```
try {
  `let's get it
  right this time!`
}
```

Test-Driving Jetpack Compose

in Real Android Apps

Jon Fazzaro
Nerd Coach

industrial logic

What makes a team *fast?*

What makes a company *strong?*

What makes an industry *grow?*

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TECH ELEVATOR

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Test-Driving Jetpack Compose

in Real Android Apps

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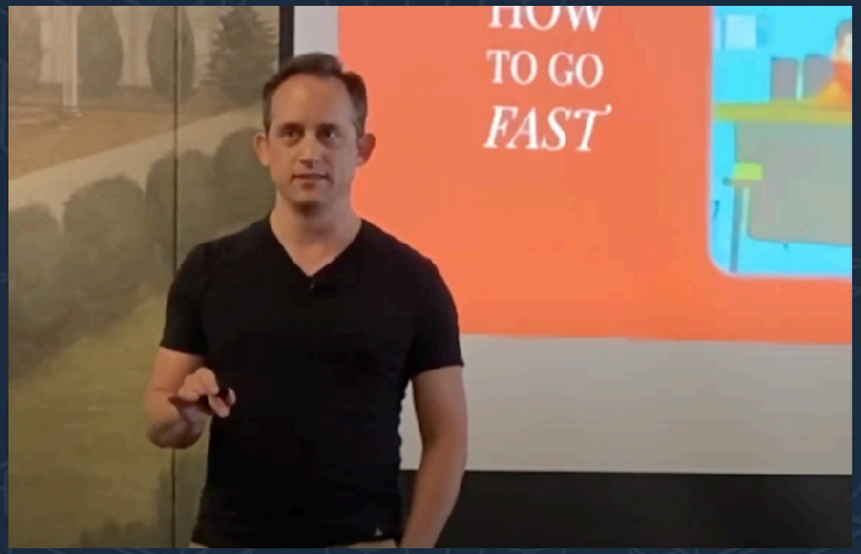
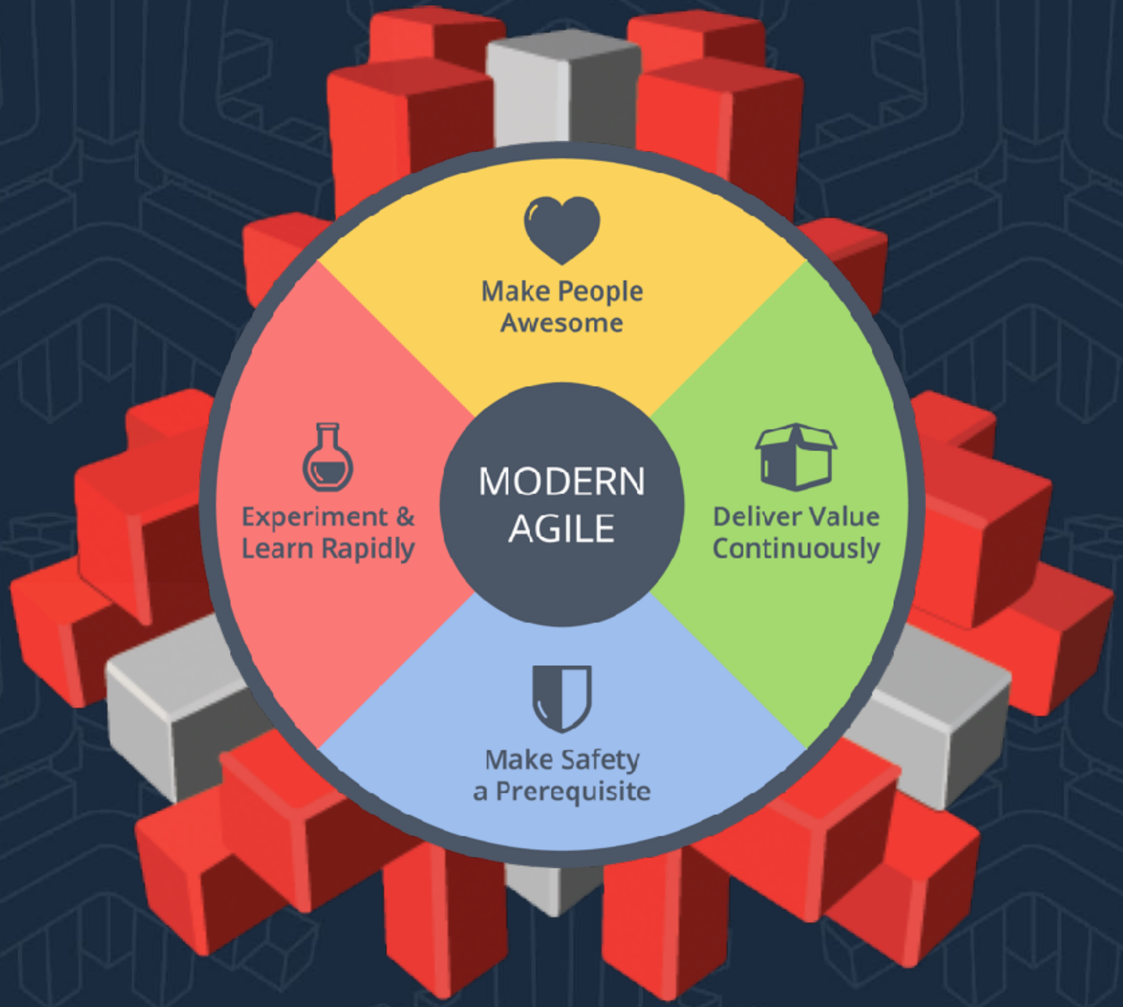
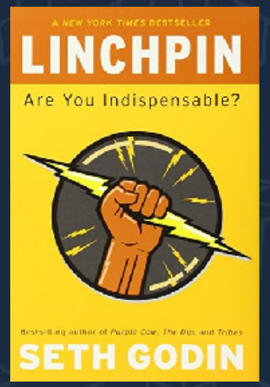
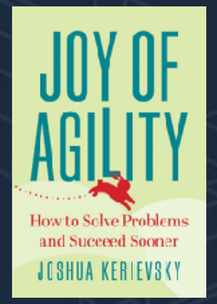
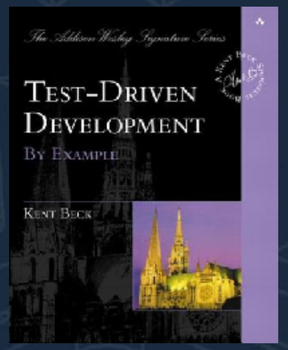

TO GO
FAST


music
is the
BEST.
—frank ZAPPA
industrial logic


Make People
Awesome
Deliver Value
Continuously
Make Safety
a Prerequisite
Experiment &
Learn Rapidly
MODERN
AGILE

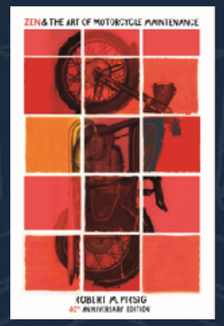

A NEW YORK TIMES BESTSELLER
LINCHPIN
Are You Indispensable?
SETH GODIN

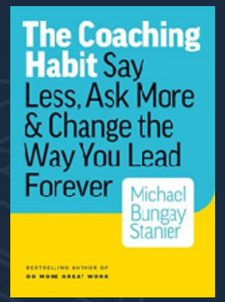

JOY OF AGILITY
How to Solve Problems and Succeed Sooner
JOSHUA KERIEVSKY

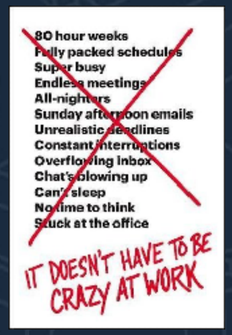

TEST-DRIVEN DEVELOPMENT
BY EXAMPLE
KENT BECK

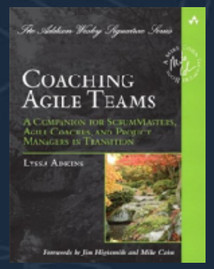

When Will It Be Done?

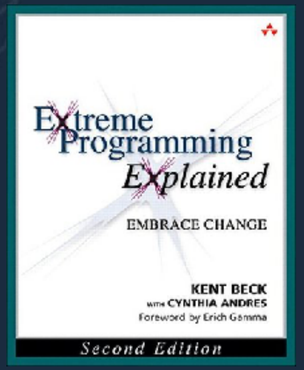

WORKING EFFECTIVELY WITH LEGACY CODE
Michael C. Feathers


ZEN & THE ART OF MOTORCYCLE MAINTENANCE

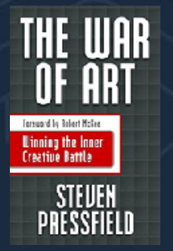

The Coaching Habit Say Less, Ask More & Change the Way You Lead Forever
Michael Bungay Stanier

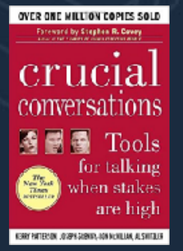

80 hour weeks
Fully packed schedules
Super busy
Endless meetings
All-nighters
Sunday afternoon emails
Unrealistic deadlines
Constant interruptions
Overflowing inbox
Chat's blowing up
Can't sleep
No time to think
Stuck at the office
IT DOESN'T HAVE TO BE CRAZY AT WORK


COACHING AGILE TEAMS


Extreme Programming Explained
EMBRACE CHANGE
KENT BECK
with CYNTHIA ANDRES
Foreword by Erich Gamma
Second Edition

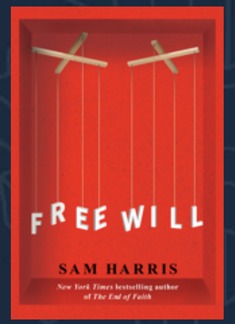

ACCELERATE
Building and Scaling High Performing Technology Organizations
Nicole Forsgren, PhD
Jez Humble, and Gene Kim


THE WAR OF ART
Winning the Inner Creative Battle
STEVEN PRESSFIELD


OVER ONE MILLION COPIES SOLD
crucial conversations
Tools for talking when stakes are high


THE MYTHICAL MAN-MONTH


DYNAMIC RETEAMING


FREE WILL
SAM HARRIS


THE LEAN STARTUP
ERIC RIES

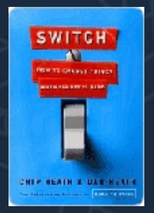

PATRICK LENCIONI
The MOTIVE


The Tao of Holding Space


EXECUTIVE COACHING WITH BACKBONE AND HEART
A SYSTEMS APPROACH TO ENGAGING LEADERS WITH THEIR CHALLENGES
2nd
MARY BETH O'NEILL


Fixing Your Scrum


The Phoenix Project


SWITCH

Test Driven Development

Without

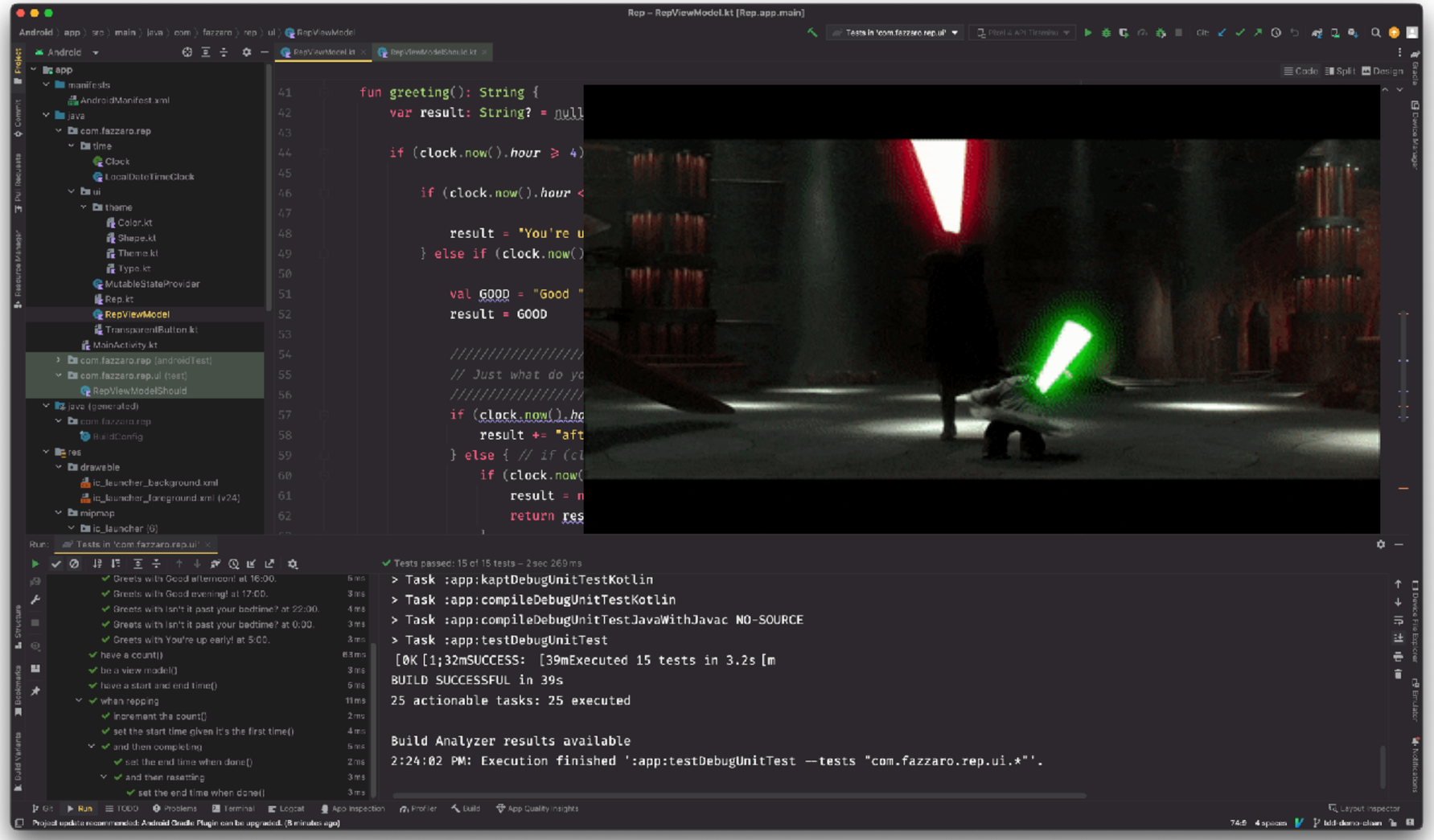
Test Driven Development

Teaching

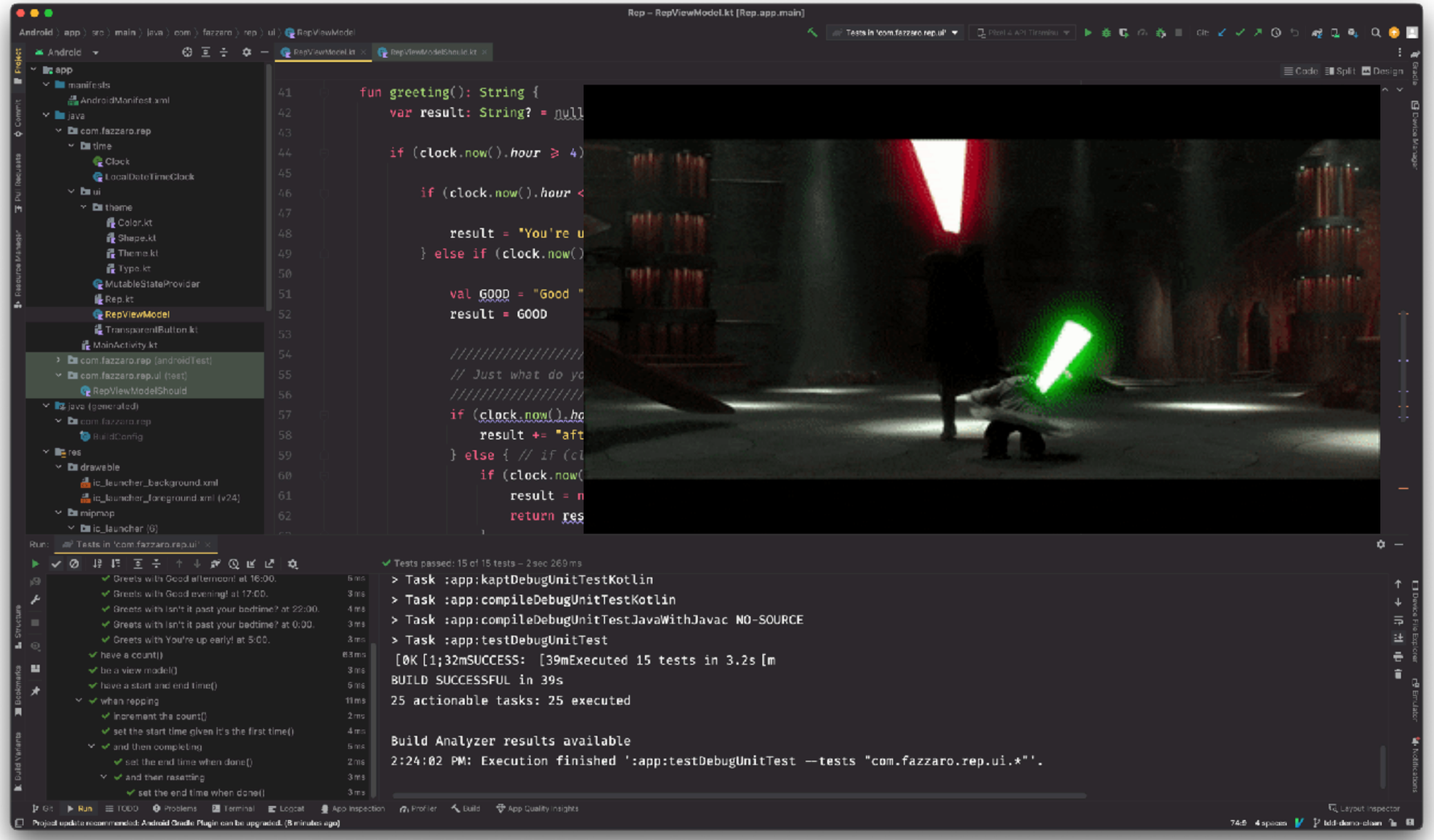
Test Driven Development

How?

How?


Rep – RepViewModel.kt [Rep.app.main]
fun greeting(): String {
var result: String? = null
if (clock.now().hour ≥ 4)
if (clock.now().hour <
result = "You're u
} else if (clock.now()
val GOOD = "Good "
result = GOOD
// Just what do yo
if (clock.now().ho
result += "aft
} else { // if (cl
if (clock.now(
result = n
return res
Tests passed: 15 of 15 tests – 2 sec 269 ms
> Task :app:kaptDebugUnitTestKotlin
> Task :app:compileDebugUnitTestKotlin
> Task :app:compileDebugUnitTestJavaWithJavac NO-SOURCE
> Task :app:testDebugUnitTest
[0K [1;32mSUCCESS: [39mExecuted 15 tests in 3.2s [m
BUILD SUCCESSFUL in 39s
25 actionable tasks: 25 executed
Build Analyzer results available
2:24:02 PM: Execution finished ':app:testDebugUnitTest --tests "com.fazzaro.rep.ui.*"'.

How?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> Task :app:compileDebugUnitTestKotlin
> Task :app:compileDebugUnitTestJavaWithJavac NO-SOURCE
> Task :app:testDebugUnitTest
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How?

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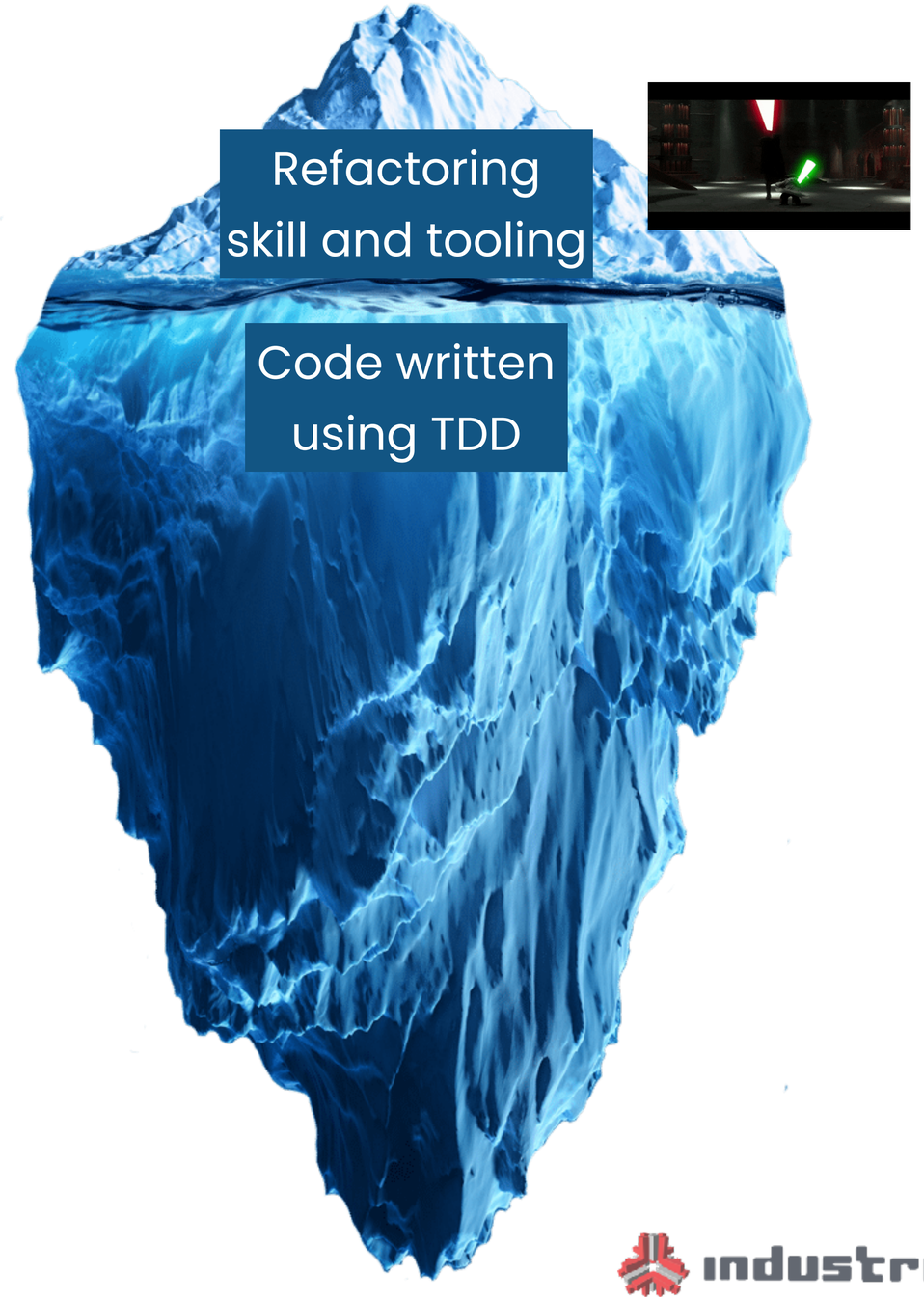
How?

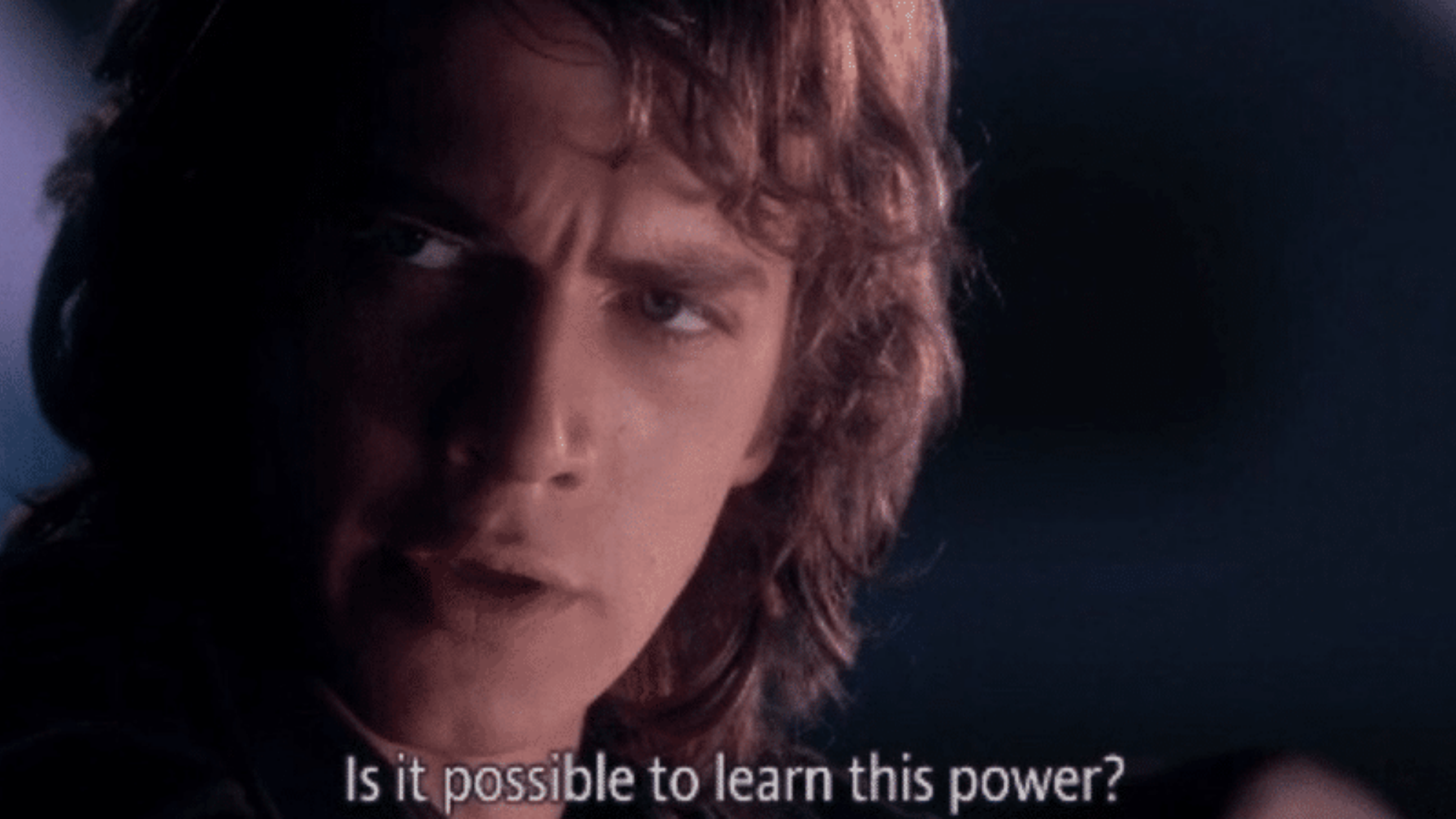


zOMg sO CLeaR

```
fun greeting(): String {
    return when {
        clock.now().hour < 4 -> "Isn't it past your bedtime?"
        clock.now().hour < 6 -> "You're up early!"
        clock.now().hour < 12 -> "Good morning!"
        clock.now().hour < 17 -> "Good afternoon!"
        clock.now().hour < 22 -> "Good evening!"
        else -> "Isn't it past your bedtime?"
    }
}
```

So what?

So what?


Is it possible to learn this power?

Compose

Compose
Declarative

Compose
Declarative
Imperative

Compose

Declarative

```
18  @Composable
19  fun FeedView(model: FeedViewModel = hiltViewModel()) {
20      model.load()
21      Column { this: ColumnScope
22          Text(
23              text = model.headline,
24              style = MaterialTheme.typography.subtitle2,
25              modifier = Modifier
26                  .padding(start = 20.dp, bottom = 5.dp)
27          )
28          if (model.hasError)
29              Sadness(with = "loading posts")
30          else
31              LazyColumn() { this: LazyListScope
```

Imperative

Compose
Declarative
Imperative

```
class PostRepository @Inject constructor(
    private val postsAPI: PostsAPI,
    var postStore: PostStore
) {

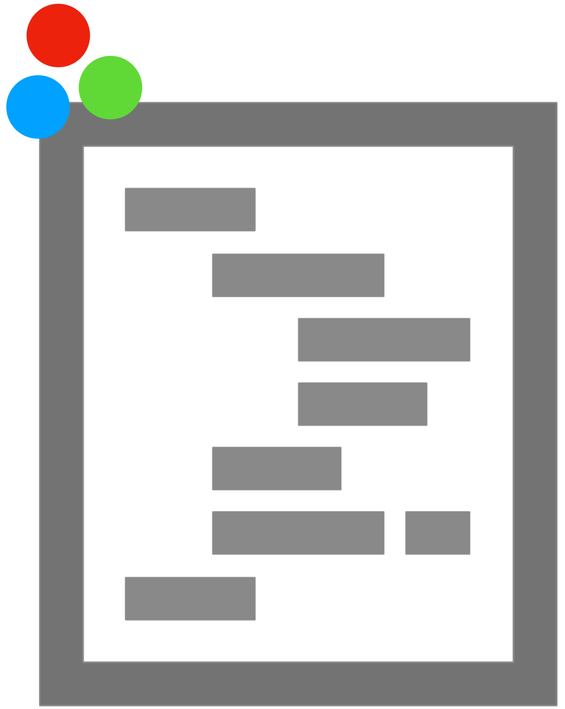
    private var posts: List<Post>? = null

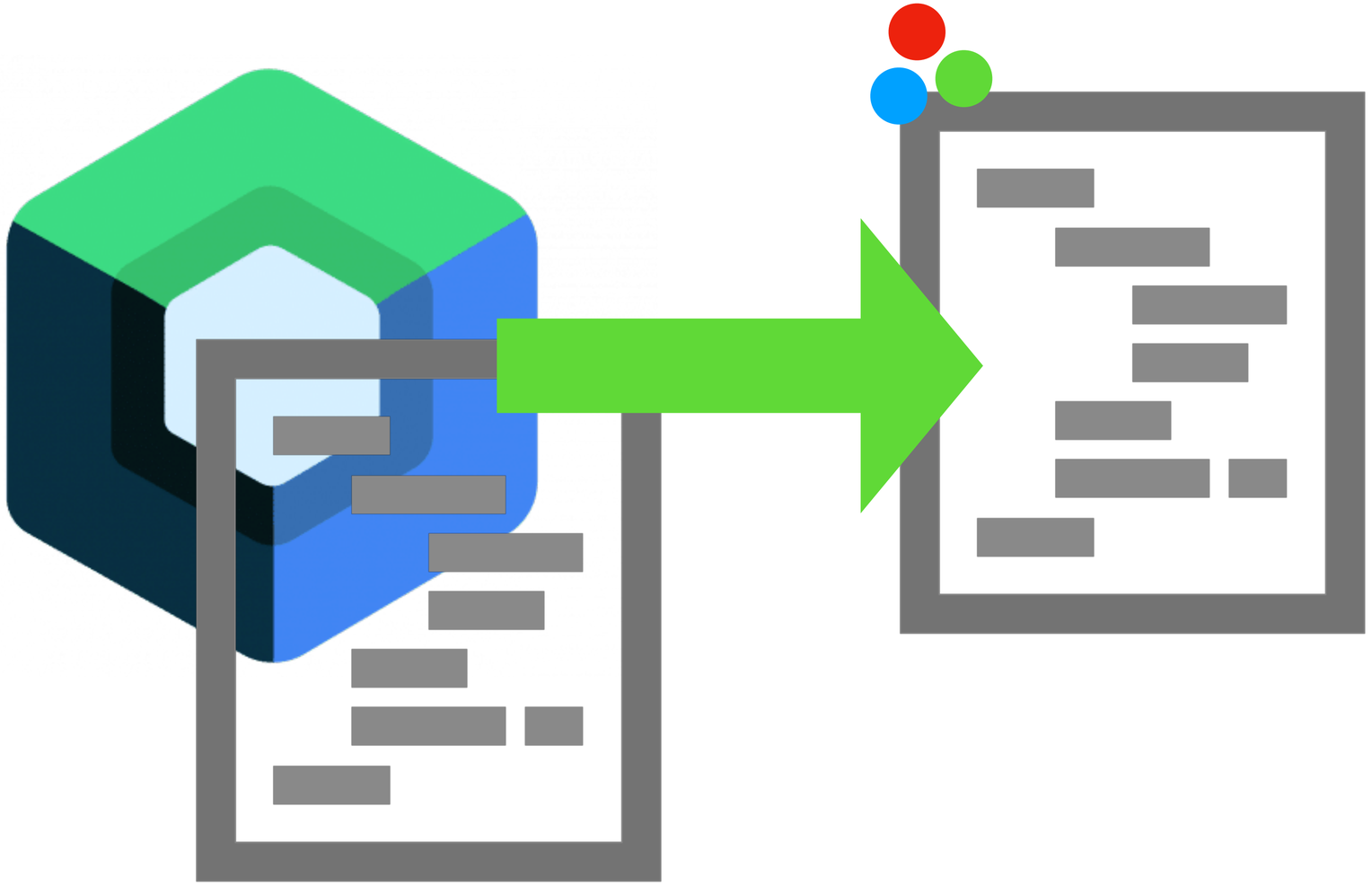
    suspend fun getPosts(): List<Post> {
        if (posts == null)
            posts = postStore.getAll().map{ it.toPost() }.ifEmpty { loa
        return posts!!
    }

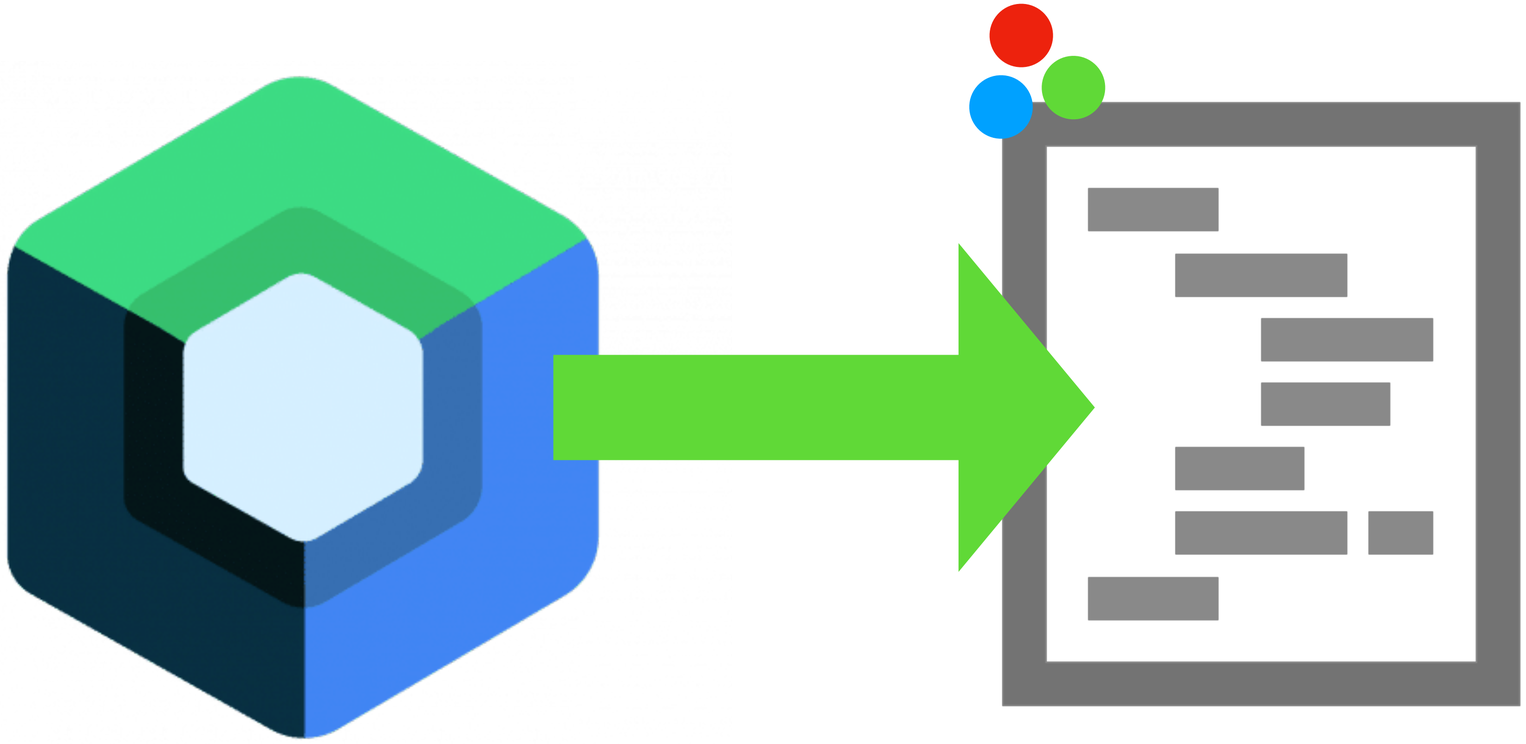
    private suspend fun loadPosts(): List<Post> {
        val posts = loadPostsFromAPI().map { it.toPost() }
        postStore.insert(posts.map { it.fromPost() })
        return posts
    }

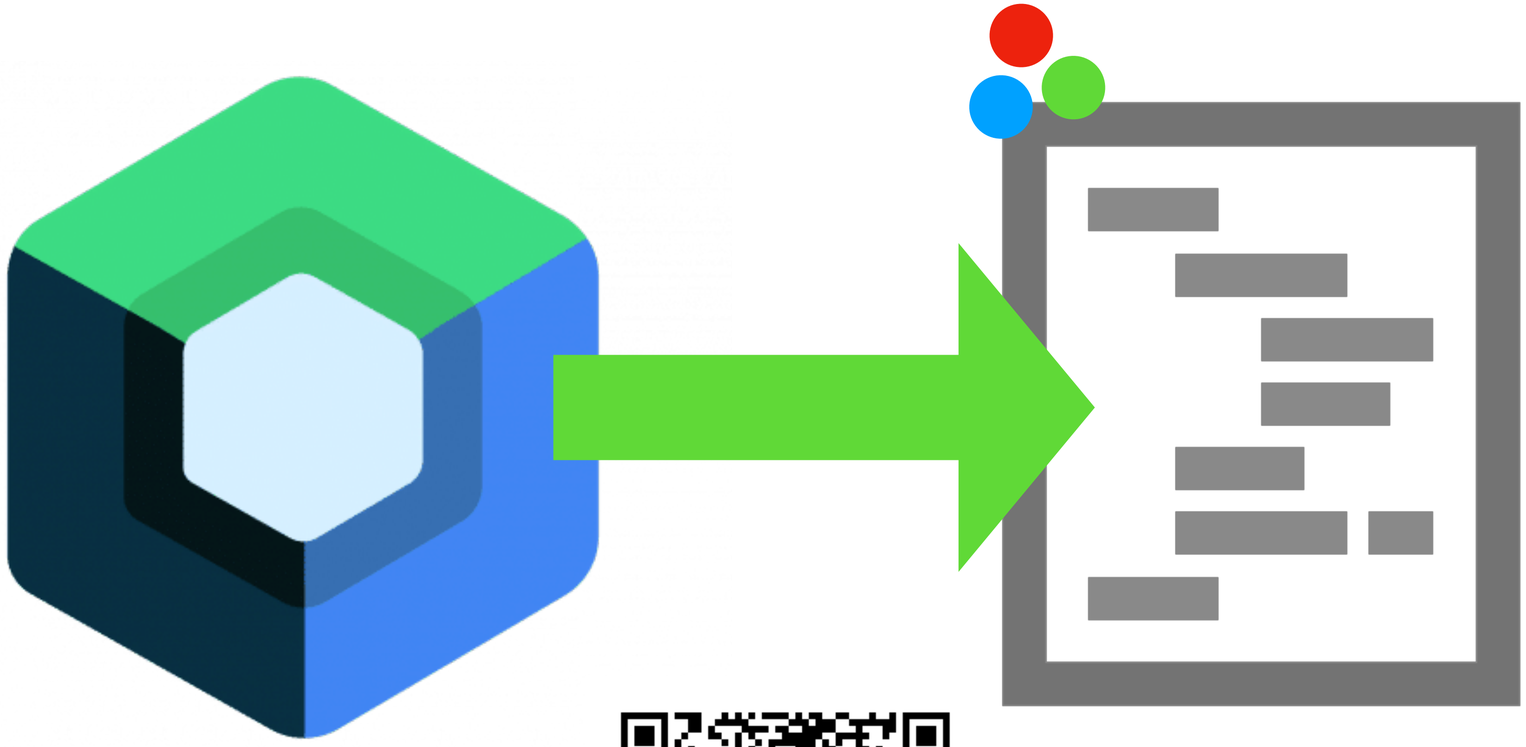
    private suspend fun loadPostsFromAPI(): List<PostRecord> {
```

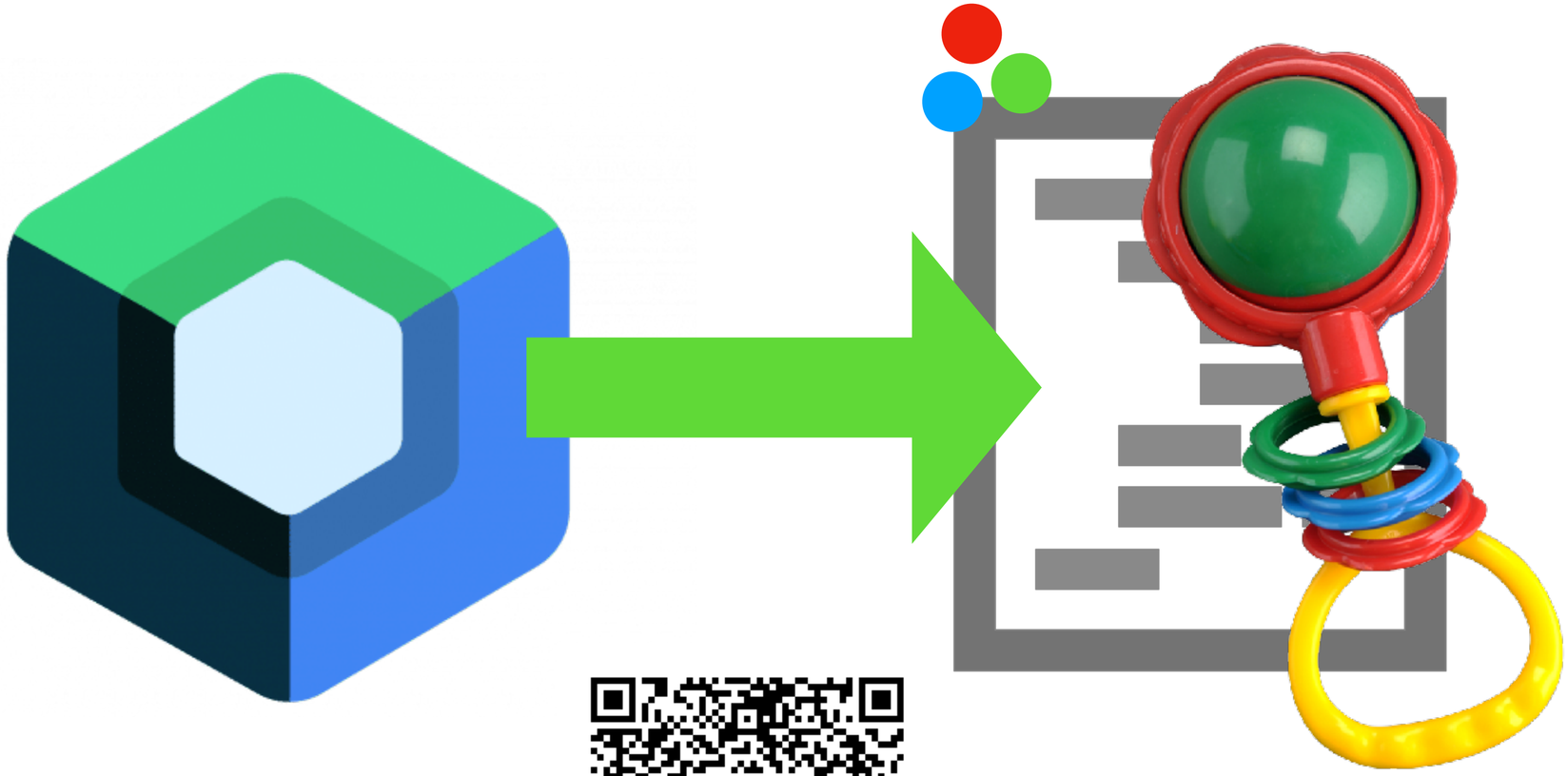

9NEWS Denver @9NEWS · Sep 4
St. Louis studio apartment combines bathroom with kitchen and yikes
on9news.tv/2oE4iQp

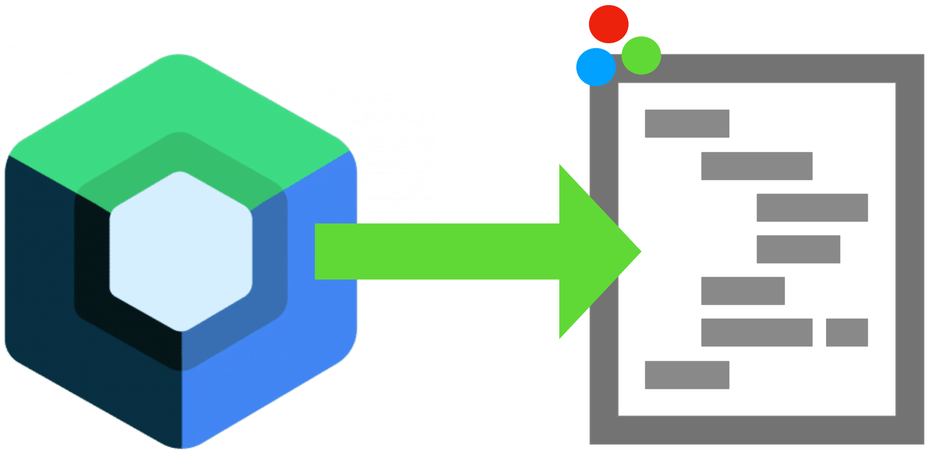


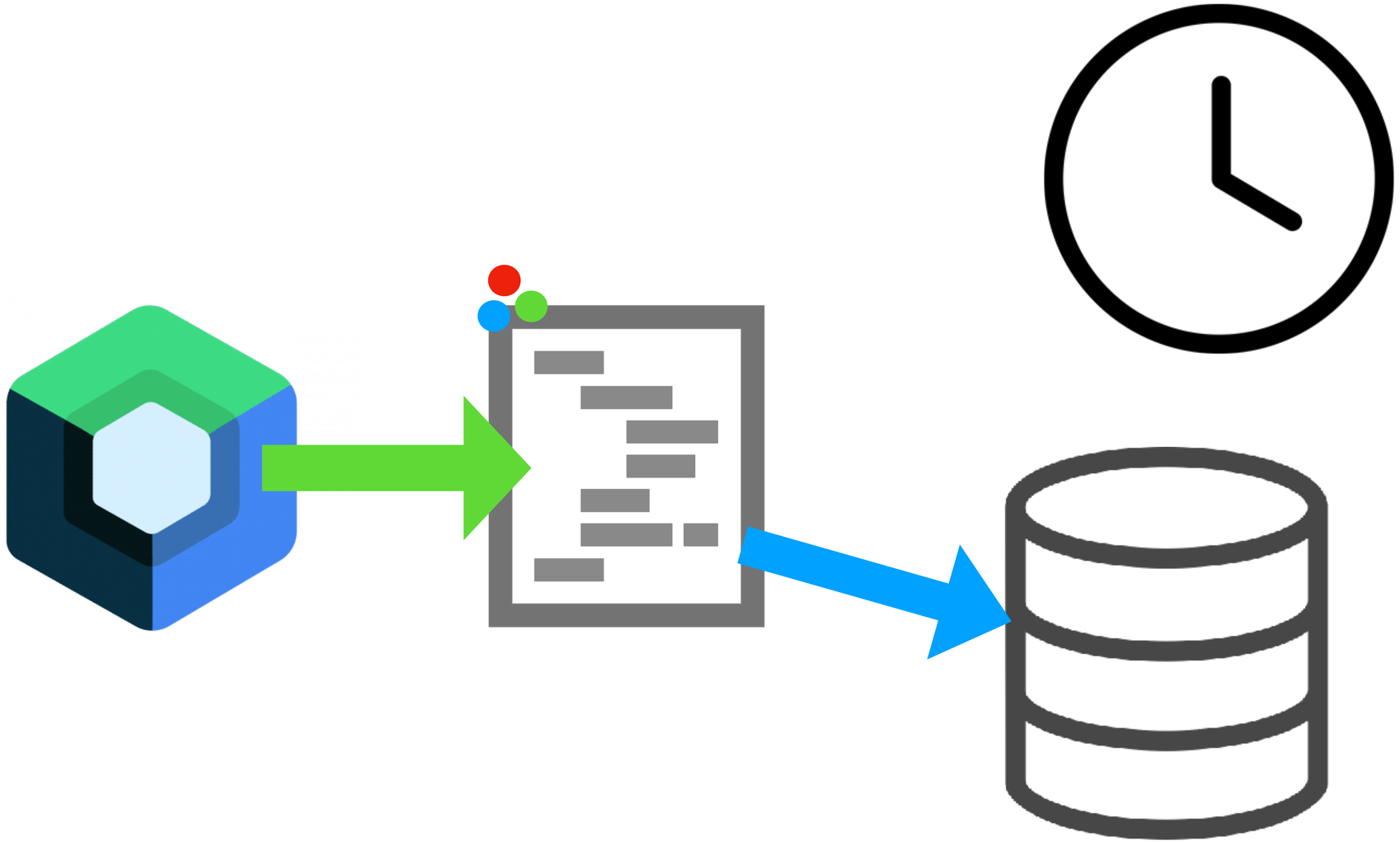


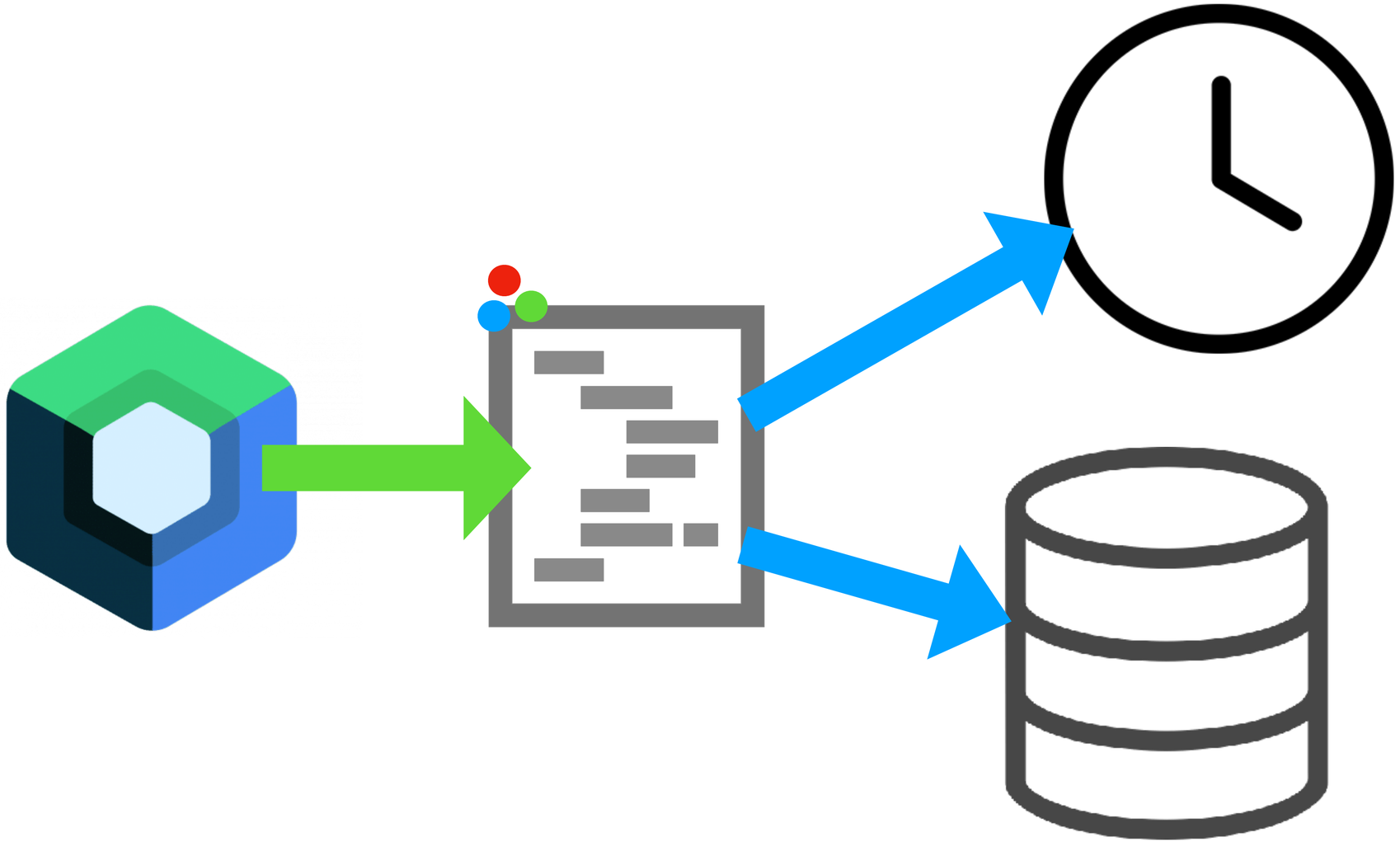


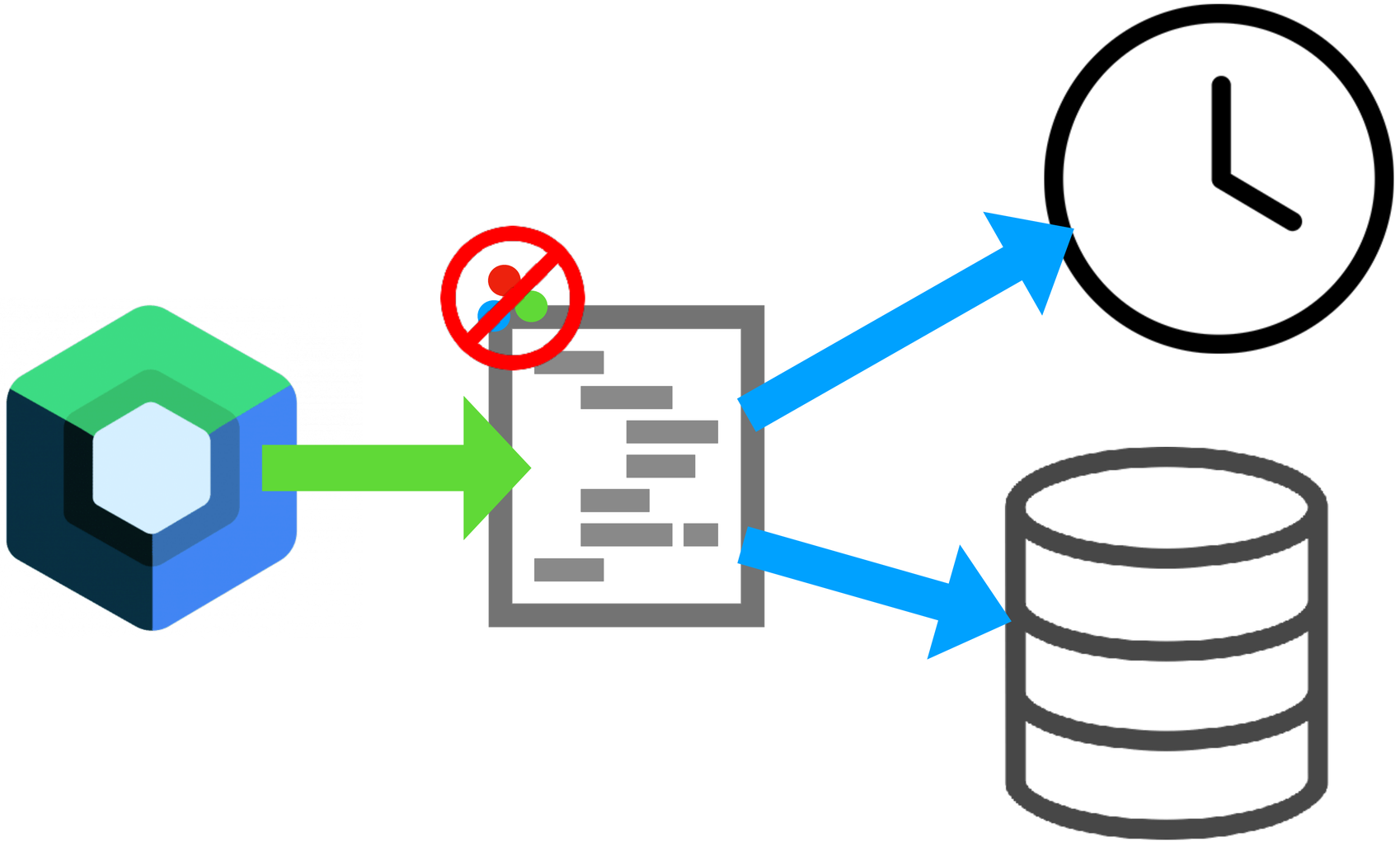












One More Level Of Indirection

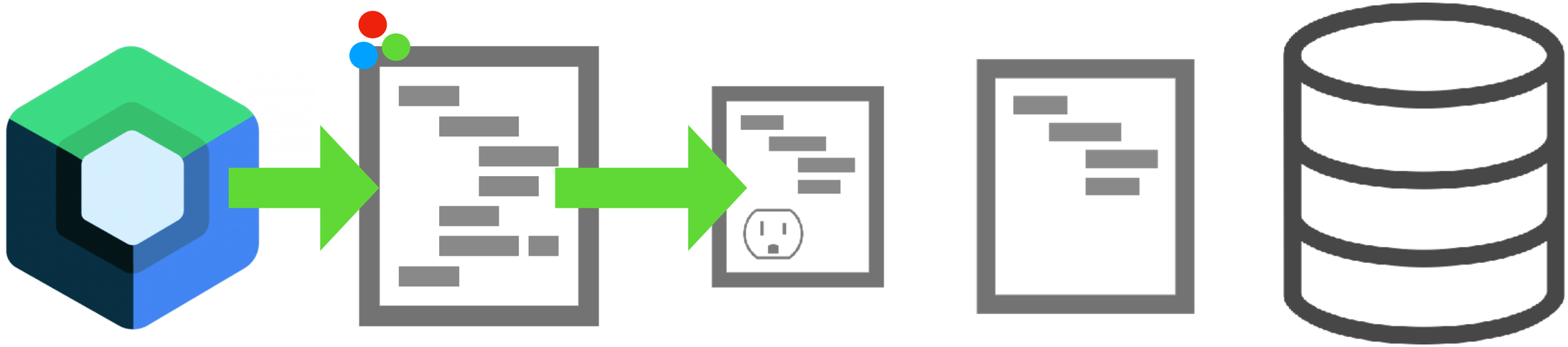
It is said that there is no problem in computer science which cannot be solved by one more level of indirection (this sounds like a quote, has anybody references?).

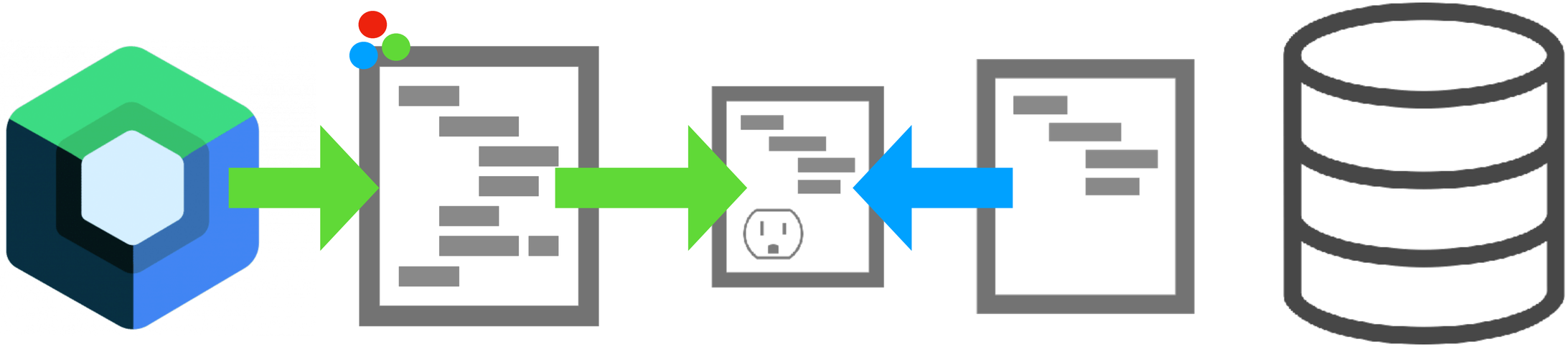
The quote is credited to David Wheeler: http://en.wikipedia.org/wiki/David_Wheeler_(computer_scientist) [[please fix the URL -- how does one encode parens?)

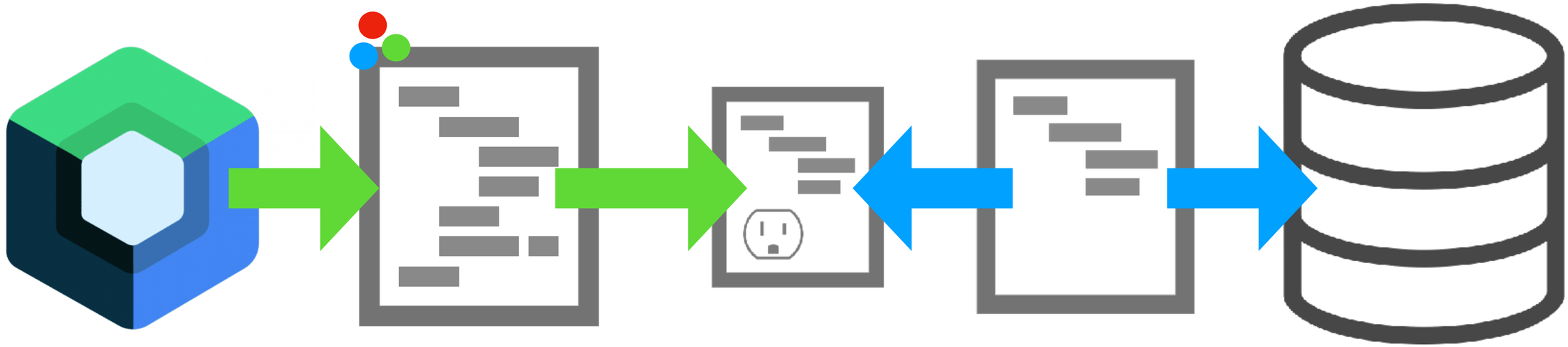
But it also can add complexity to the system, and therefore is not a free lunch.

Dependency Inversion Principle

Would you solder a lamp directly
to the electrical wiring in a wall?







Google Play

Apps & games ▾ Device ▾

Rep
Fazzaro

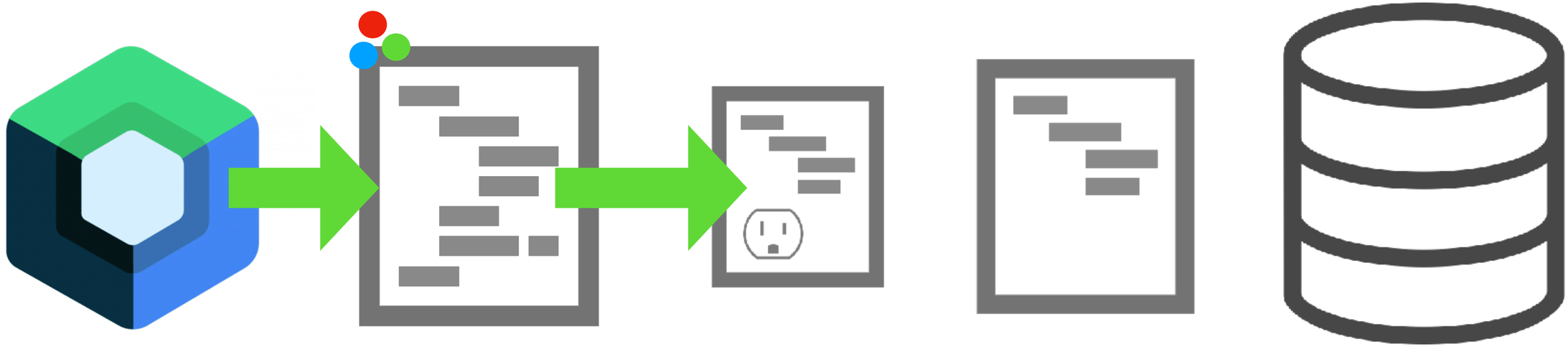
About this app →

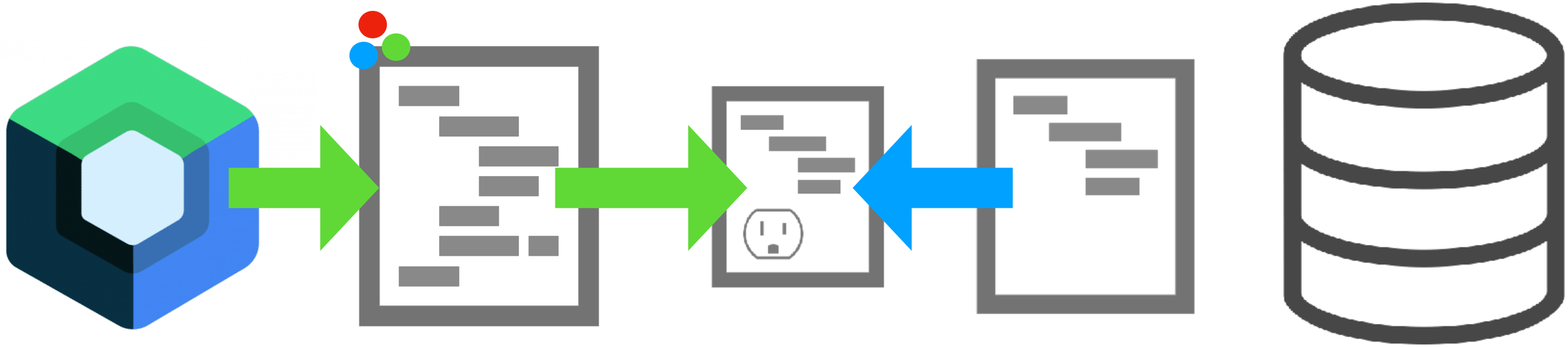
Count push-ups with your nose.

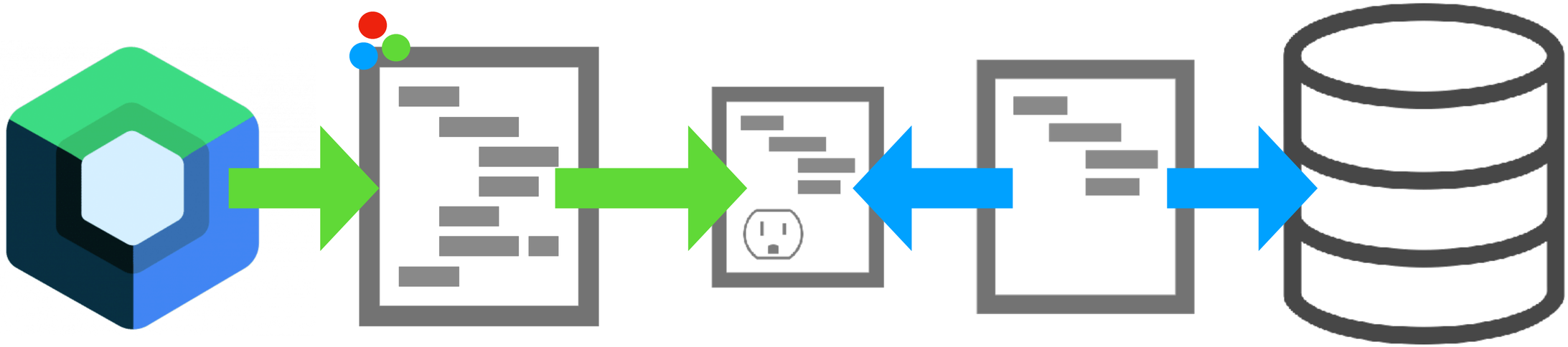
Or whatever else you can think of to count.

Updated on
Feb 24, 2023

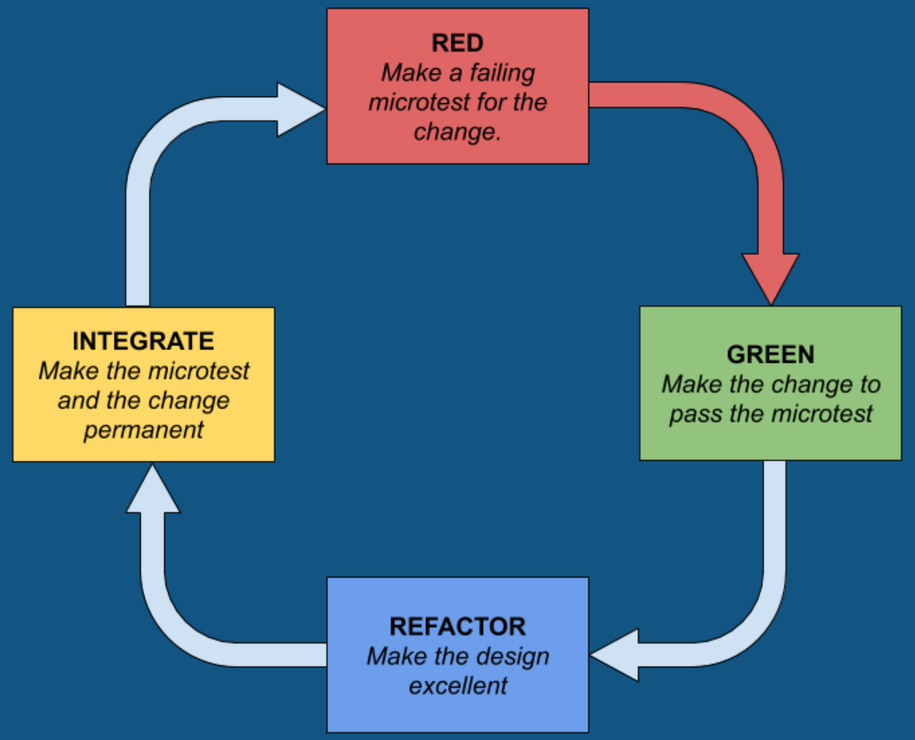
Productivity





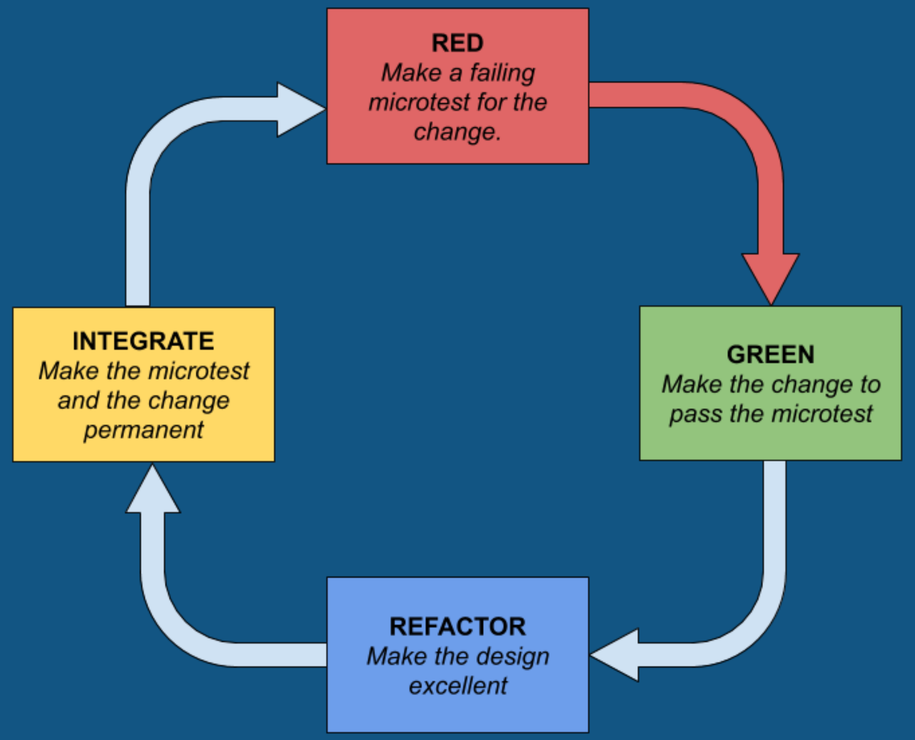


TDD is *hard*.


RED
Make a failing microtest for the change.
GREEN
Make the change to pass the microtest
REFACTOR
Make the design excellent
INTEGRATE
Make the microtest and the change permanent

TDD is *hard*.

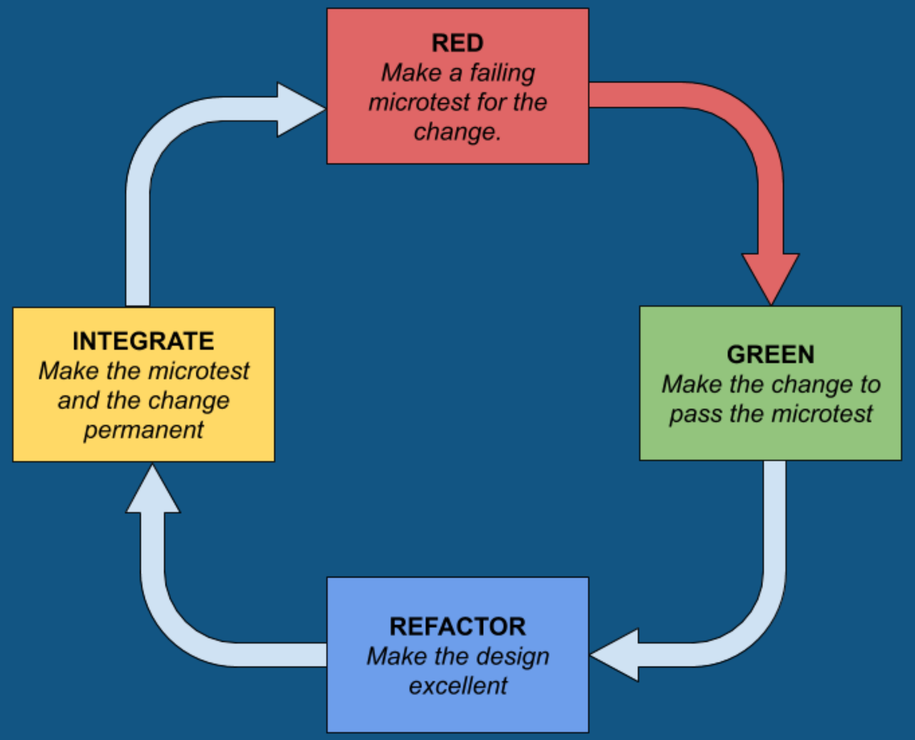
TDD is *fast*.



TDD is *hard*.

TDD is *fast*.

TDD *works*.



```
try {
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Test-Driving Jetpack Compose

in Real Android Apps

Jon Fazzaro
Nerd Coach