# Mobile Application Development (Flutter & Dart Programming)

***Presented By:***

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# Week 1

- **To Recognize Dart Programming Basics: An Introduction to Writing Dart Programs on Dart pad.**
- **Introduction Dart.**
- **First Dart Program (Live Demo)**
- **Variables & Data Types**
- **List in Dart**
- **forEach() in Dart**
- **Map in Dart?**
- **Comments in Dart**
- **Task**

# Week 2 (Conti)

- **To Recognize Dart Programming Basics: An Introduction to Writing Dart Programs on Dart pad.**
- **Final And Const Keyword in Dart**
- **Conditionals if statement**
- **Ternary Operator in Dart**
- **The switch Statement in Dart**
- **Task**

# Week 3 (Conti)

- **To Recognize Dart Programming Basics: An Introduction to Writing Dart Programs on Dart pad.**
- **The while Loop in Dart**
- **The for Loop in Dart**
- **The do-while Loop in Dart**
- **<u>Task</u>**

# Week 4

- **Objective: To Demonstrate Setting Up the Development Environment and Creating Your First Basic Application Project.**
- **Part 1: Installing Flutter (Step by Step)**
- **Part 2: Installing an IDE (Integrated Development Environment)**
- **VS Code Setup**
- **Task**

# Week 5

- **Objective: Constructing a Multi-Screen Flutter Application with Navigation and Data Passing**
- **Step 1: Create the Main Application**
- **Step 2: Create the First Screen**
- **Step 3: Create the Second Screen**
- **Step 4: Passing Data Between Screens**
- **Step 5: Back Navigation**
- **Task**

# Week 6

- **Constructing a Multi-Screen E-Commerce Flutter Application with Navigation, Data Passing, and Cart Management**
- **STEP 1: Project Setup**
- **STEP 2: Create Screens**
- **STEP 3: Login Screen**
- **STEP 4: Product Model**
- **STEP 5: Home Screen – Product List**
- **STEP 6: Product Detail Screen**
- **STEP 7: Cart Screen**
- **STEP 8: Testing App Flow**
- **STEP 9: UI Improvement**
- **Task**

# Week 7

- **Open- Ended Lab (To apply knowledge of Dart programming fundamentals and execute Flutter development techniques to create interactive applications with advanced features.)**
- **Task**

# Week 8

- **To Perform Navigation and Routing with Page Transitions, Deep Linking, URL Routing, Navigation Rail, and Bottom Navigation Bar.**
- **Step 1: Project Setup**
- **Step 2: Understand the Project Structure**
- **Step 3: Configure Navigation in main.dart**
- **Step 4: Create Home Screen**
- **Step 5: Create Detail Screen**
- **Step 6: Run the Application**
- **Step 7: Page Transition Using MaterialPageRoute**
- **Step 8: Add Bottom Navigation Bar**
- **Step 9: Navigation Rail (For Tablets and Desktop)**
- **Step 10: Deep Linking Concept**
- **Task**

# Week 9

- **To learn how to create and manage forms in Flutter for user input. And implement validation, retrieve user data, and handle form submission effectively.**
- **STEP 1: Create Flutter Project**
- **STEP 2: Go to Main File**
- **STEP 3: Complete Working Code**
- **STEP 4: Code Explanation**
- **STEP 5: Run the App**
- **Task**

# Week 10

- **Complete Task & Page List**
- **1. Authentication Pages**
- **2. Home Dashboard**
- **3. Workout Pages**
- **4. Meal Pages**
- **5. Progress & Analytics Pages**
- **6. Chatbot / Coach Page**
- **7. Profile & Settings Page**
- **8. Advanced Pages**
- **9. Navigation**
- **10. State Management**

# Week 11

- Q/A Session.

# Week 12

- Exam/Project + Viva