Mobile App Development Track:
Program Goal

2 Months Online + 1 Month Offline

Agnes

Program Overview & Core Topics

Foundational Dart Programming

Equip learners with foundational programming skills in Dart, the robust language behind Flutter, ensuring a strong grasp of core syntax and object-oriented concepts.

Comprehensive Flutter Development

Master comprehensive mobile app development with Flutter, enabling the creation of high-performance, natively compiled applications for seamless cross-platform deployment.

Key Mobile UI/UX & Deployment

Gain a deep understanding of key mobile UI/UX principles, effective data management strategies, and the essential processes for successful app deployment.

Core Topics: Flutter Focus

Dart In-depth study of Dart programming language essentials.

Widgets Building beautiful UIs with Flutter's rich widget catalog.

State Mgmt Implementing robust state solutions for complex apps.

API Connecting apps to backend services and external APIs.

Storage Managing data persistence using local/cloud mechanisms.

Deployment Practical steps for packaging and publishing mobile apps.

Mini Project: Hands-On Application

Apply learned skills to a practical, end-to-end project.
Objective: Design, develop, and deploy a functional mobile application, creating a tangible portfolio piece that

Phase 1: Foundational & Core Concepts (Online)

Program Phase 1: Online Foundations

📅 **Month 1: Initiation & Core Dart Principles**

📅 **Month 2: Flutter Essentials & UI/UX**

Delivered Online

‹› Dart Programming Foundation

Foundation: Building a strong theoretical foundation in Dart programming.

Explore Dart's core syntax and object-oriented principles, understanding its pivotal role as the language powering Flutter for efficient, scalable code.

▦ Flutter Framework Essentials

Practice: Practical foundation in Flutter framework essentials.

Master Flutter's UI framework to build beautiful, performant interfaces with its rich widget catalog for cross-platform development.

Month 1: Dart & Flutter UI Fundamentals

📅 Week 1: Introduction & Dart Basics

- **Mobile Development Overview:** Understanding the ecosystem, native vs. cross-platform.
- **Dart Programming Fundamentals:** Variables, data types, control flow, functions, classes.
- **Tools & Setup:** Installing Flutter SDK & IDEs (VS Code/Android Studio).

🔲 Week 2: Flutter Widgets & Layouts

- **Core Concept:** Understanding "everything is a widget."
- **Stateless vs. Stateful:** Differentiating static and dynamic UI.
- **Basic & Layout Widgets:** Text, Image, Button, Row, Column, Container.

❯ Week 3: Navigation, Forms & Input

- **Navigation (Navigator):** Routing between screens, passing data.
- **Forms & TextFields:** Capturing and validating user input.
- **Gestures & Interactivity:** Detecting taps, drags, and other user actions.

🖌 Week 4: Assets, Theming & Responsive UI

- **Managing Assets:** Including images and custom fonts.
- **Custom Theming:** Defining app-wide styles for brand consistency.
- **Responsive UI (MediaQuery):** Adapting layouts for different screen sizes.

📐 Hands-on Application: Practical UI Development

Month 2: Data Management & Advanced Features

Week 5: State Management & Async

Managing Application State: Delve into `setState` for local state and `Provider` for scalable, application-wide state management.

Asynchronous Operations: Master `Futures` and `async/await` for clean, readable asynchronous code, essential for network requests.

Week 6: API Integration & Parsing

Connecting to Services: Perform HTTP requests (GET, POST) to interact with RESTful APIs and fetch remote data.

Processing Data: Master `JSON parsing` to convert API responses into usable Dart objects and implement robust `error handling`.

Week 7: Local Storage & Device Features

Persisting Data: Use `Shared Preferences` for simple key-value storage and `SQLite` for structured data with CRUD operations.
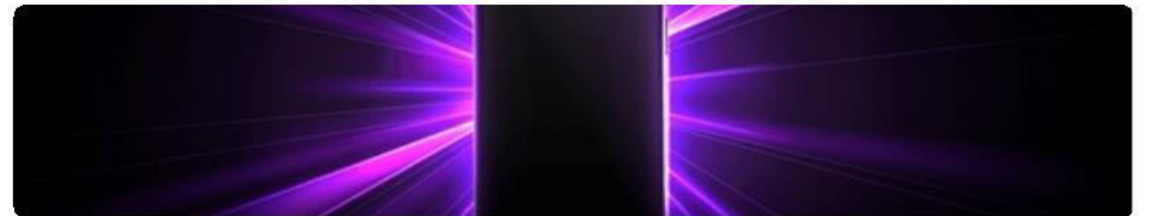
Device Capabilities: Request and manage runtime `permissions` for features like camera and location to enhance app functionality.

Week 8: Cloud & Native Overview

Backend Services: Integrate `Firebase Authentication` for user management and `Cloud Firestore` for real-time data sync.

Platform Deep Dive: Gain an overview of native `iOS` development concepts and how Flutter interacts with underlying frameworks.

Phase 2: Project Application & Industry Immersion (Offline)

📍 Month 3: Intensive Offline Immersion

This dedicated phase transitions learning into an intensive, hands-on, and collaborative offline environment, designed to simulate real-world development scenarios.

🔧 Applying Flutter Concepts

This phase mandates the comprehensive application of all previously acquired Flutter and Dart concepts, solidifying theoretical knowledge through practical implementation.

Learners will transition from guided exercises to independent problem-solving, leveraging their full skill set to architect robust and efficient mobile solutions.

📱 Build a Comprehensive App

The core deliverable is a market-ready mobile application, integrating diverse functionalities to form a robust portfolio piece.

☁ Integrate Cloud Services

The application will feature a rich set of advanced functionalities and integrate various cloud services (e.g., Firebase, AWS) for robust backend support.

This includes data storage, user authentication, and real-time features, mirroring industry standards for modern mobile applications.

Direct Mentorship & Career Readiness

Personalized Expert Guidance: Benefit from direct, one-on-one mentorship from seasoned

Month 3: Capstone Project & Deployment

Week 9: Project Kick-off & App Design

Comprehensive UI/UX Design: Define user flows, create wireframes, and develop high-fidelity mockups for an intuitive user experience.

Technical Architecture Planning: Design a robust app structure, including database schemas, API specs, and a scalable state management strategy.

Interactive Prototyping: Build testable prototypes to

Week 10: Core App Development & API Integration

Frontend Build & Core Functionality: Implement the primary UI in Flutter, building essential screens, navigation, and user interaction elements.

Backend Setup & API Connection: Configure backend services and establish secure, efficient communication between the frontend and backend.

Week 11: Advanced Features, Testing & Optimization

Implementing Advanced Functionality: Integrate complex features like real-time updates and refine state management for enhanced performance.

Thorough Testing & Debugging: Conduct rigorous unit, widget, and integration testing to identify bugs and optimize app performance.

Week 12 (Part 1): Deployment Preparation

App Icons & Splash Screens: Design and integrate high-quality icons and splash screens that meet platform requirements.

Build Release & Signing: Generate and digitally sign release builds (APK/IPA) for production.

App Store Listing & Metadata: Prepare compelling descriptions, screenshots, and privacy policies for submission.

Career Launchpad & Next Steps

Week 12 (Part 2): Final Project Presentation & Live Demo

Showcase Your Mastery: Present your capstone project, demonstrating your comprehensive skills in Flutter development, UI/UX design, data management, and backend integration.

Live Demonstration & Feedback: Conduct a live demo to instructors, peers, and industry guests. Engage in a Q&A session, receive constructive feedback, and articulate your design and technical decisions.

Future Enhancements & Career Opportunities

Embrace Continuous Innovation: Commit to continuous learning by staying updated with Flutter's roadmap, new Dart features, and emerging trends like mobile AI integration.

Diverse Career Trajectories: Your Flutter expertise opens doors to roles like Mobile App Developer, Frontend Engineer, and Cross-Platform

Career Development Workshops

- **Resume & Portfolio:** Craft impactful resumes and compelling portfolios to highlight your technical skills.
- **LinkedIn Optimization:** Enhance your profile to maximize visibility and expand your professional network.
- **Mock Interviews:** Practice technical and behavioral questions to build confidence and refine responses.

Networking Session

Connect directly with experienced professionals and hiring managers. Explore job openings, internships, and mentorship possibilities in the mobile development sector.

Contact for Opportunities

x@y.com

Graduation & Certification

Celebrate your achievement in a formal ceremony