IONOXE
Upskill Certify Succeed

Ionoxe Tech

IONOXE
Upskill Certify Succeed

App Development

Week 1- 8 Curriculum

PROGRAM OUTLINE

Month 1 – Training Module: Get hands-on learning through live interactive sessions, technical workshops, and personalized guidance from industry professionals. (Registered students will receive secure login credentials to access sessions.) No prior technical background is needed to enroll.

Month 2 – Internship Module: Work on live industrial projects under expert supervision and gain exposure to real business challenges and modern workflows.

Project Phase 1: Each participant will complete 10 individual tasks crafted to build problem-solving and technical competence, guided by assigned mentors.

Project Phase 2 – Capstone Project: Work in a collaborative team of 10–12 interns on a large-scale industry project. Each intern will have defined responsibilities contributing to the group's overall success. All essential project data, tools, and materials will be supplied by IONOXE TECH SOLUTIONS.

Project Overview

The **8-Week App Development Internship** is designed to provide **hands-on, industry-oriented training** in **mobile application development** using modern frameworks and tools.

This program guides interns through the complete **app development lifecycle** — from design and prototyping to coding, integration, testing, and deployment. Participants will gain expertise in **Android (Java/Kotlin)** and **cross-platform development (Flutter / React Native)** while learning real-world best practices.

By the end of this internship, participants will be capable of developing and deploying **fully functional mobile applications**.

Week 1: Introduction to App Development & Android Studio

Topics to Learn

- Overview of mobile App Development
- Understanding Android ecosystem & architecture
- Setting up Android Studio and SDK tools
- Basics of XML layout design

Practical Tasks

- Install Android Studio & configure environment
- Build a “Hello World” mobile app
- Design a basic login page layout

Tools

- Android Studio
- XML
- Java

IONOXE
Upskill Certify Succeed

Week 2: UI & UX Design

Topics to Learn

- Layouts: Linear, Relative, Constraint
- Working with resources (colors, styles, themes)
- UI/UX principles for mobile
- Introduction to Material Design

Practical Tasks

- Create responsive layouts for mobile screens
- Design a registration from with validations
- Customize UI components using Material Design

Tools

- Android Studio
- XML
- Figma

2 Minor Projects on Week 1

IONOXE
Upskill Certify Succeed

Week 3: Java for Android

Topics to Learn

- Core Java concepts
- Activity lifecycles
- Handling user inputs and events
- Toasts, snackbar and Dialog boxes

Practical Tasks

- Build an app with multiple screens
- Pass data between screens using intents
- Implement interactive UI components

Tools

- Android Studio
- Java

2 Minor Projects on Week 2

Week4: Data Storage & API'S

Topics to Learn

- SALite and Room Database
- Shared preference
- Consuming REST API'S using Retrofit/Volley
- JSON parsing and network calla

Practical Tasks

- Create a local database app
- Connect app to external API and fetch live data
- Display fetched data in RecycleView

Tools

- Android Studio
- Retrofit
- Room Database
- JSON

2 Minor Projects on Week 3

IONOXE
Upskill Certify Succeed

IONOXE
Upskill Certify Succeed

Week5: Firebase Integration & Authentication

Topics to Learn

- Introduction to Firebase
- Firebase Authentication
- Realtime Database/ Firestore basics
- Firebase Cloud Storage

Practical Tasks

- Integrate Firebase authentication
- Create Login/Signup using Firebase
- Store user data and retrieve it from Firestore

Tools

- Firebase
- Android Studio

2 Minor Projects on Week 4

IONOXE
Upskill Certify Succeed

Week 6: Advanced App Features

Topics to Learn

- Push Notifications
- Background tasks & Services
- Permissions handling
- Integrating maps, camera and Sensor API’S

Practical Tasks

- Add push notification support
- Build an app with camera access or location tracking
- Handle permission dynamically

Tools

- Firebase
- Google Maps API’S
- Android studio

2 Minor Projects on Week 5

Week 7&8: Testing, Debugging & Optimization

Topics to Learn

- App Testing & debugging tools
- Logcat and android profiler
- App performance optimization
- UI testing and version control with GitHub

Practical Tasks

- Test app on emulator and physical device
- Debug common runtime errors
- Optimize app size and speed

Tools

- Android Studio
- GitHub
- Emulator

2 Minor Projects on Week 6

🎯 Learning Outcomes

By the end of this internship, participants will:

- ✅ Understand the full Android app development lifecycle
- ✅ Design responsive, user-friendly mobile interfaces
- ✅ Work with APIs, databases, and Firebase integration
- ✅ Test, debug, and deploy Android apps
- ✅ Be ready for roles like **Mobile App Developer**, **Android Developer**, or **Flutter Developer**

.

⚙️ Tools & Technologies

Android Studio | Java | Kotlin | XML | Firebase | REST API | JSON | GitHub | Figma