Android Basics and Introduction to kotlin

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What are Android Study Jams?

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Android
Basics

Learn the basics of building Android apps with the Kotlin programming language and develop a collection of simple apps to start your journey as an Android developer!

Pre-requisites

- Basic computer literacy
- Basic math skills

Curriculum used

[Android Basics in Kotlin Course](#)

Note: If you already know how to program, you can start off with [Kotlin Koans](#) exercises to become familiar with Kotlin syntax and language features, and skip the first pathway of Unit 1 of the course [Android Kotlin Fundamentals.](#)

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Android Basics

What will you learn?

1   **Introduction to Kotlin**

Learn to code in <u>Kotlin</u>, a modern programming language that helps developers be more productive.

(1 hour)

2   **Create your first Android app**

Learn to <u>create and run your first Android app</u> in Android Studio.

(2 hours)

3   **Build a basic layout**

Learn the basics of <u>layouts</u> in Android by creating your very own birthday card app!

(1 hour)

4   **Add a button to an app**

Learn how to use <u>classes, objects, and conditionals</u> to create an interactive dice roller app.

(3 hours)

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Android Basics

What will you learn?

5 **Get user input**

Learn how to get user input within an app by building a tip calculator app.

(3 hours)

6 **Display a scrollable list**

Learn how to display a list of text and images in an app.

(2 hours)

7 **Navigate between screens**

Add another screen to your app by adding a second activity.

(2 hours)

8 **Intro to Navigation Component**

Learn how the Jetpack Navigation component makes it easier to manage navigation within your app.

(1 hour)

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Android Basics

What will you learn?

9 **Architecture Components**
Learn <u>good app architecture</u> principles by building a game app to unscramble words.
(2 hours)

10 **Advanced navigation examples**
Combine what you've learned so far in a <u>more advanced app</u> that demonstrates navigating between multiple screens.
(2 hours)

11 **Coroutines**
Write code for more advanced and complex Android apps.
(1 hour)

12 **Get and display data from the internet**
Retrieve and display images over the internet with HTTP and REST.
(1 hour)

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Android
Basics

What will you learn?

13 **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.
(2 hours)

14 **Use Room for data persistence**
Use the Room library to allow your apps to read and write from a database.
(1 hour)

15 **Schedule tasks with WorkManager**
Learn when and how to use WorkManager, an API that handles background work that needs to run regardless of whether the application process is still running.
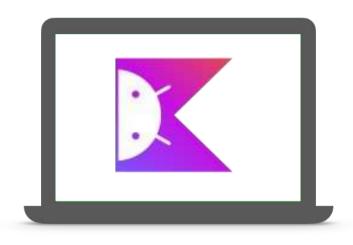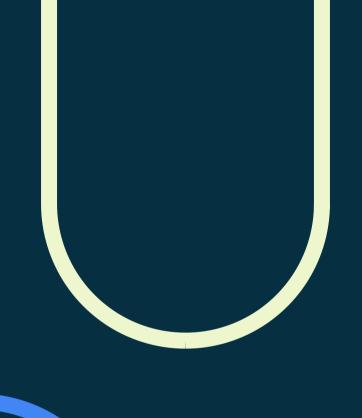**(1 hour)**

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Equipment needed for each student

o   Computer

o   Internet connection

o   (Optional) Github (Link to Learn)

o   (Optional) Android device & USB cable

o   Android Studio

Note: Android Studio takes some time to download and configure. Instructions are linked here.

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Join the Whatsapp group

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So Let's Start!!

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