

BÀI TẬP ANDROID

HỒ VĨ KHÁNH – 22520633

The screenshot shows the hextree.io website with a dark theme. On the left is a sidebar menu with options: Overview, Explore Map (selected), Web Security, Android, Hardware Hacking, YouTube Map, Leaderboard, Account, Subscription, and Logout. The main area displays a hexagonal grid of course tiles under the heading 'ANDROID' and 'COMPLETED COURSES 12/12'. Each tile represents a course and includes a checkmark indicating completion. The courses are: Your First Android App, Research Device & Emulator Setup, Network Interception, Reverse Engineering Android Apps, Dynamic Instrumentation, Intent Attack Surface, Android WebViews, Content- and FileProvider, Android (Insecure) Storage, Android Permissions, Broadcast Receivers, and Android Services. A small 'LAST' tile for 'Intent Attack Surface' is also visible. The top right corner shows the user profile 'HoVikhanh' with a 'Free account' status and the ID '22520633'. The bottom left of the page has a URL: <https://app.hextree.io/map/android/android-continent>.

The screenshot shows the 'Unit 1: Your first Android app' page from the 'Android Basics with Compose' course. The page has a dark header with navigation links: Developers, Essentials, Design & Plan, Develop, Google Play, and Community. A search bar and language selector (English) are also present. The main content area features three pathways, each with a circular icon, a 'COMPLETED' status, a 100% progress bar, and a title: 'Introduction to Kotlin', 'Set up Android Studio', and 'Build a basic layout'. Each pathway includes a brief description of the learning objectives. A Google account overlay is visible on the right side of the page, showing the user's profile picture, name 'Hi, Khánh!', and options to 'Manage your Google Account', 'Switch account', or 'Sign out'. The bottom left of the page has a URL: <https://developer.android.com/courses/android-basics-compose/unit-1#>.

Developers

Essentials ▾Design & Plan ▾Develop ▾Google PlayCommunity

Search /

English ▾Android Studio

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ANDROID BASICS WITH COMPOSE

Unit 2: Building app UI

Continue learning the fundamentals of Kotlin, and start building more interactive apps.

PATHWAY 1




COMPLETED100%

Kotlin fundamentals

Learn more fundamentals of Kotlin, object-

<https://developer.android.com/courses/android-basics-compose/unit-2#nhvtae>


PATHWAY 2



COMPLETED100%

Add a button to an app

PATHWAY 3



COMPLETED100%

Interact with UI and state

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ANDROID BASICS WITH COMPOSE

Unit 3: Display lists and use Material Design

Build apps that display a list of data and learn how to make your apps more beautiful with Material Design.

PATHWAY 1




COMPLETED100%

More Kotlin

<https://developer.android.com/courses/android-basics-compose/unit-3#>


PATHWAY 2



COMPLETED100%

Build a scrollable list

PATHWAY 3



COMPLETED100%


Build beautiful apps

ANDROID BASICS WITH COMPOSE

Unit 4: Navigation and app architecture

Learn the best practices of app architecture to build more complex apps. 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.

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PATHWAY 1




COMPLETED 100%

Architecture Components

Learn about app architecture and how to use Jetpack Compose to build more complex apps with more

PATHWAY 2




COMPLETED 100%

Navigation in Jetpack Compose

Learn how to use the Navigation component to build more complex apps with more

PATHWAY 3



COMPLETED 100%


Adapt for different screen sizes

In this pathway, you'll learn how to adapt your app to different screen sizes and provide a

Unit 5: Connect to the internet

Use Kotlin coroutines to perform multiple tasks at once, and learn about HTTP and REST to get data from the internet using Retrofit. Then use the Coil library to display images in your app.

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PATHWAY 1

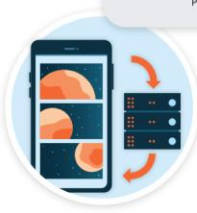


COMPLETED 100%

Get data from the internet

Learn how to use Kotlin coroutines to perform multiple tasks at once, and learn about HTTP and REST to get data from the internet using Retrofit. Then use the Coil library to display images in your app.

PATHWAY 2



COMPLETED 100%

Load and display images from the internet

Learn how to use Kotlin coroutines to perform multiple tasks at once, and learn about HTTP and REST to get data from the internet using Retrofit. Then use the Coil library to display images in your app.

Developers

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Unit 6: Data persistence

Learn how to store data locally on the device and keep your apps working through any network disruptions for a smooth and consistent user experience.

PATHWAY 1

COMPLETED

100%

Introduction to SQL

Learn how to use SQL to read and manipulate data in a relational database.

PATHWAY 2

COMPLETED

100%

Use Room for data persistence

Use the Room library to easily create and use relational databases in an Android app.

PATHWAY 3

COMPLETED


100%

Store and access data using keys with DataStore

Learn how to store simple, key-value pair data with Preferences DataStore in an Android app.

<https://developer.android.com/courses/android-basics-compose/unit-6#>

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Unit 7: WorkManager

Use Android Jetpack's WorkManager API to schedule necessary background work, such as data backups or fresh content downloads, that keeps running even if the app exits or the device restarts.

PATHWAY 1

COMPLETED


100%



Schedule tasks with WorkManager

<https://developer.android.com/courses/android-basics-compose/unit-7#> rkManager, an API that handles background

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Unit 8: Compose with Views

Learn how to use Compose and the older UI toolkit based on Views side-by-side in the same app. In this unit you will learn interoperability APIs and best practices to add a new feature to an existing app in Views, use an existing library that uses Views, or use a UI component that is not yet available in Compose.

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PATHWAY 1



COMPLETED

100%

Android Views and Compose in

Views

PATHWAY 2



COMPLETED

100%

Views in Compose