

Introduction to Mobile Development

Mobile Dev Guide · Module 1 of 8 · CHERIEDU Dev Series

1. The Mobile Landscape

There are 7 billion smartphones in the world. Mobile apps generate over \$500 billion in revenue annually. Learning mobile development opens doors to some of the most exciting and well-paying software roles.

2. Native vs Cross-Platform

Approach	Technology	Pros	Cons
iOS Native	Swift / SwiftUI	Best performance, full API access	Only works on iOS
Android Native	Kotlin / Jetpack	Best performance on Android	Only works on Android
Flutter	Dart (by Google)	One codebase, iOS + Android	Dart is less common
React Native	JavaScript (Meta)	Web devs can learn fast	Performance trade-offs
Kotlin Multiplatform	Kotlin	Share logic, native UI	Complex setup

3. CHERI SMS Mobile App Stack

- Flutter — for cross-platform iOS and Android app.
- Dart — programming language for Flutter.
- REST API — communicates with the ASP.NET backend.
- Firebase FCM — push notifications for parents, teachers, students.
- Secure local storage — for offline data caching.

4. Setting Up Your Development Environment

1. Install Flutter SDK: flutter.dev/docs/get-started/install
2. Install Android Studio (includes Android emulator).
3. Install VS Code with Flutter extension.
4. Run: flutter doctor (checks everything is set up correctly).
5. Create first app: flutter create my_school_app
6. Run on emulator: flutter run

5. Mobile Dev Career Paths

Role	Skills	Salary (India)
iOS Developer	Swift, SwiftUI, Xcode	16–18 LPA
Android Developer	Kotlin, Jetpack Compose	16–16 LPA
Flutter Developer	Dart, Flutter, Firebase	15–15 LPA
Mobile Architect	System design, all platforms	115–35 LPA

FIRST STEPS

Install Flutter and create your first app. Run `flutter create hello_school && cd hello_school && flutter run`. You will see a working counter app on your emulator in under 5 minutes.

