ANDROID APPS DEVELOPMENT

By:

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Week 1: Kotlin basics

Take your first steps programming in Kotlin, add images and text to your Android apps, and learn how to use classes, objects, and conditionals to create an interactive app for your users.

Introduction to Kotlin
Learn to code in Kotlin, a modern programming language that makes coding clear and accessible.

Create your first app
Learn to create Android apps using Android Studio in this introductory pathway.

Build a basic layout
Learn how to add images and text to your Android apps.

Add a button to an app
Learn how to use classes, objects, and conditionals to create an interactive app for your users.

Week 2: Layouts

Build two different apps, and improve the user interface of your app by learning about layouts, Material Design guidelines, and best practices for UI development.

Get user input in an app: Part 1
Create a tip calculator app by building the layout first and then implementing the logic to calculate the tip from the user input.

Get user input in an app: Part 2
Add visual polish to the Tip Calculator app using Material Design guidelines.

Week 3: Navigation 1

Display a scrollable list
Create an app that displays a scrollable list of inspiring text and images using the RecyclerView widget in Android.

Navigate between screens
Add another screen to an app by adding a second activity, and use an intent to navigate to it. Also, learn the basics of the activity lifecycle as you navigate into and out of different activities.

Week 4: Navigation 2

Enhance your users' ability to navigate across, into and back out from the various screens within your app for a consistent and predictable user experience.

Introduction to the Navigation component
Learn about the Navigation Architecture Component in Android Jetpack, which provides a framework for building in-app navigation.

Architecture components
Learn how to use Android Jetpack Architecture components, a collection of libraries that help you design robust, testable, and maintainable apps.

Week 5: Navigation 3

Advanced navigation app examples
Combine everything you've learned in this unit about navigation, ViewModel, data binding, and LiveData by building a more advanced app that also includes custom back stack behavior.

Week 6: Connect to the internet1

Write coroutines for complex code, and learn about HTTP and REST to get data from the internet. Then, use the Coil library to display images in your app.

Get data from the internet
Retrieve and display images over the internet with HTTP and REST.

Week 7: Connect to the internet2

Coroutines
Write code for more advanced and complex Android apps.

Week8: Data persistence

Keep your apps working through any disruptions to essential networks or processes for a smooth and consistent user experience.

Introduction to SQL, Room, and Flow
Learn the basics of reading and manipulating data with SQL, and how to create and use relational databases in an Android app with the Room library.

Week9: Data persistence 2

Use Room for data persistence
Use the Room library to allow your apps to read and write from a database.

Week 10: Work Manager

Use Android Jetpack's Work Manager API to schedule necessary background work, like backing up data or downloading fresh content, that keeps running even if the app exits or the device restarts.

Schedule tasks with Work Manager
Learn when and how to use Work Manager, an API that handles background work that needs to run regardless of whether the application process is still running.

Week 11-12: Project Preparation