Creating Your First Android App

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Overview

Create and Deploy Your First Android App

- How to create a new Android project?

- How to build and install your Android app?

- How to display feedback to a user?

Demo

Creating Your Android App

– Create a new Android Studio project

– Deploy the project to an Android emulator

How Is an Android App Built?

How Is an Android App Built?

Gradle

Android Gradle Plugin

Android Manifest

Gradle

Gradle is a build tool used to build and configure a variety of programming language and frameworks.

Gradle tasks manage all build steps

Run Gradle tasks using the Gradle Wrapper
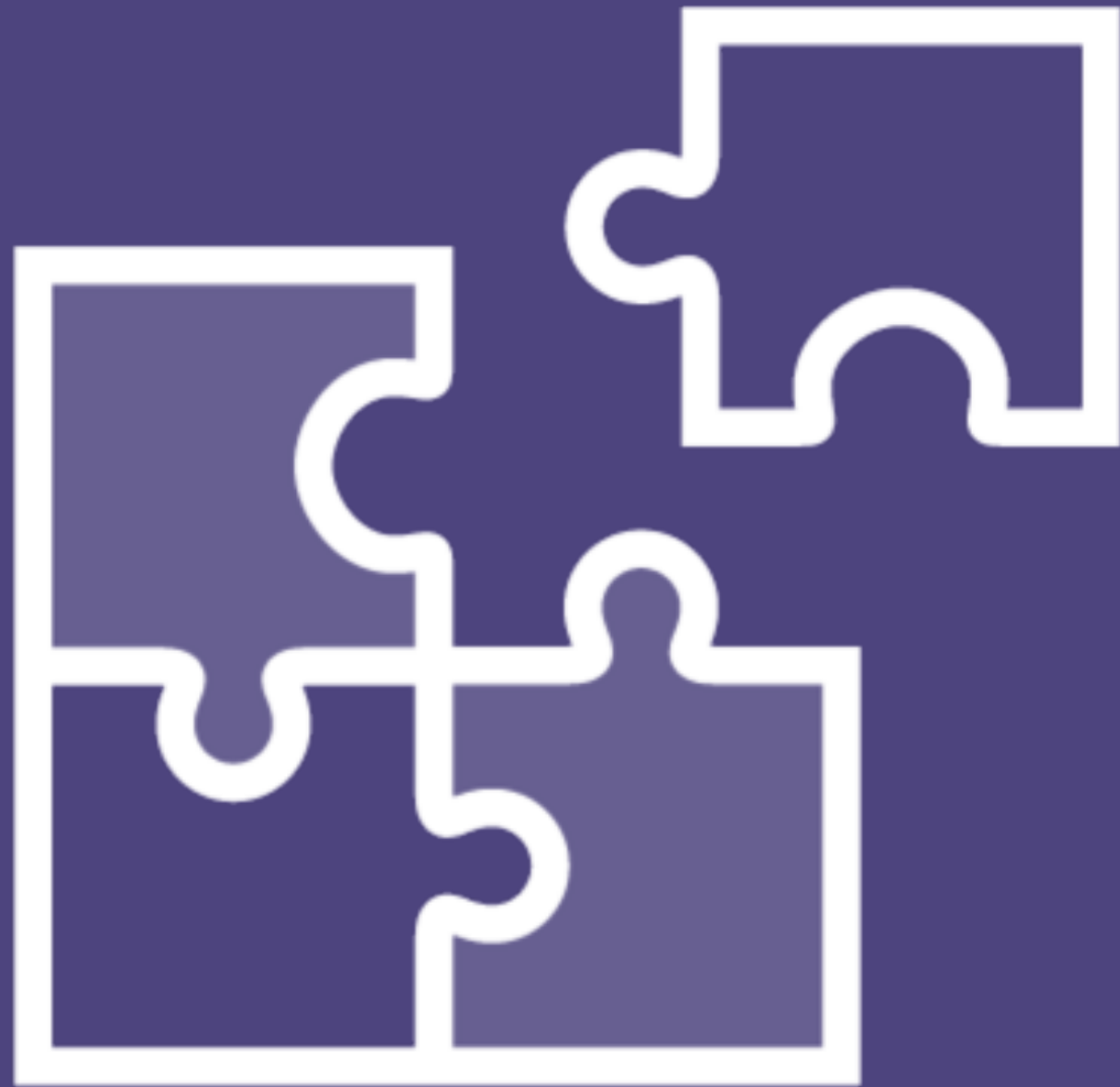
- ./gradlew <task name>

Gradle project structure

- Root project
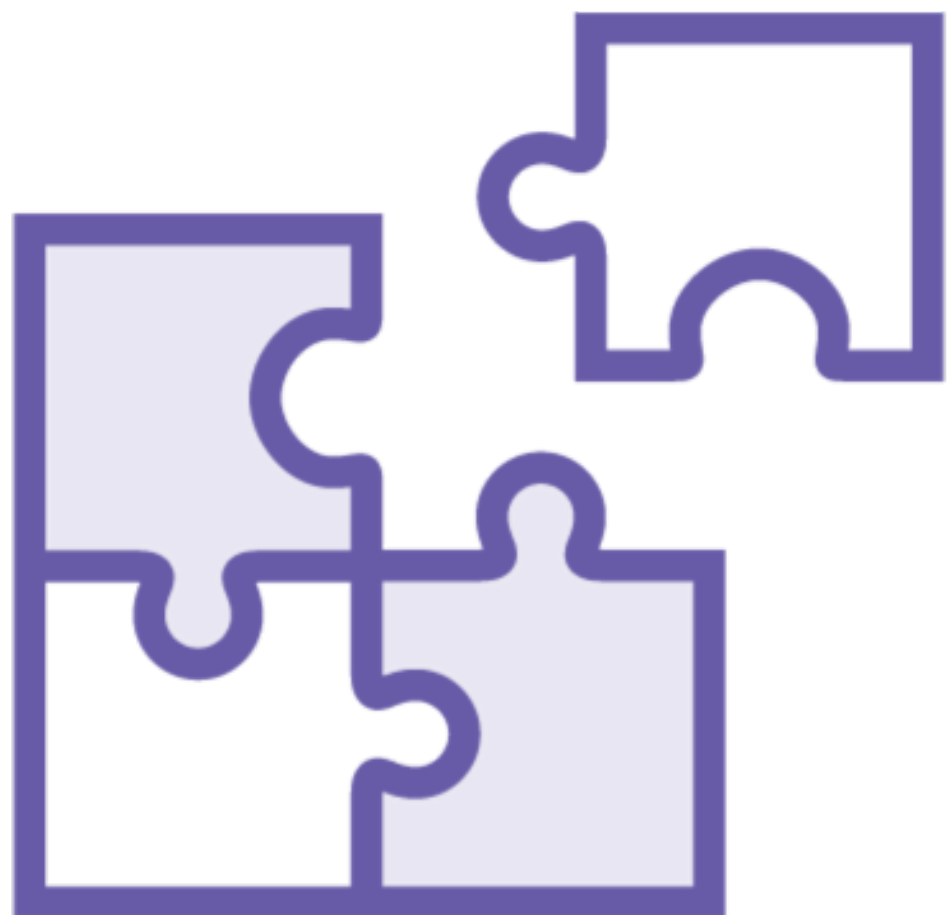
- One, or many, Gradle modules

Gradle files in a new Android Studio project

- settings.gradle

- build.gradle

- app/build.gradle

Android Gradle Plugin

A Gradle build plugin which provides tasks and configuration settings specific to building Android projects

Provides Gradle tasks for Android

- Compilation

- Packaging the .apk

- Testing and linting

Configures important app settings

- minApi

- targetApi

- Build variants

Android Manifest

Describes important app details to the Gradle build tools, the Android operating system, and to Google Play

Defines important app metadata

– App name

– Package name

– Permissions

Declares app components

Android App Components

Activities	**Services**
Broadcast receivers	**Content providers**

Android App Components

Activities	**Represents a user interface**
Services	**Performs long-running background tasks**
Broadcast receivers	**Receives and responds to system events**
Content providers	**Manages shareable app data**

Android App Components

Activities

Entry point for user interaction

Defines the screen's layout

Manages user interaction and feedback

One, or many, Activities within an app

./gradlew assembleDebug

Build Your App from the Command Line

Run your Gradle build tasks from the command line

./gradlew installDebug

Install Your App from the Command Line

Build and install your app from the command line

:app:assembleDebug

Run Your App from Android Studio

Which Gradle tasks are run when Android Studio runs your app?

Demo

Building Your App

- Explore the Android Studio project structure

- Customize build files

- Update app name

- Build and deploy your app from the command line

Demo

Displaying User Feedback

– Update the app layout

– Respond to user interaction

– Display feedback

Summary

Deploying Your First Android App

- Created a new Android Studio project

- Built and deployed your app

- Updated your app to respond to user interaction and display feedback

Creating Your First Android App

Consider your own app

- How will you display information on the screen?

- What kinds of user interaction are required?

- What kinds of user feedback are required?

Layouts

Interactions

Feedback