



## 10-Week Curriculum

# **Week 1 -- Onboarding & OOP + SOLID**

- Introduce program, rules and communication.
  - OOP & SOLID
  -  **Reading:** *The Object-Oriented Thought Process*

## Week 2 -- Clean Architecture + Widget Tour

- Clean Architecture
  - Flutter Widget Catalog tour + playground app for new widgets
  -  **Problem Solving**

**Week 3 -- State Mgmt + DI + Networking**

- State management (Bloc / Cubit)
  - Dependency Injection
  - Networking & APIs (Dio/Retrofit + JSON Models + Error handling)
  - Demo: Small functional app applying All of these + Clean Architecture
  -  **Reading:** *Grokking Algorithms*

## Week 4 -- Git Workflow + Testing

- Branching strategies (GitFlow)
  - Pull Requests + Code Review best practices
  - Testing in Flutter (Unit, Widget, Integration) + Demo App
  -  **Problem Solving:** practice

**Week 5 -- CI/CD + Firebase + Analytics**

- CI/CD deep dive
  - Flavors & environment setup
  - Firebase Crashlytics + Analytics tools + Marketing tools (e.g. Sentry, Adjust, CleverTap, MoEngage, etc.)
  -  **Reading:** *لِأَنَّ الْأَعْمَالَ Inside Out*

## Week 6 -- Product Awareness + Theming + Caching + Maps

- Product mindset: "Code is just part of the picture" (session)
- Theming (Light/Dark modes, custom themes)
- Play with Maps
- Caching, Pagination, Secure & Refresh Token + demo app
-  **Problem Solving:** practice

## Week 7 -- Design Patterns + Native Basics

- Most important Design Patterns in Flutter
- Quick intro to Native Android Development + mini app
-  **Reading:** *Head First Design Patterns*

## Week 8 -- DS & Algorithms + More Topics in Flutter

- Data Structures & Algorithms study + practice
- Deep Linking, Payment, and Flutter Performance Optimization (DevTools: CPU Profiler, Memory, Frame rendering)
-  **Reading:** Continue *Head First Design Patterns*

## Weeks 9 & 10 -- Graduation Project

- Full graduation project applying everything learned
- Prepare presentation
- Wrap-up and feedback session
-  **Problem Solving:** practice

 By the end of this program, your level will be higher than most seniors in the market, and this is not a joke.