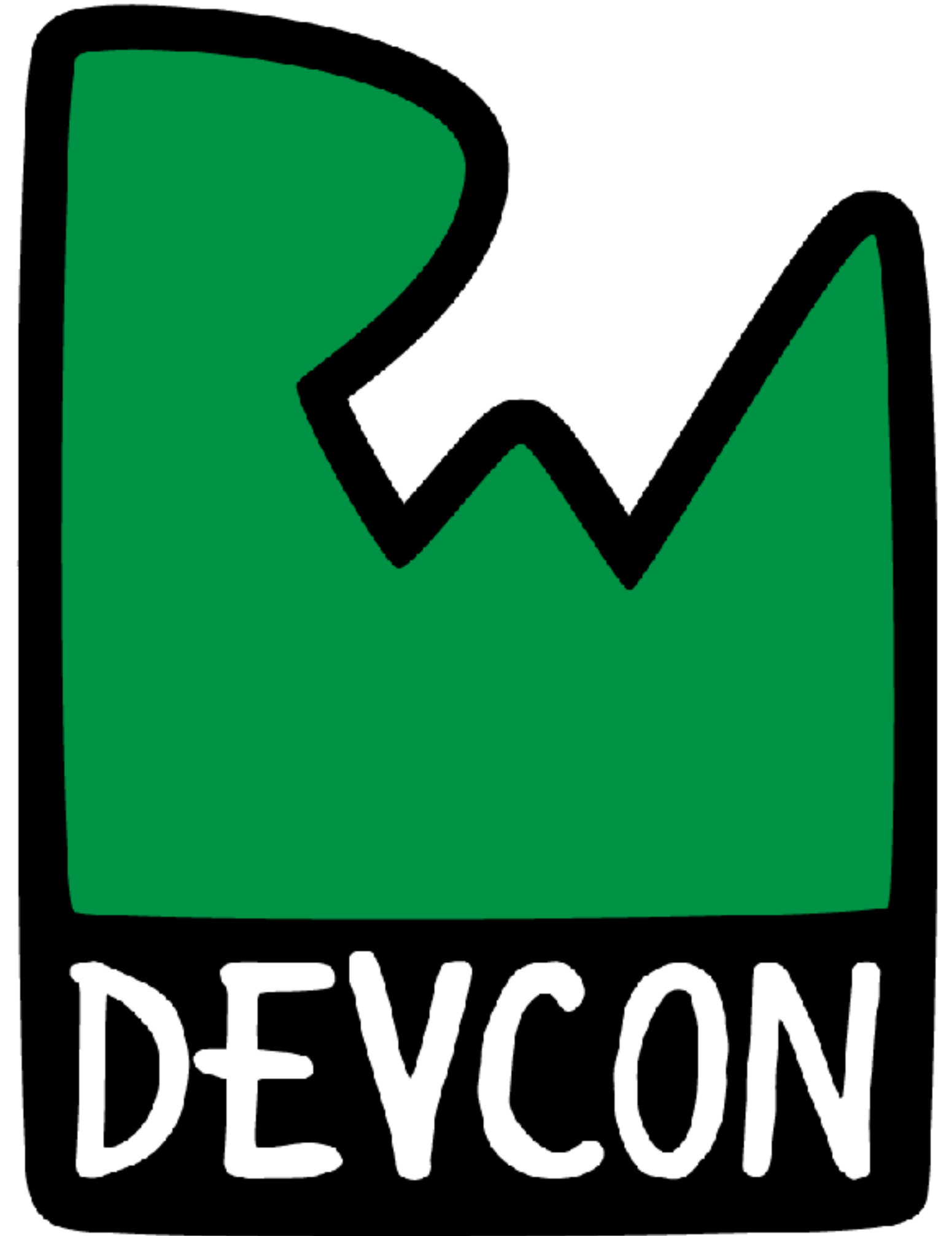


Session 12: Clean Architecture on Android



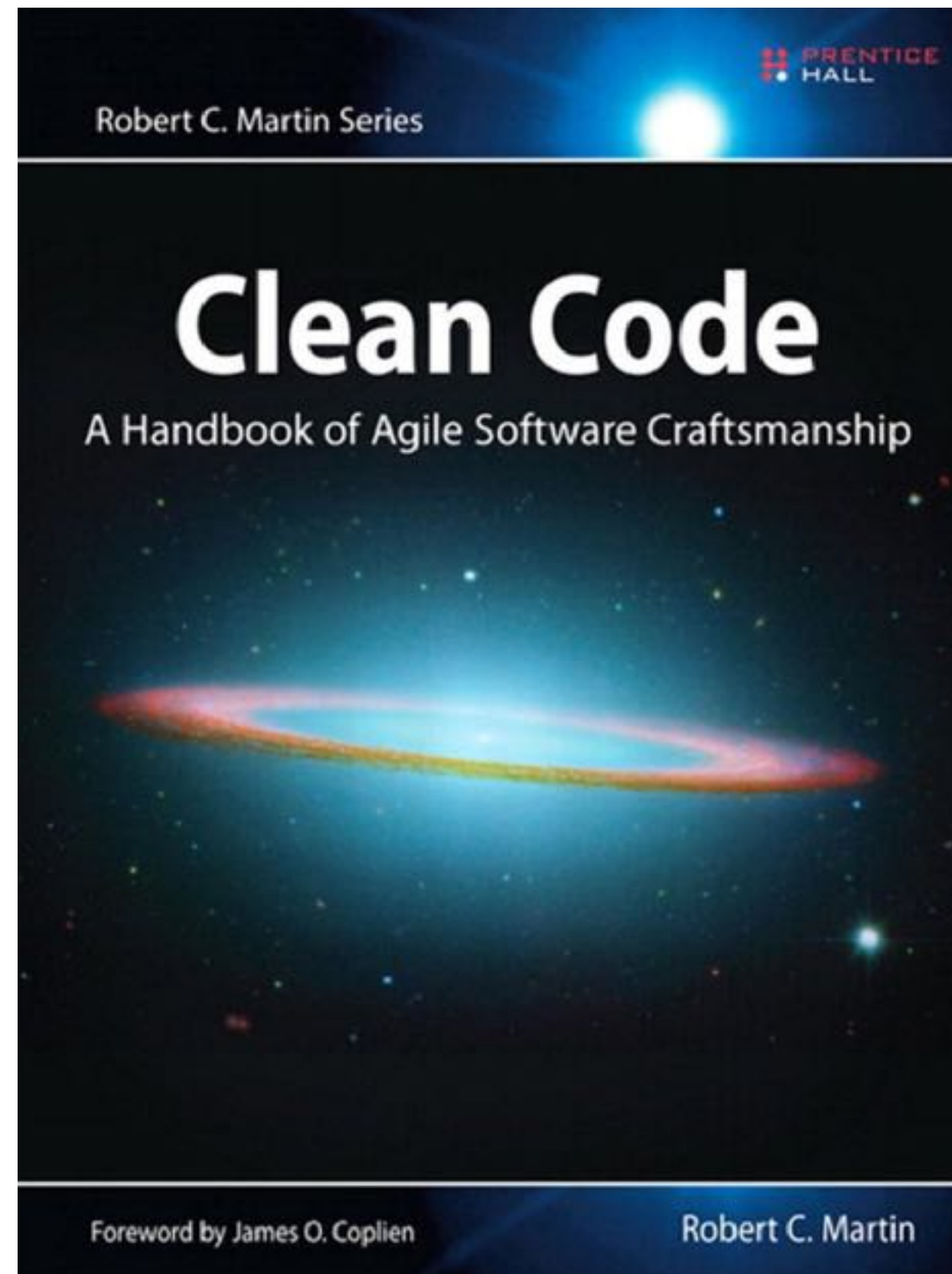
THEORY & APP STRUCTURE

Clean Architecture on Android Outline

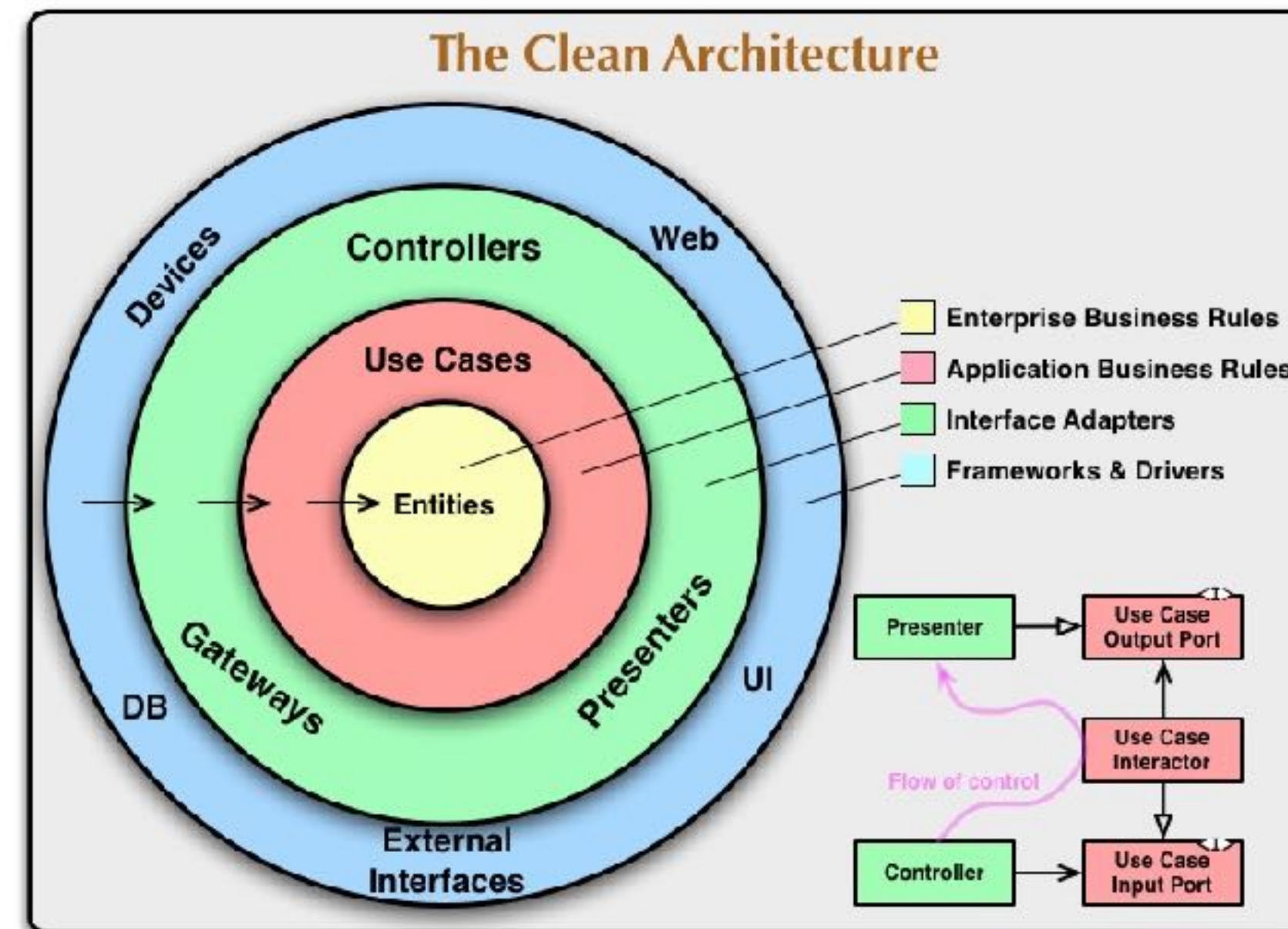
- ⚙ Demo 1:
Theory & App Structure
- ⚙ Demo 2:
New Use Case - Domain & Data
- ⚙ Demo 3:
New Use Case - Presentation & UI



THE CLEAN ARCHITECTURE

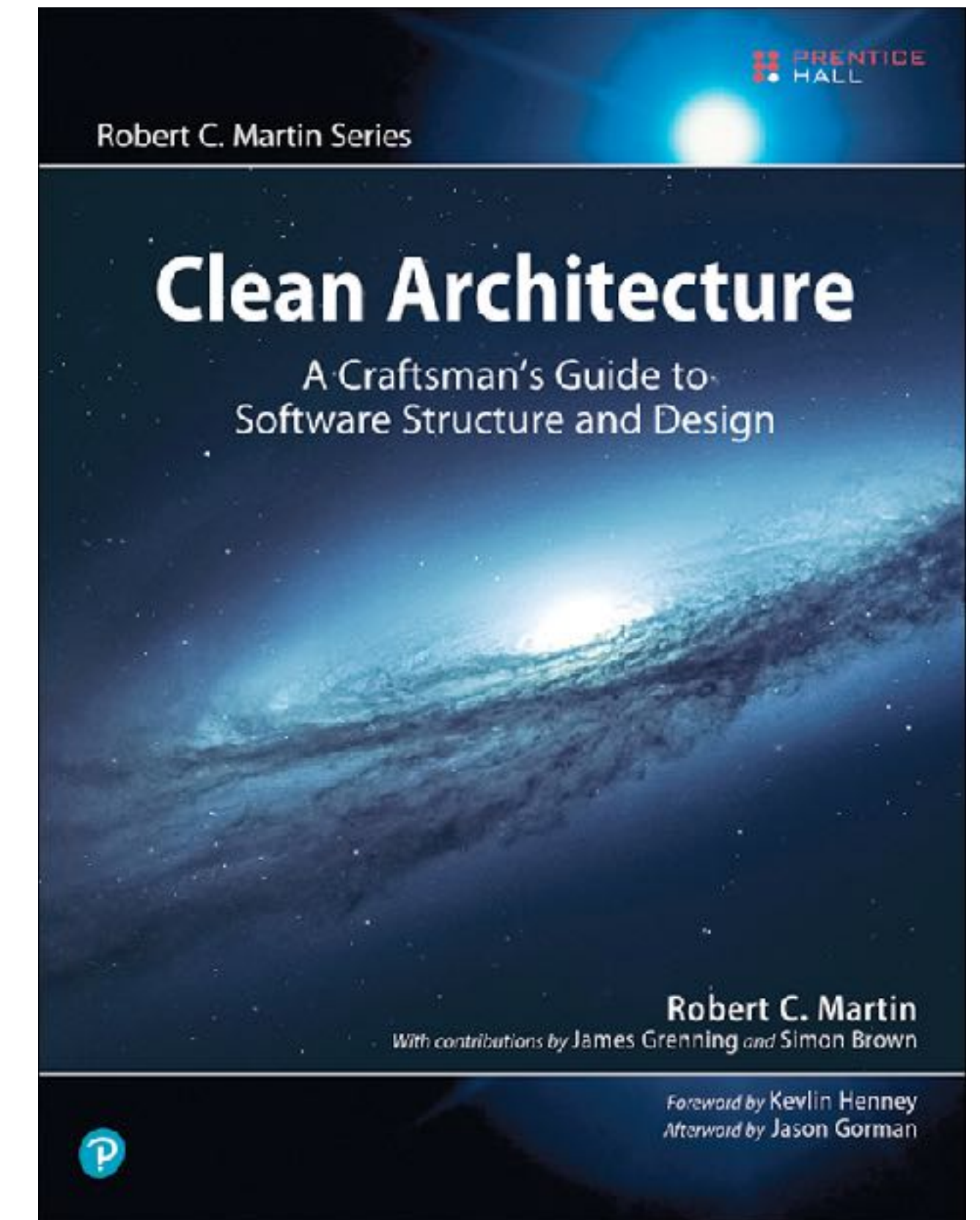


2008



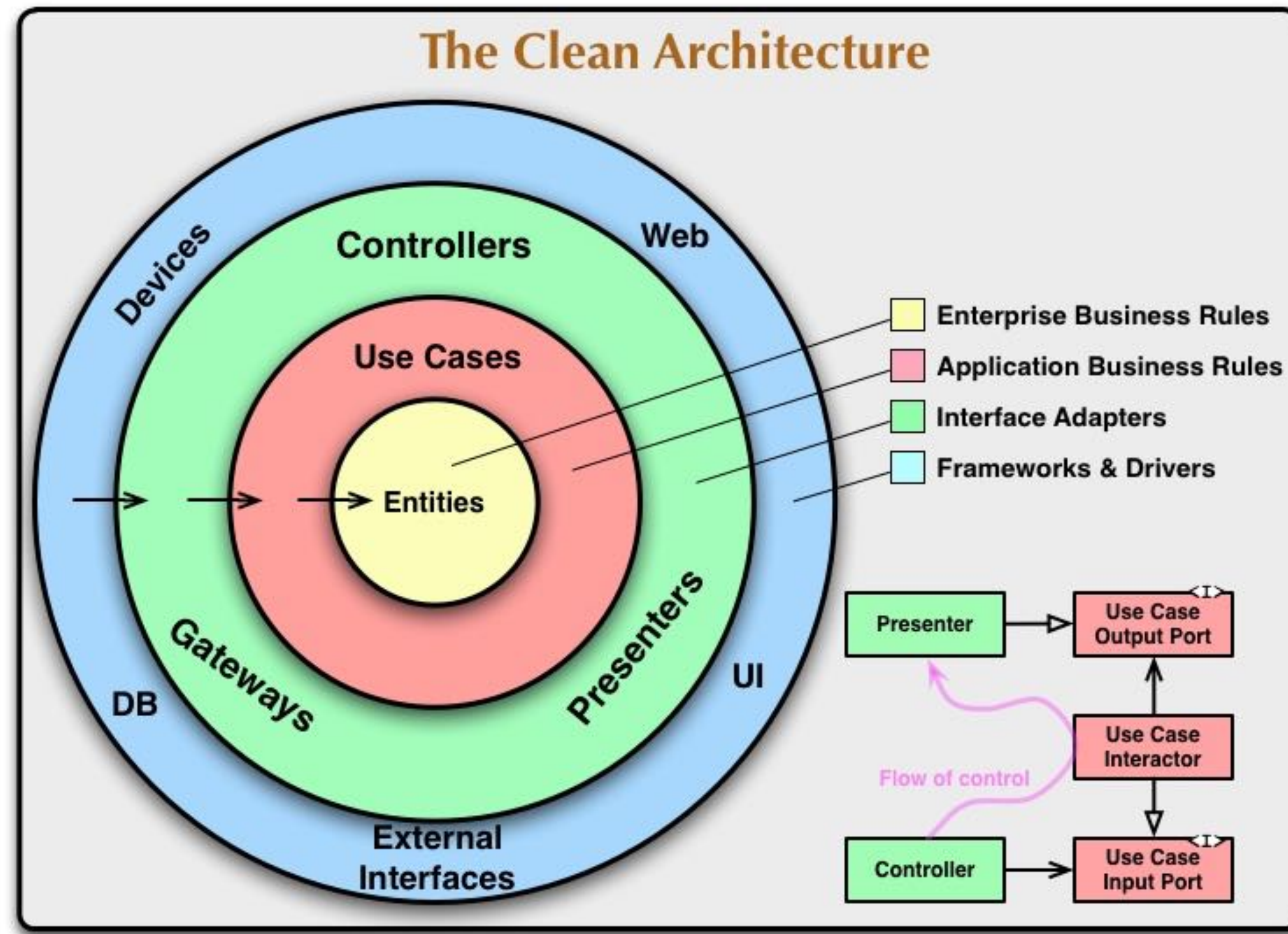
13 Aug 2012

<http://bit.ly/2a1px8t>



2017

THE CLEAN ARCHITECTURE



<http://bit.ly/2a1px8t>

GOALS & PRINCIPLES OF CLEAN ARCHITECTURE

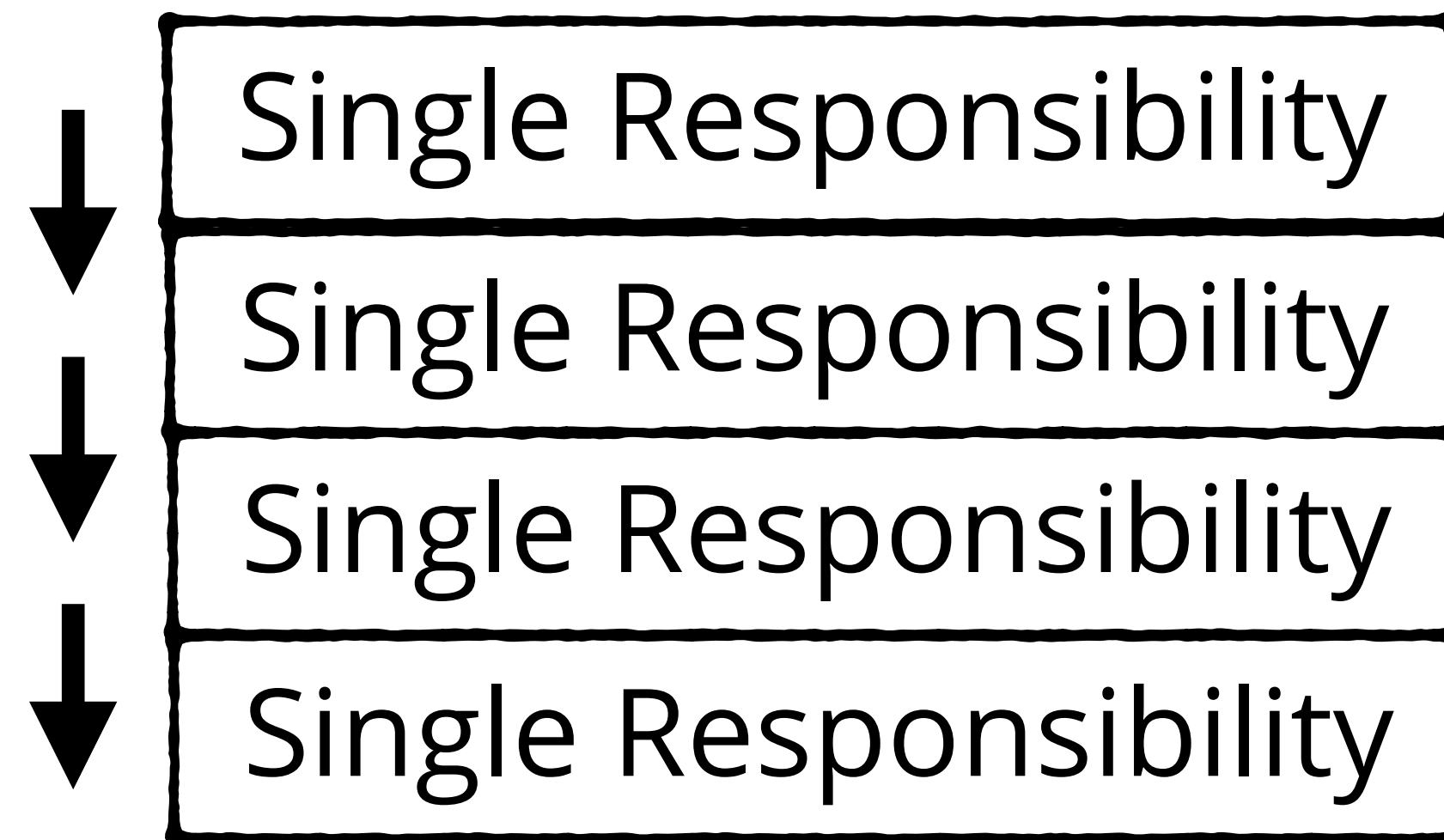
- ⚙ Develop-ability
- ⚙ Deployability
- ⚙ Maintainability
- ⚙ Testability
- ⚙ Deferability

- ⚙ Single Responsibility
- ⚙ Components
- ⚙ Boundaries
- ⚙ Dependency Inversion



PRINCIPLES OF CLEAN ARCHITECTURE (CONTINUED)

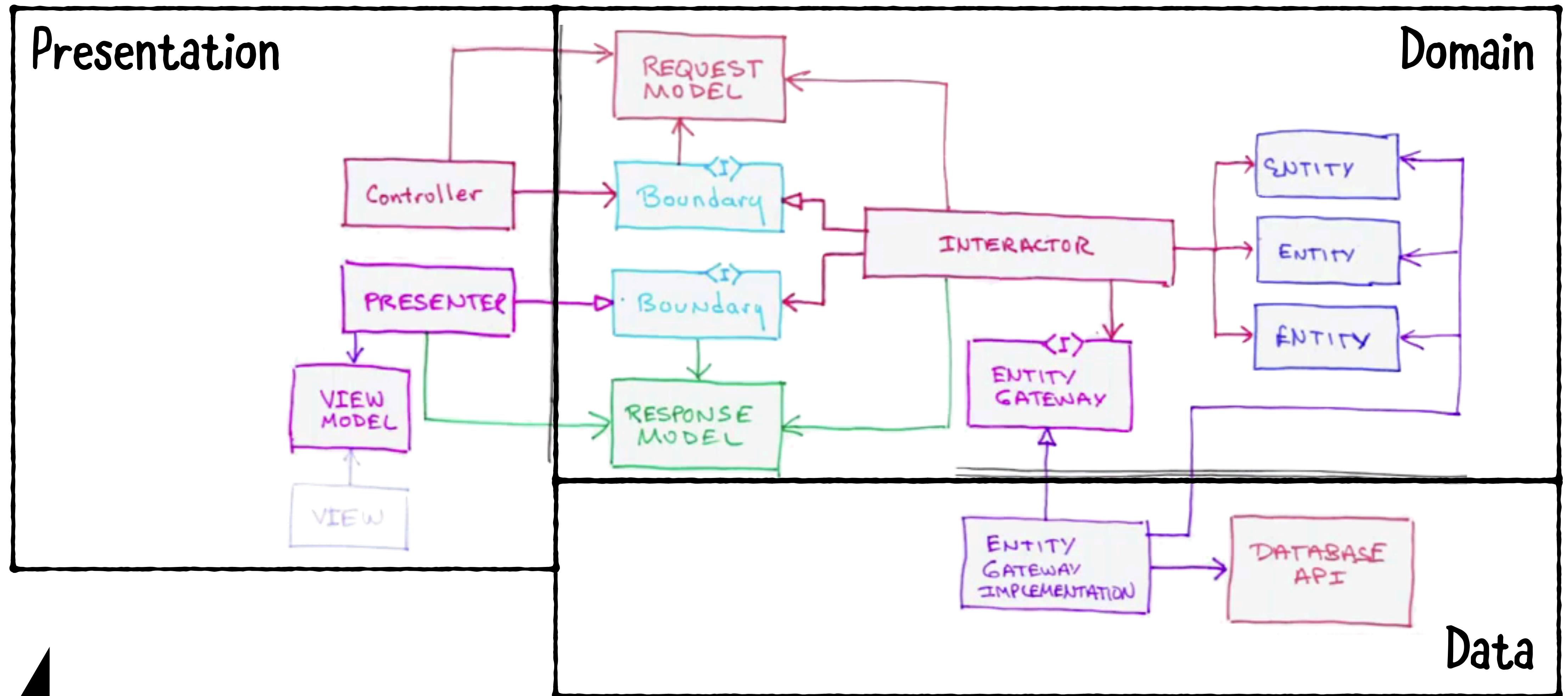
Dependency
Inversion



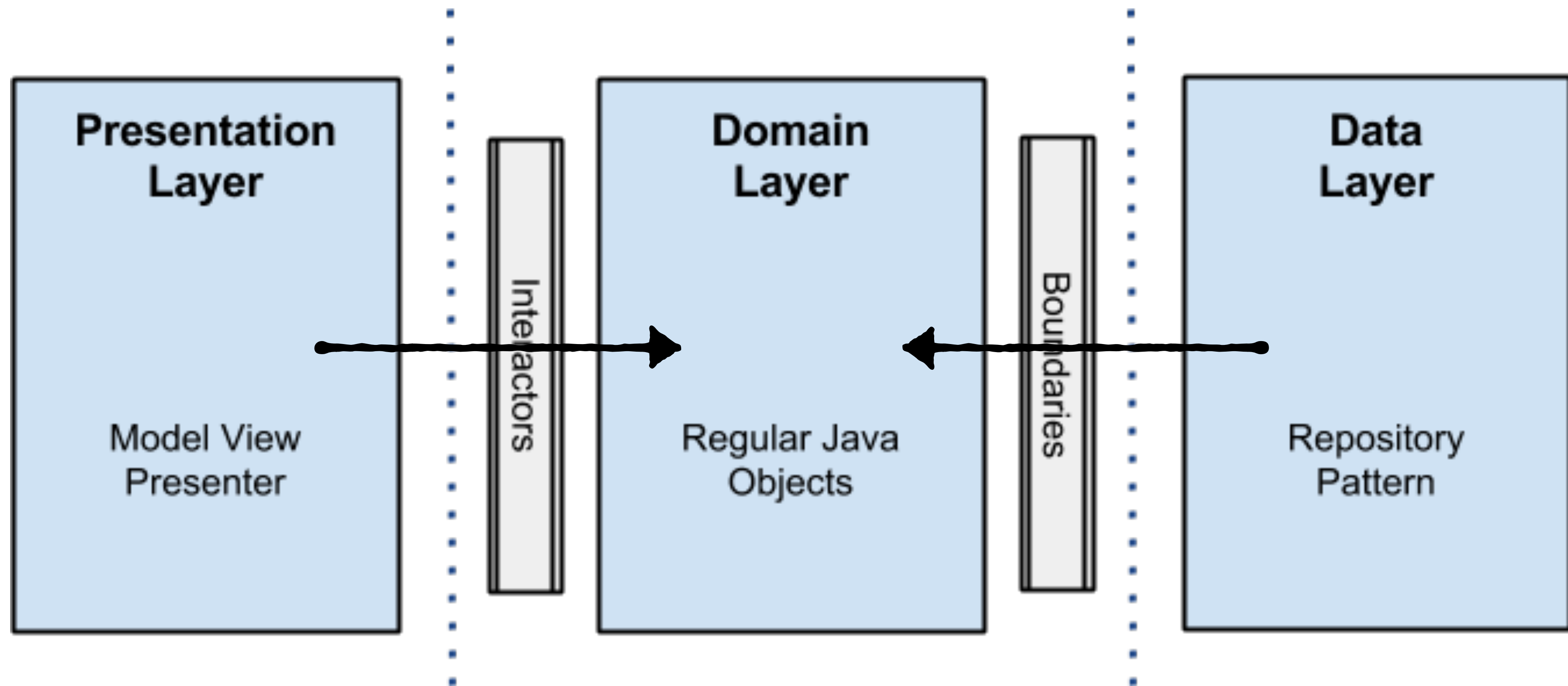
Component
Component
Component
Component

w/ Boundaries

UNCLE BOB CLEAN ARCHITECTURE DESIGN

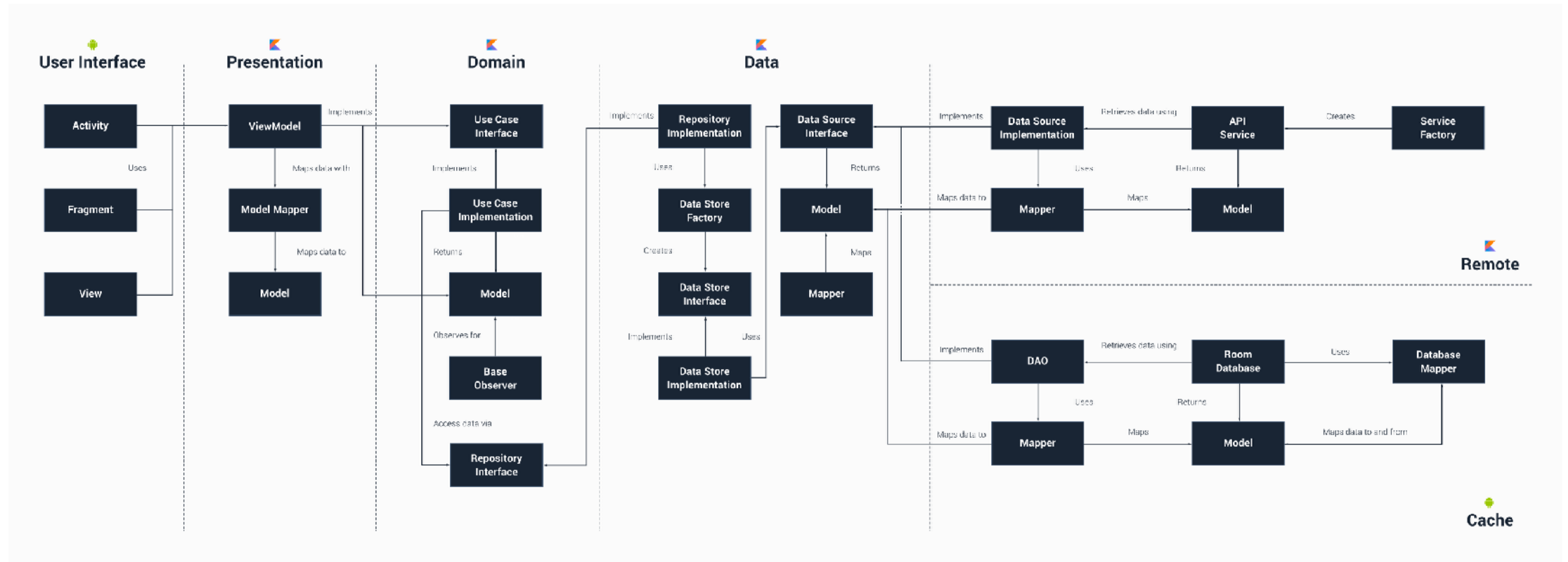


“ARCHITECTING ANDROID..THE CLEAN WAY?”



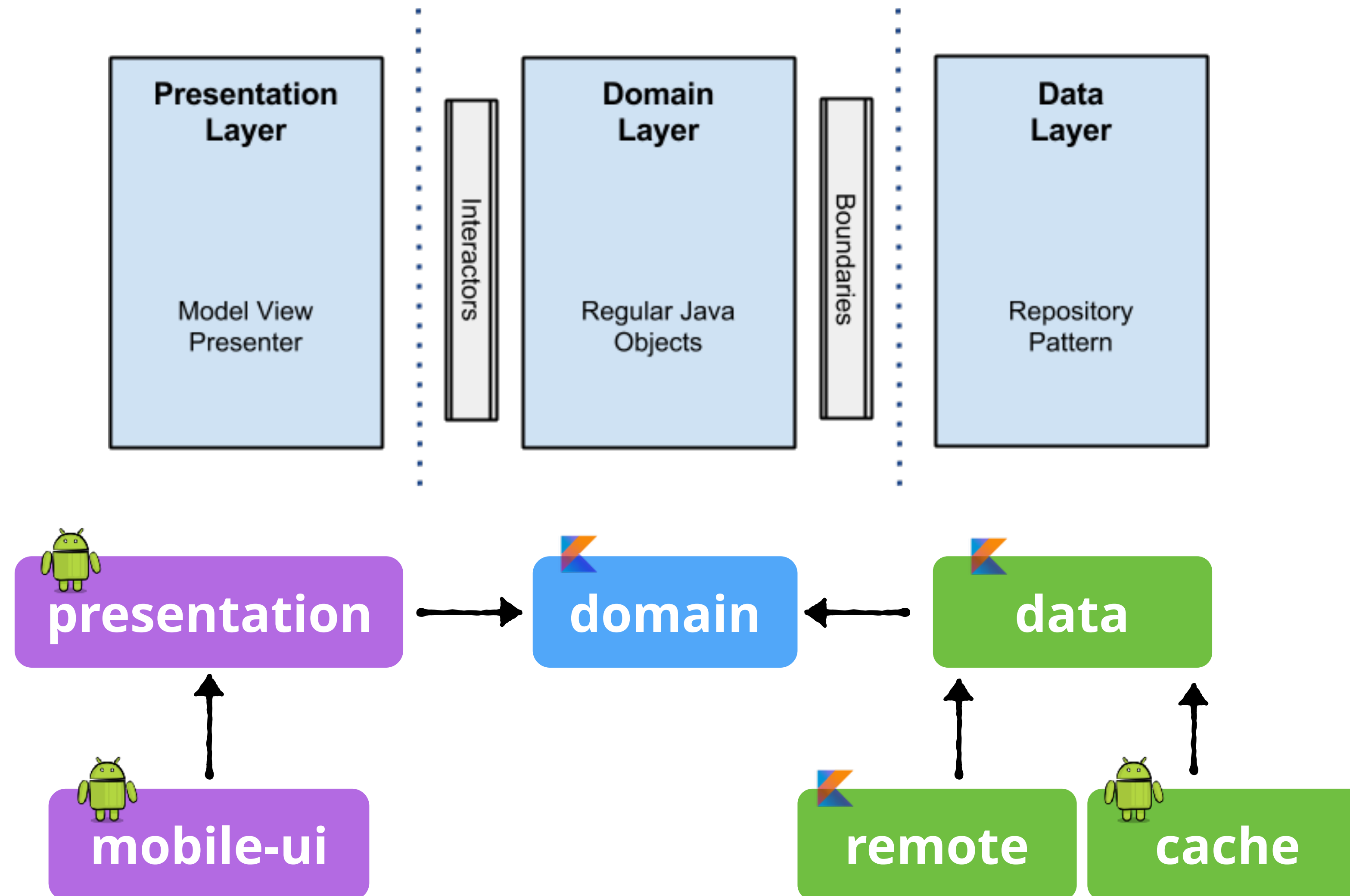
<http://bit.ly/2ndJhub>

BUFFER CLEAN ARCHITECTURE BOILERPLATE



<http://bit.ly/2yZn3oM>

BUFFER ANDROID MODULES



TOOLS USED

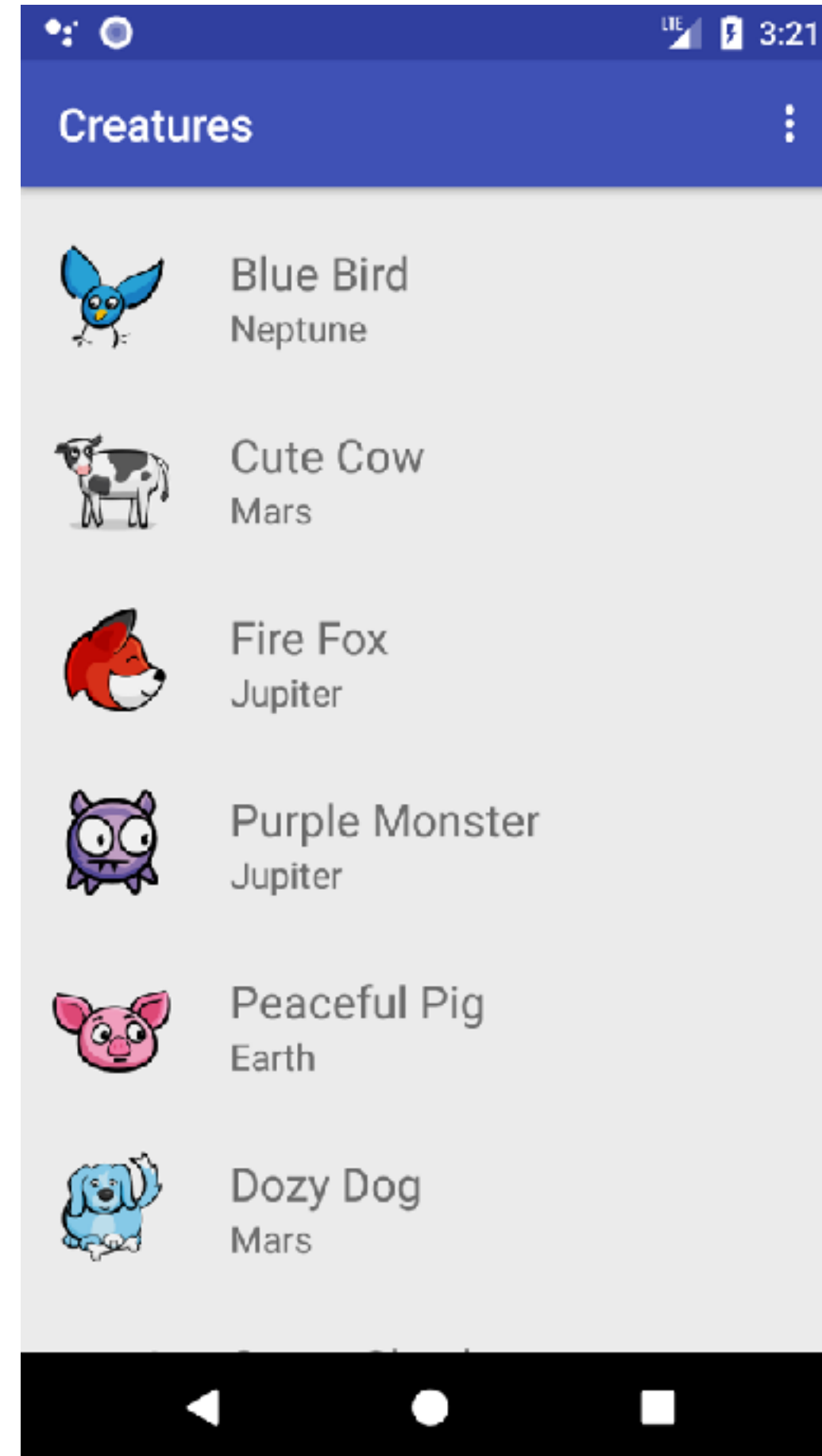
- ⚙ Kotlin
- ⚙ Room
- ⚙ Android Architecture Components
- ⚙ Android Support Libraries
- ⚙ RxJava 2
- ⚙ Dagger 2
- ⚙ Glide

- ⚙ Retrofit
- ⚙ OkHttp
- ⚙ Gson
- ⚙ Timber
- ⚙ Mockito
- ⚙ Espresso
- ⚙ Robolectric

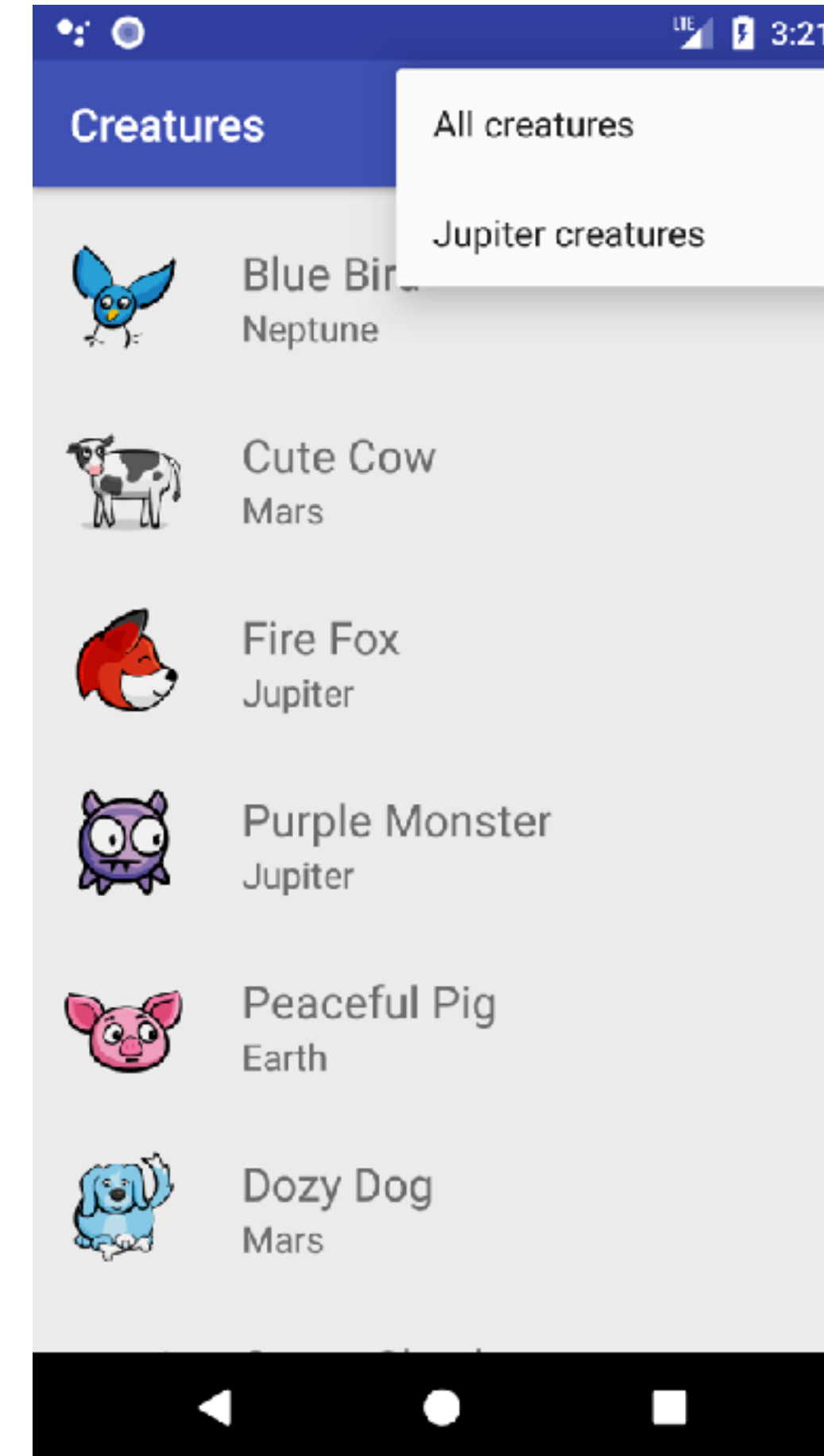


DEMOS

Use Case:
Get All



Demo 1



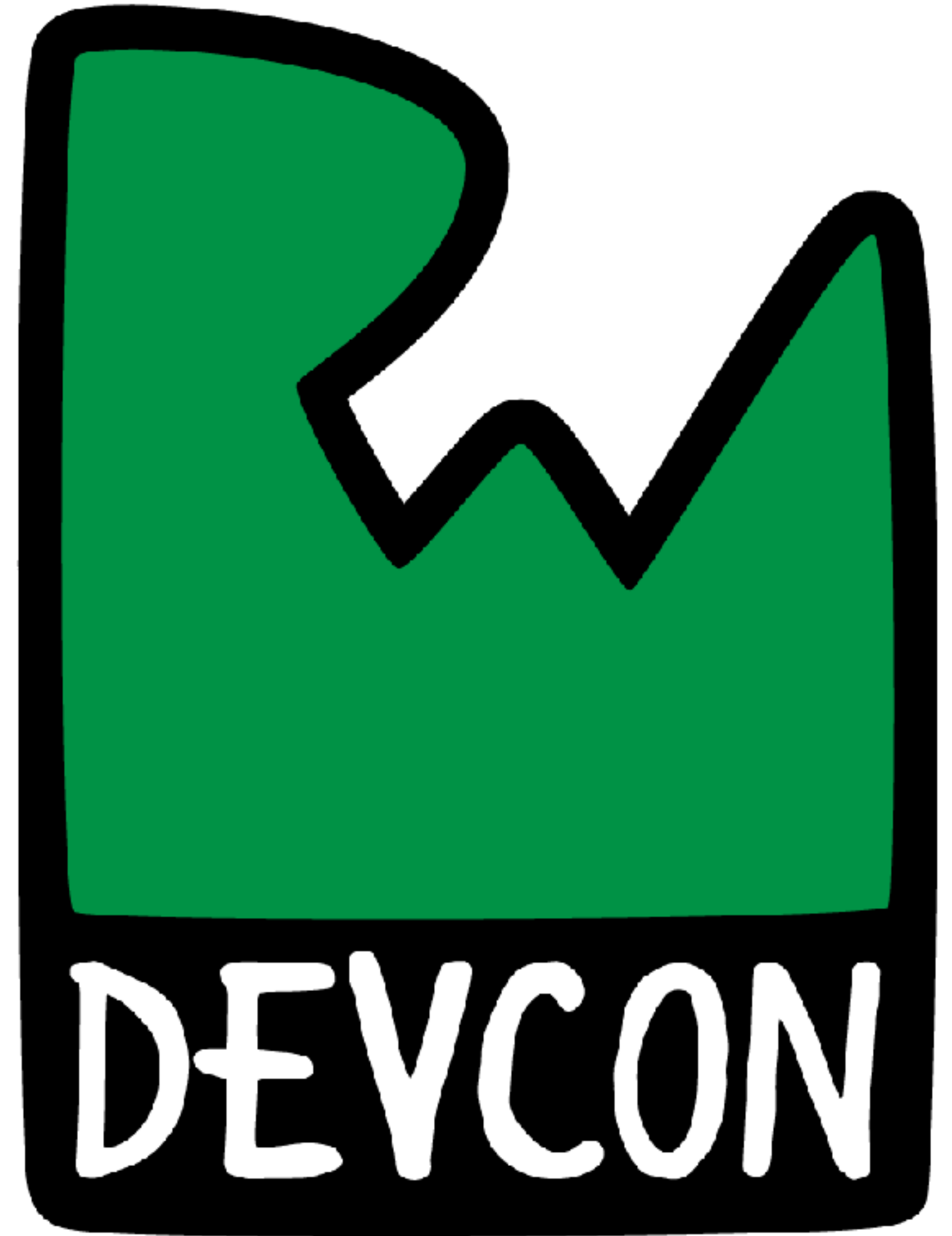
Demos 2 & 3

Use Case:
Get Jupiter

DEMO 1

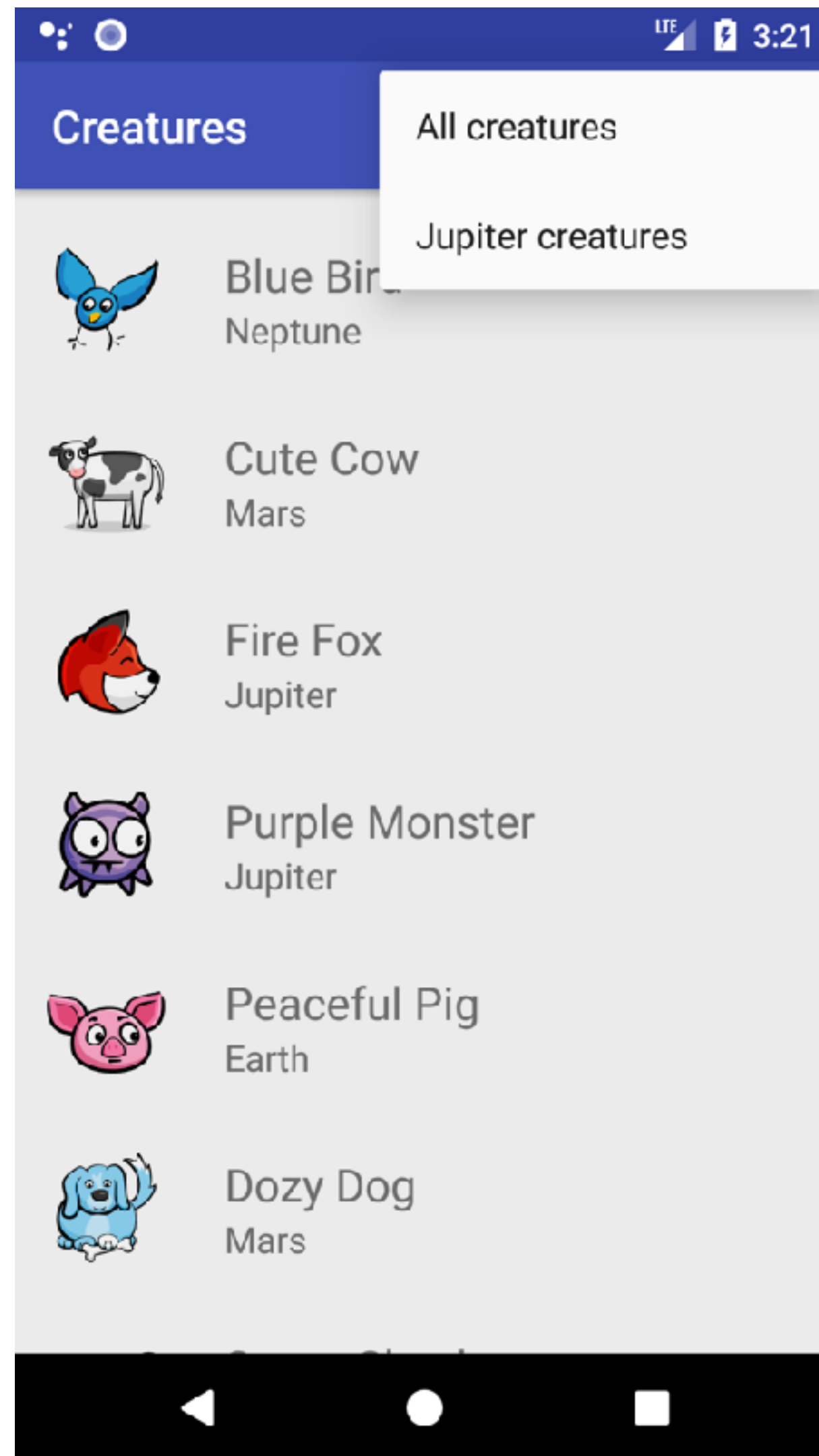


Session 12: Clean Architecture on Android



NEW USE CASE: DOMAIN & DATA

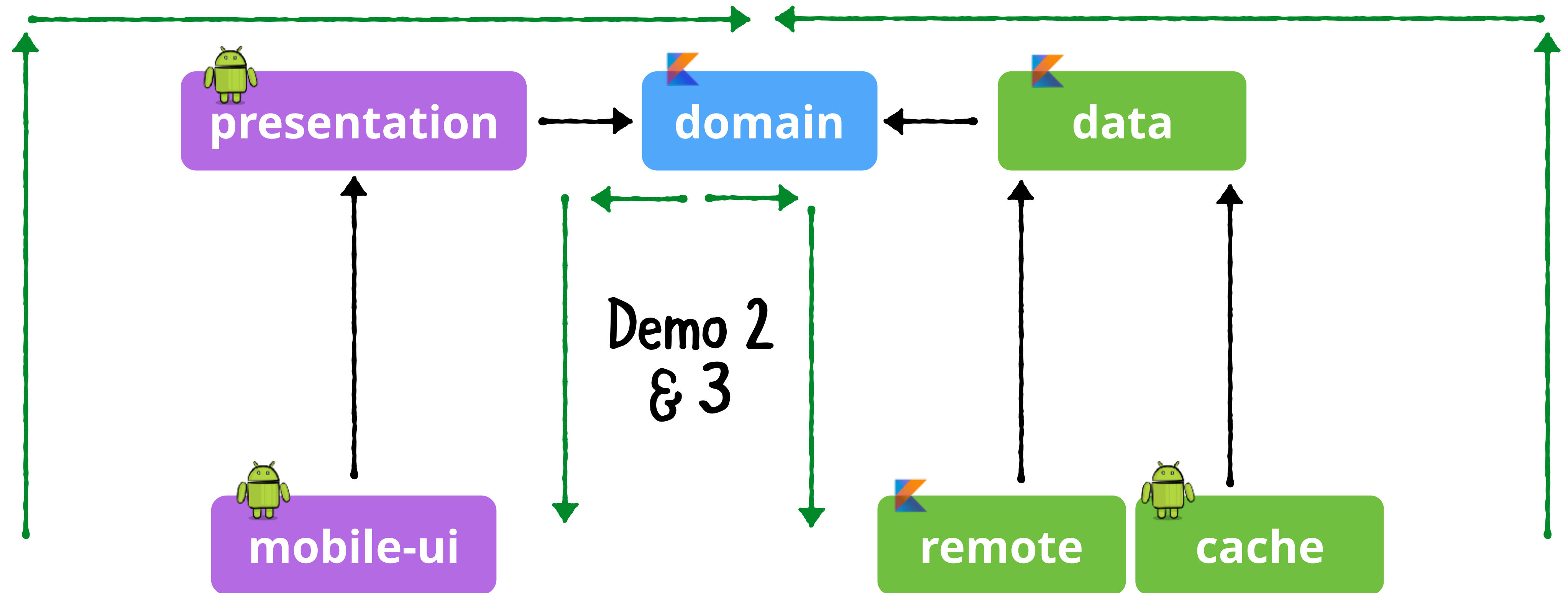
DEMO 2 & 3



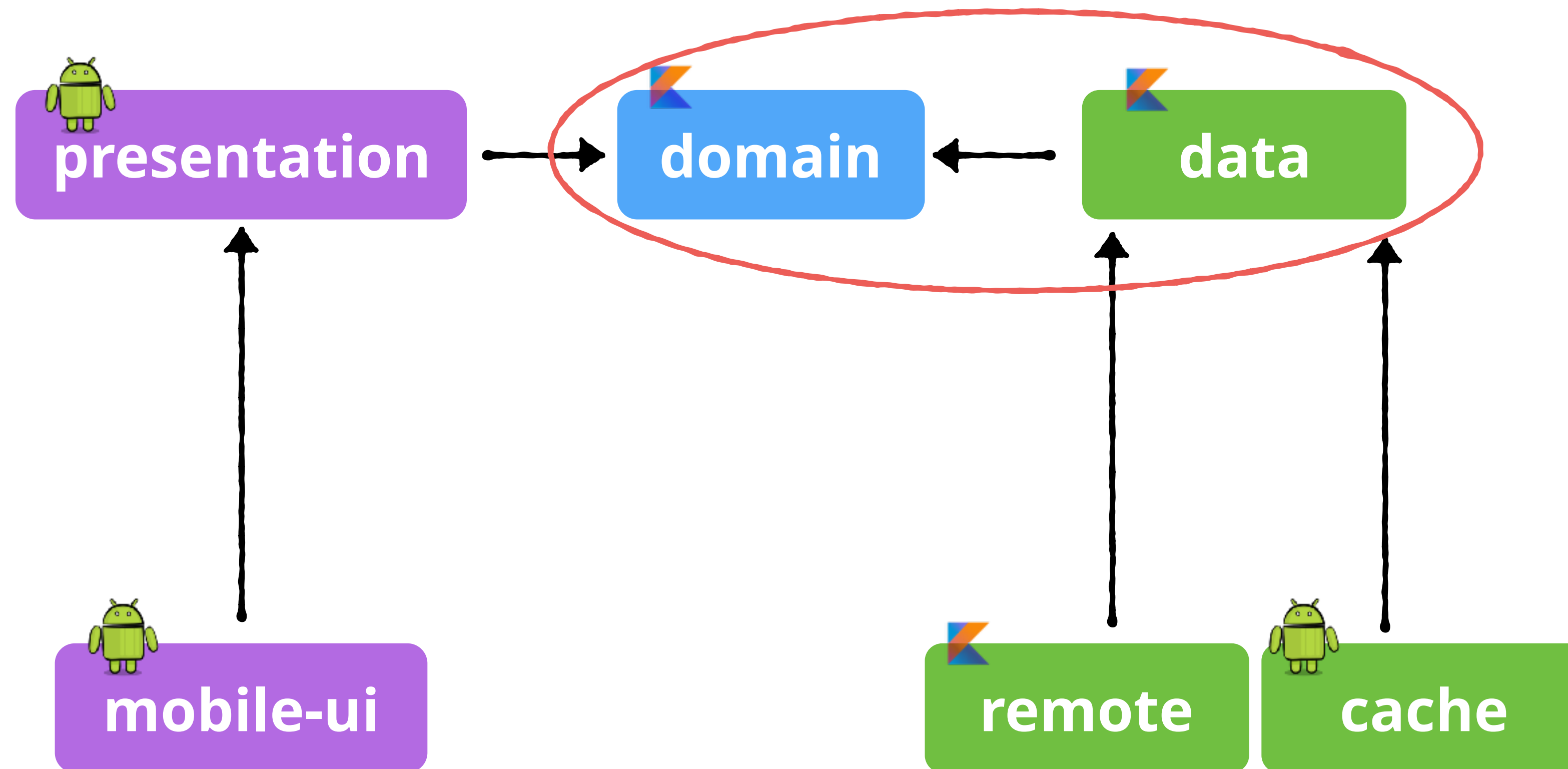
Use Case:
Jupiter creatures

“INSIDE-OUT”

Demo 1



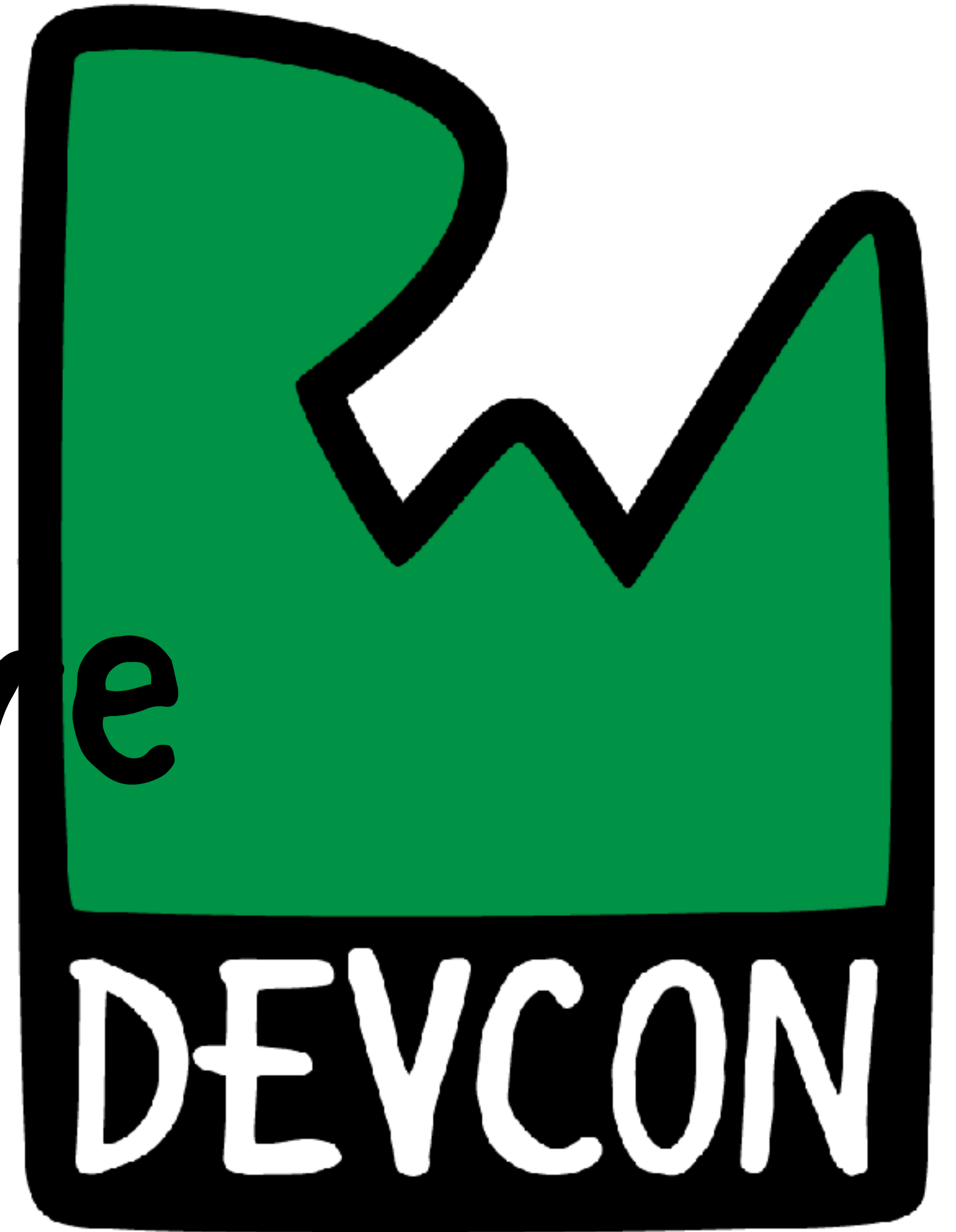
“INSIDE-OUT” DEMO 2



DEMO 2

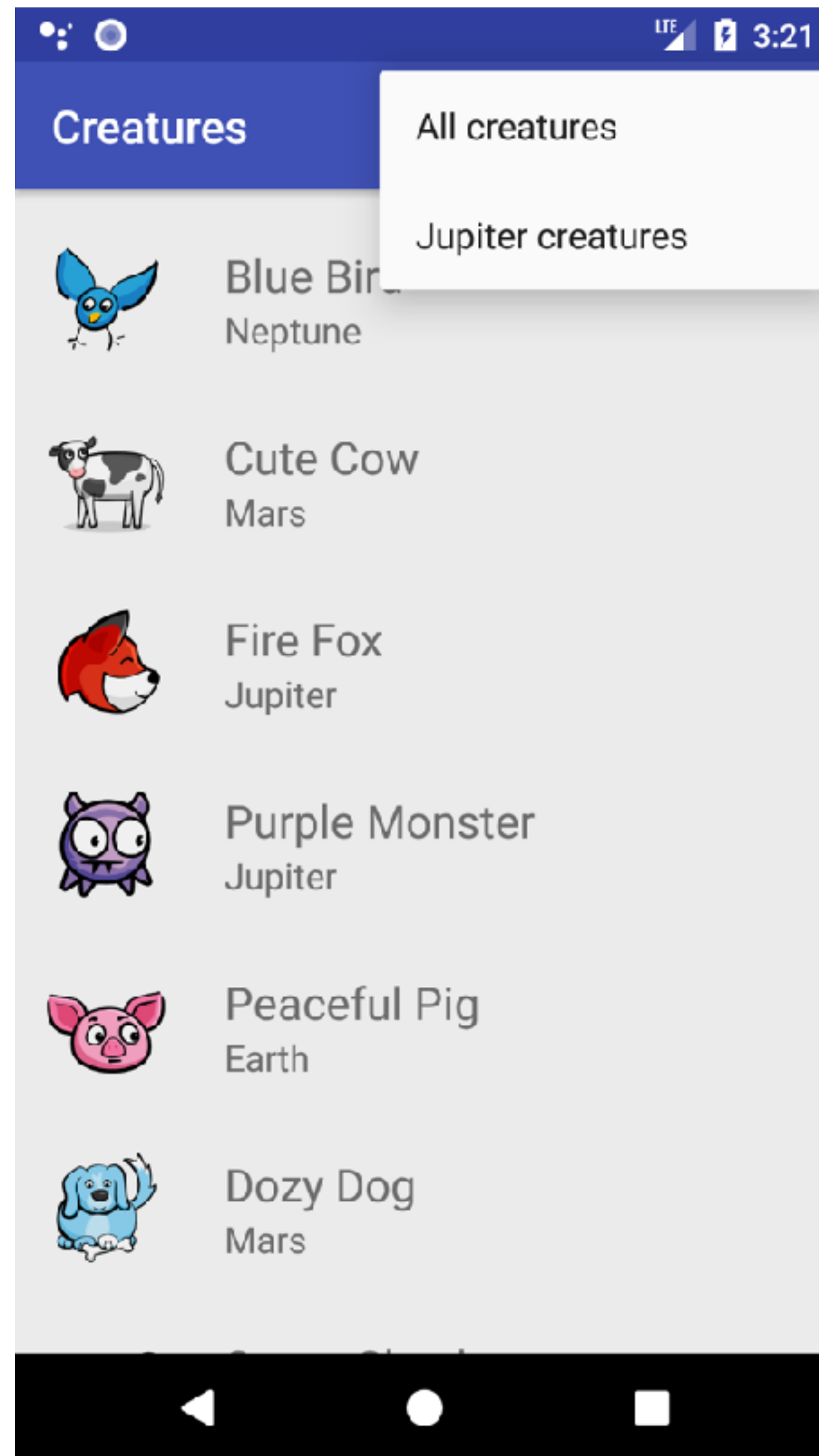


Session 12: Clean Architecture on Android



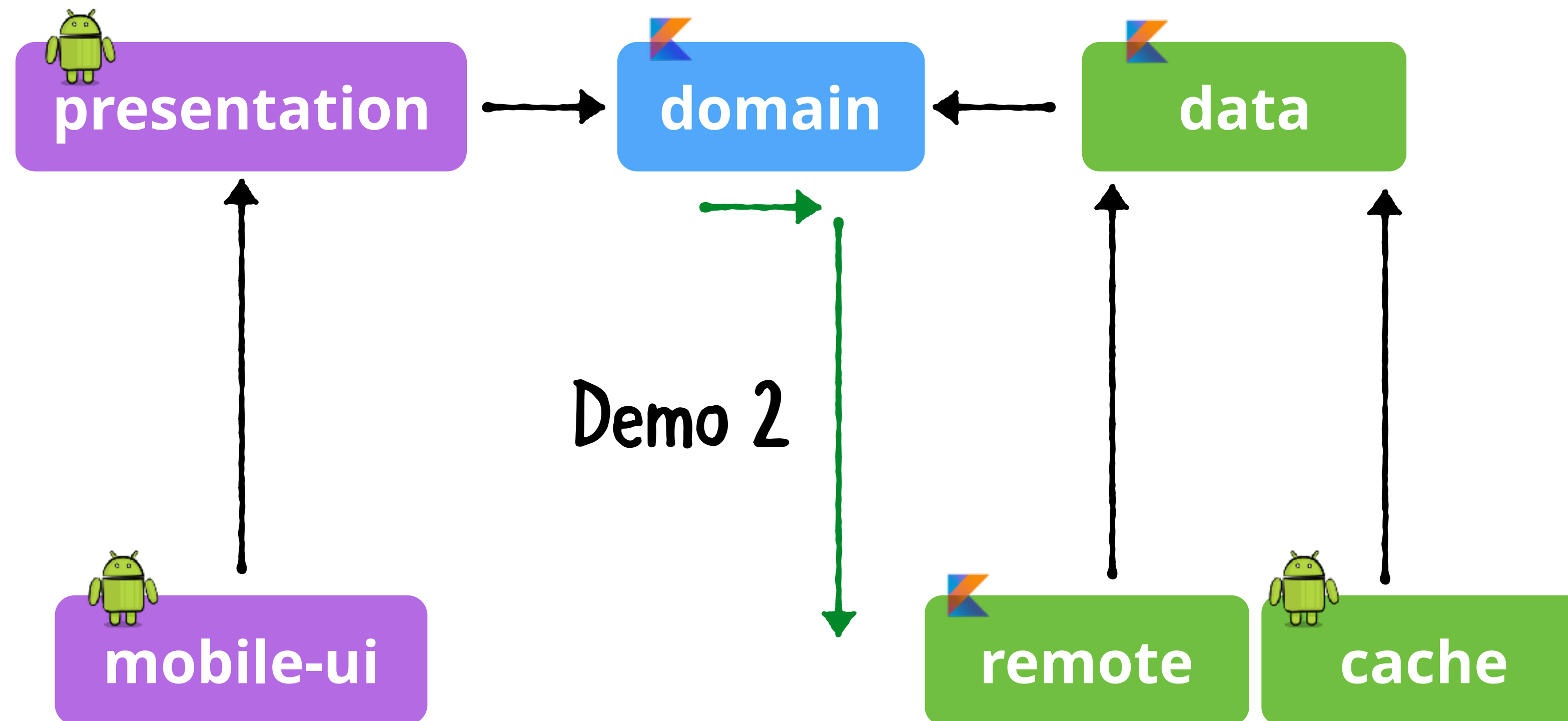
NEW USE CASE: PRESENTATION & UI

DEMO 2 & 3

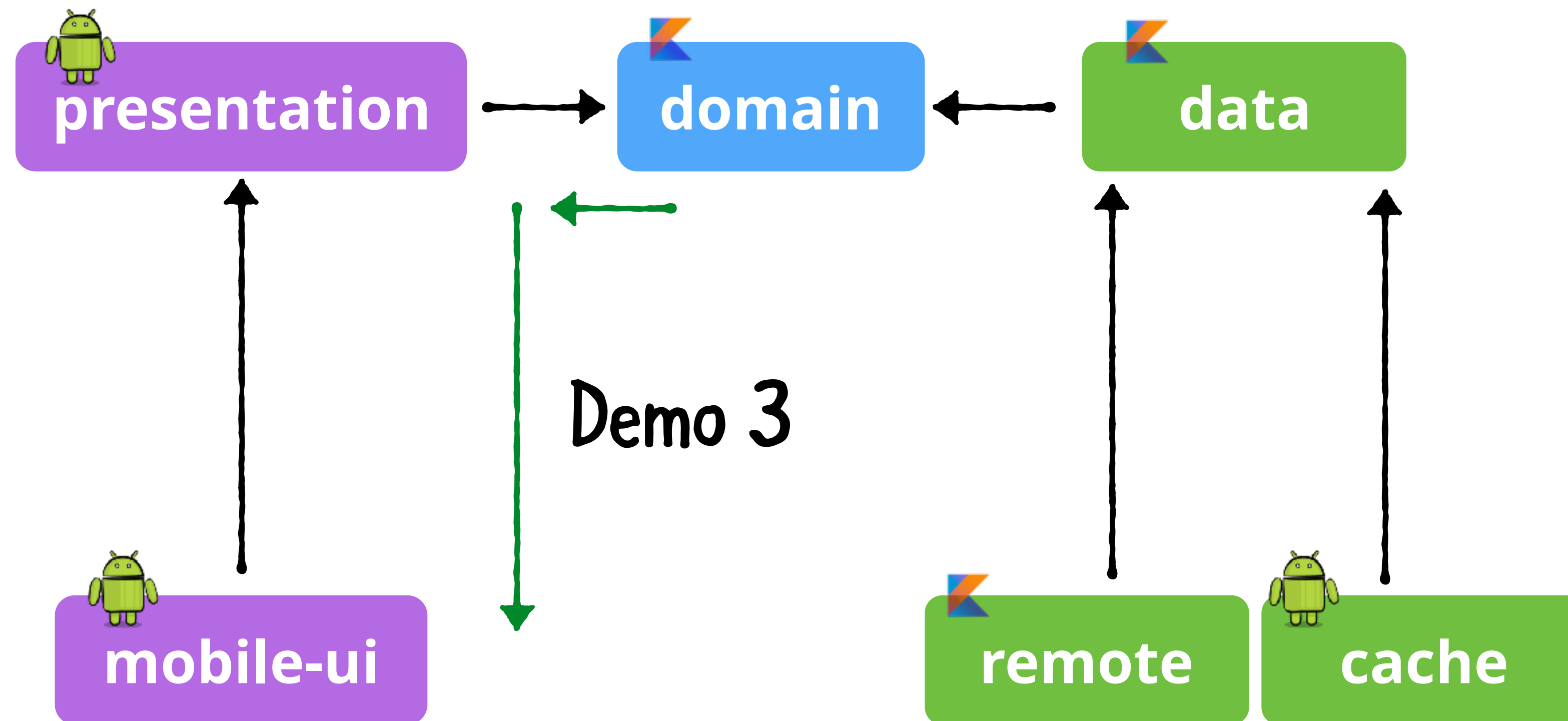


Use Case:
Jupiter creatures

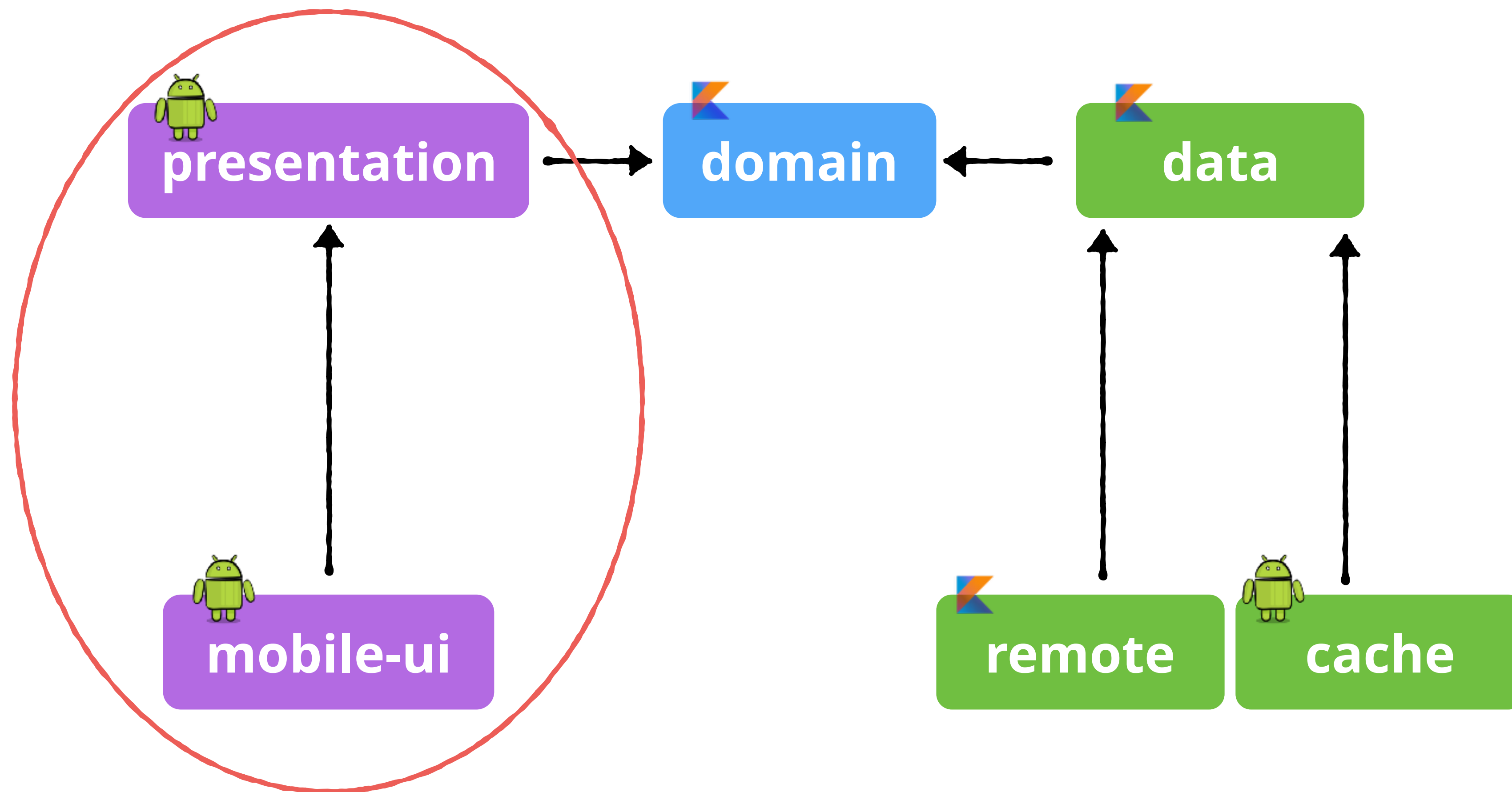
“INSIDE-OUT” DEMO 2



“INSIDE-OUT” DEMO 3



“INSIDE-OUT” DEMO 3

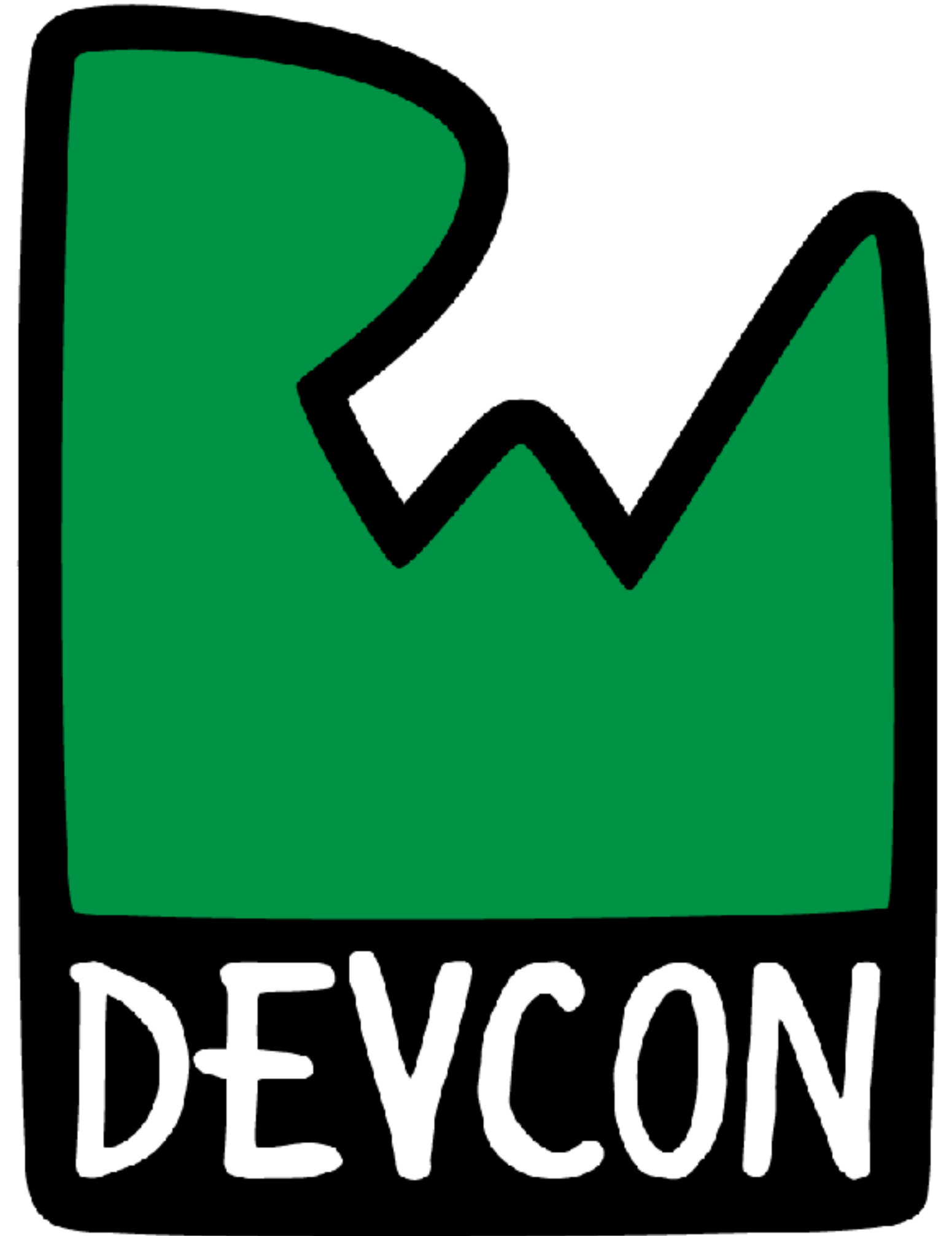


DEMO 3



Session 12:

Clean Architecture on Android



CONCLUSION

DEMO 1: WHAT DID YOU LEARN?

- ⚙ History of Clean Architecture
- ⚙ Goals and Principles of Clean Architecture
- ⚙ Layers of a Clean Architecture in an Android app
- ⚙ Review of an existing use case



DEMO 2: WHAT DID YOU LEARN?

- ⚙ Adding a new use case to the Domain layer
- ⚙ Update repository interface in Domain layer
- ⚙ Implement interface in the Data layer per Dependency Inversion
- ⚙ Test each layer independently



DEMO 3: WHAT DID YOU LEARN?

- ⚙️ Update ViewModel in Presentation layer to get LiveData for the new use case
- ⚙️ Test Presentation layer by mocking the use case
- ⚙️ Update UI layer to call into ViewModel for new use case



WHERE TO GO FROM HERE?

- ⚙ Uncle Bob Clean Architecture: <http://bit.ly/2a1px8t>
- ⚙ Clean Architecture book: <http://bit.ly/2AZGzOr>
- ⚙ Buffer Clean Architecture: <http://bit.ly/2yZn3oM>
- ⚙ Twitter: [@orionthewake](https://twitter.com/orionthewake)

