling
2. Working With Core Components
3. Styling React Native Apps
4. Exploring Layouts & Flexbox
5. React Native & Flexbox
6. Using Flexbox To Create Layouts
7. Flexbox - A Deep Dive
8. Improving The Layout
9. Handling Events
10. iOS & Android Styling Differences
11. Making Content Scrollable with ScrollView
12. Optimizing Lists with FlatList
13. Splitting Components Into Smaller Components
14. Utilizing Props
15. Working on the "Goal Input" Component
16. Handling Taps with the Pressable Component
17. Making Items Deletable & Using IDs
18. Adding an Android Ripple Effect & an iOS Alternative
19. Adding a Modal Screen
20. Styling the Modal Overlay
21. Opening & Closing the Modal
22. Working with Images & Changing Colors

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17 CHAPTER

17.Debugging React Native Apps

01 HRS | 05 HRS

1. Module Introduction
2. Handling Errors
3. Logging to the Console
4. Debugging JavaScript Remotely
5. Using the React DevTools
6. Using the Documentation

18 CHAPTER

18.Components, Layout & Styling

30 MINS | 04 HRS

1. Setting Up our Screen Components
2. Creating Custom Buttons
3. Styling for Android & iOS
4. Styling the "Number Input" Element
5. Configuring the TextInput Field
6. Improving the Buttons
7. Coloring the Component
8. Adding a Linear Gradient, Background Image
9. Creating a Title Component
10. Managing Colors Globally
11. Working with Icons (Button Icons)

19 CHAPTER

19.Navigation

30 MINS | 03 HRS

1. Installing navigation
2. Working with Params
3. Navigation bar, Navigation buttons
4. The sidedrawer
5. Tab navigation
6. Nesting navigators

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20 CHAPTER

20.Working With Libraries

1. Installing the image picker
2. Using the image picker
3. Installing the contacts library
4. Using the contacts library
5. Installing react native elements
6. Using react native elements

1.5 HRS

06 HRS

21 CHAPTER

21.Animation With React Native

1. Animation Module
2. How Animations Work
3. Animation from Another Angle
4. Swipe Deck Props
5. Component Boilerplate
6. Deck Data
7. Interplay Between Components
8. Customizing Individual Cards

1.5 HRS

04 HRS

22 CHAPTER

22.Applying Animation Styling

1. Animating Single Cards
2. Rotate Elements
3. Interpolating Rotation Values
4. Linear Relations with Interpolation
5. Limiting Rotation with Interpolation
6. Springing Back to Default
7. Detecting Minimum Swipe Distance
8. Programmatic Animation
9. Forcing Swipes

1.5 HRS

04 HRS

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