Table of Contents

Preface

Part 1 – Introduction

Chapter 1: Getting Started with Clean Architecture

Technical requirements

The architecture of a legacy app

Legacy analysis

Software design principles

SOLID principles

Component cohesion principles

Component coupling principles

Exploring the evolution of Android

Fragments

The Gradle build system

Networking

Humble objects

Functional paradigms

Kotlin adoption

Dependency injection

Android architecture components

Coroutines and flows

Jetpack Compose

Enter clean architecture

Summary

Chapter 2: Deep Diving into Data Sources

Technical requirements

Understanding Kotlin coroutines and Flows

Kotlin coroutines

Exercise 02.01 – Using Kotlin coroutines

Kotlin Flows

Exercise 02.02 – Using Kotlin Flows

Using OkHttp and Retrofit for networking

Exercise 02.03 – Using OkHttp and Retrofit

Using the Room library for data persistence

Exercise 02.04 – Using Room to persist data

Understanding and using the DataStore library

Exercise 02.05 – Using DataStore to persist data

Summary

Chapter 3: Understanding Data Presentation on Android

Technical requirements

Analyzing lifecycle-aware components

Exercise 3.1 – Using ViewModel and LiveData

Using Jetpack Compose to build UIs

Exercise 3.2 – Navigating using Jetpack Compose

Summary

Chapter 4: Managing Dependencies in Android Applications

Technical requirements

Introduction to DI

Using Dagger 2 to manage dependencies

Using Hilt to manage dependencies

Exercise 04.01 – Using Hilt to manage dependencies

Summary

Part 2 – Domain and Data Layers

Chapter 5: Building the Domain of an Android Application

Technical requirements

Introducing the app's architecture

Creating the domain layer

Exercise 05.01 – Building a domain layer

Summary

Chapter 6: Assembling a Repository

Technical requirements

Creating the data layer

Creating repositories

Exercise 06.01 – Creating repositories

Summary

Chapter 7: Building Data Sources

Technical requirements

Building and using remote data sources

Exercise 07.01 – Building a remote data source

Building and integrating local data sources

Exercise 07.02 – Building a local data source

Summary

Part 3 – Presentation Layer

Chapter 8: Implementing an MVVM Architecture

Technical requirements

Presenting data in Android applications

Presenting data with MVVM

Exercise 08.01 – Implementing MVVM

Presenting data in multiple modules

Exercise 08.02 – Multi-module data presentation

Summary

Chapter 9: Implementing an MVI Architecture

Technical requirements

Introducing MVI

Implementing MVI with Kotlin flows

Exercise 09.01 – Transitioning to MVI

Summary

Chapter 10: Putting It All Together

Technical requirements

Inspecting module dependencies

Exercise 10.01 – Reduce dependencies

Instrumentation testing

Exercise 10.02 – Instrumented testing

Summary

Other Books You May Enjoy

Support Sign Out

©2022 O'REILLY MEDIA, INC. TERMS OF SERVICE PRIVACY POLICY