

Ctrip Kotlin Multiplatform Practice

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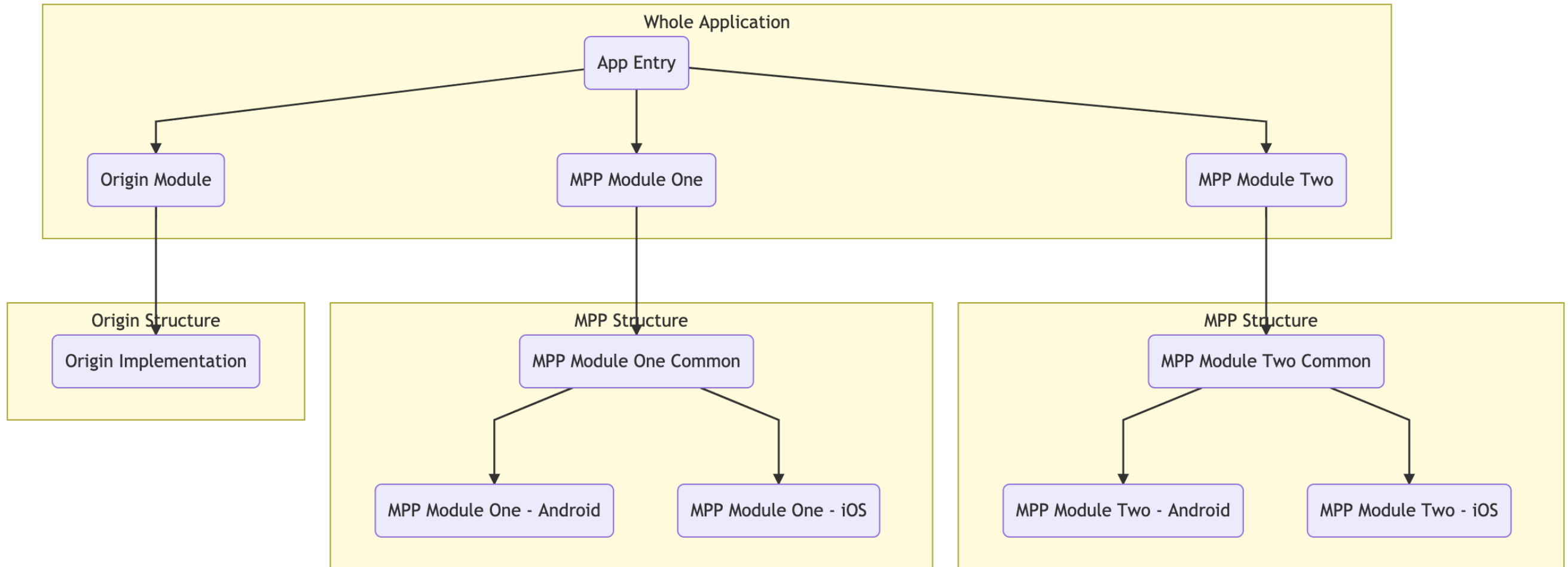
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What we need from Kotlin ?

- Data Access Layer
- Business Logic Layer
- IO / File / Network
- Concurrent / Asynchronism / Threads
- UI View Components ? (maybe)
- Tools / Test Automation

MPP4MPP Structure

(Multiplatform Project for Multiplatform Project)



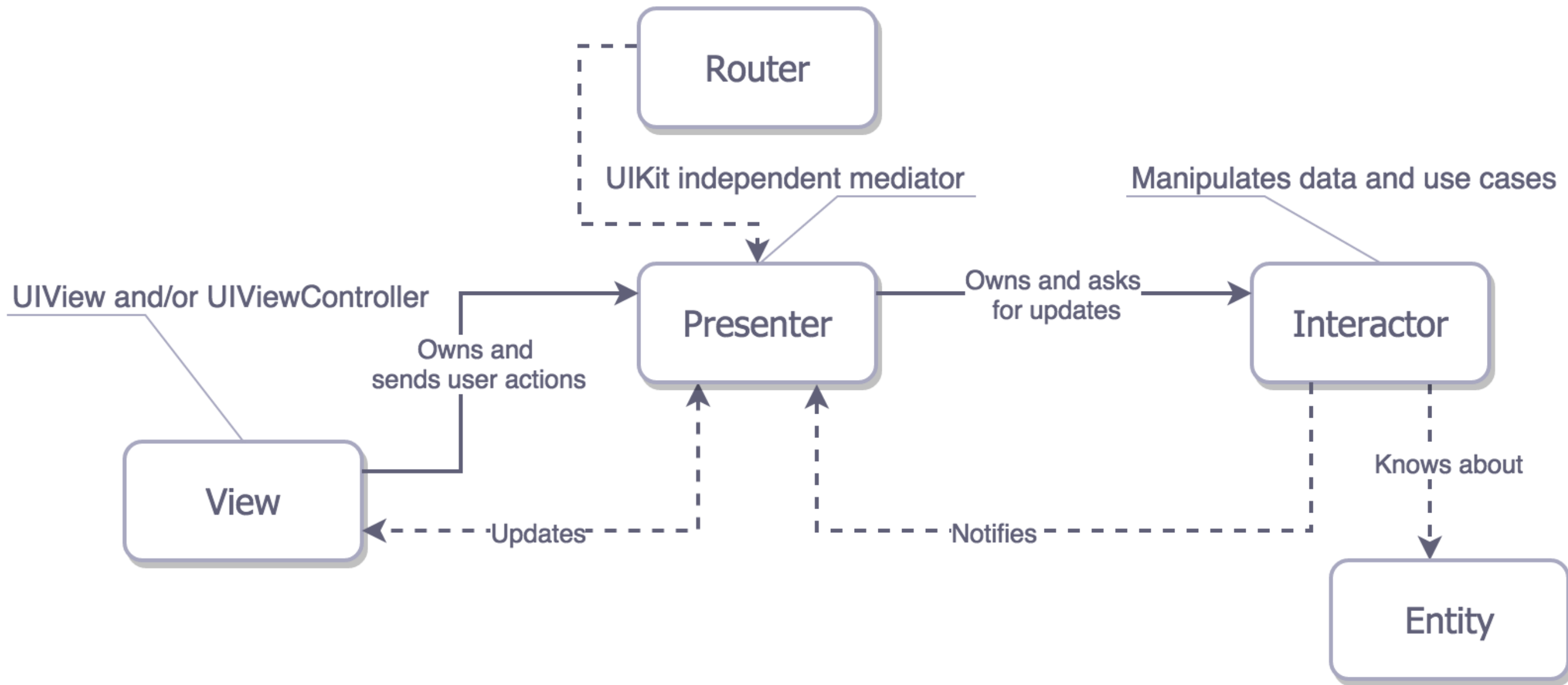
MPP4MPP Structure - Why ?

(Multiplatform Project for Multiplatform Project)

- 一个应用程序中一般不只一个MPP Module。
- 一个MPP Module需要支持可被另一个MPP Module或Native Module引用。
- Kotlin + stdlib = jar
- Kotlin + stdlib + Android API = aar
- Kotlin Native + iOS Platform API = KLib / Apple Framework
- 参考： `kotlin.test`, `kotlinx.serialization`。

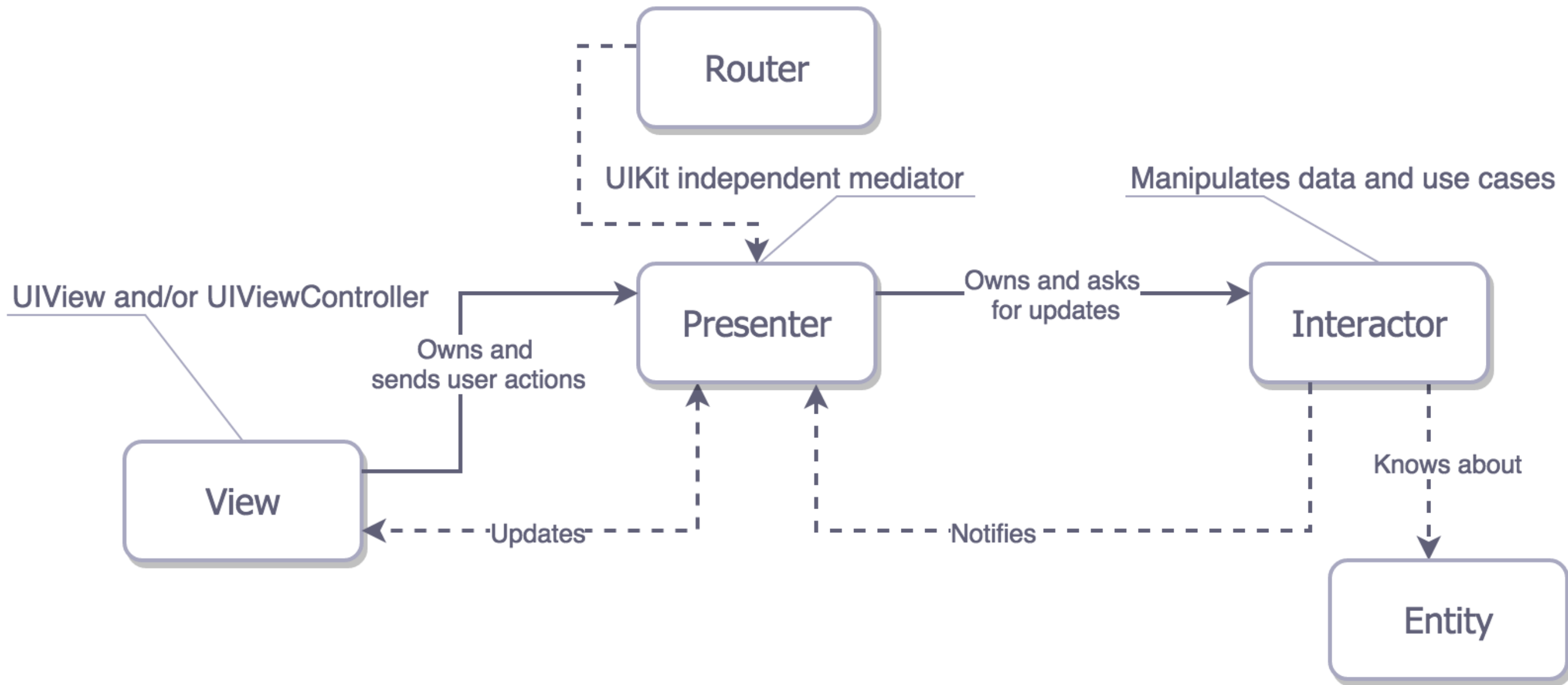
VIPER as a Container Architecture

Inspired by Uber



Move from MV* to VIPER

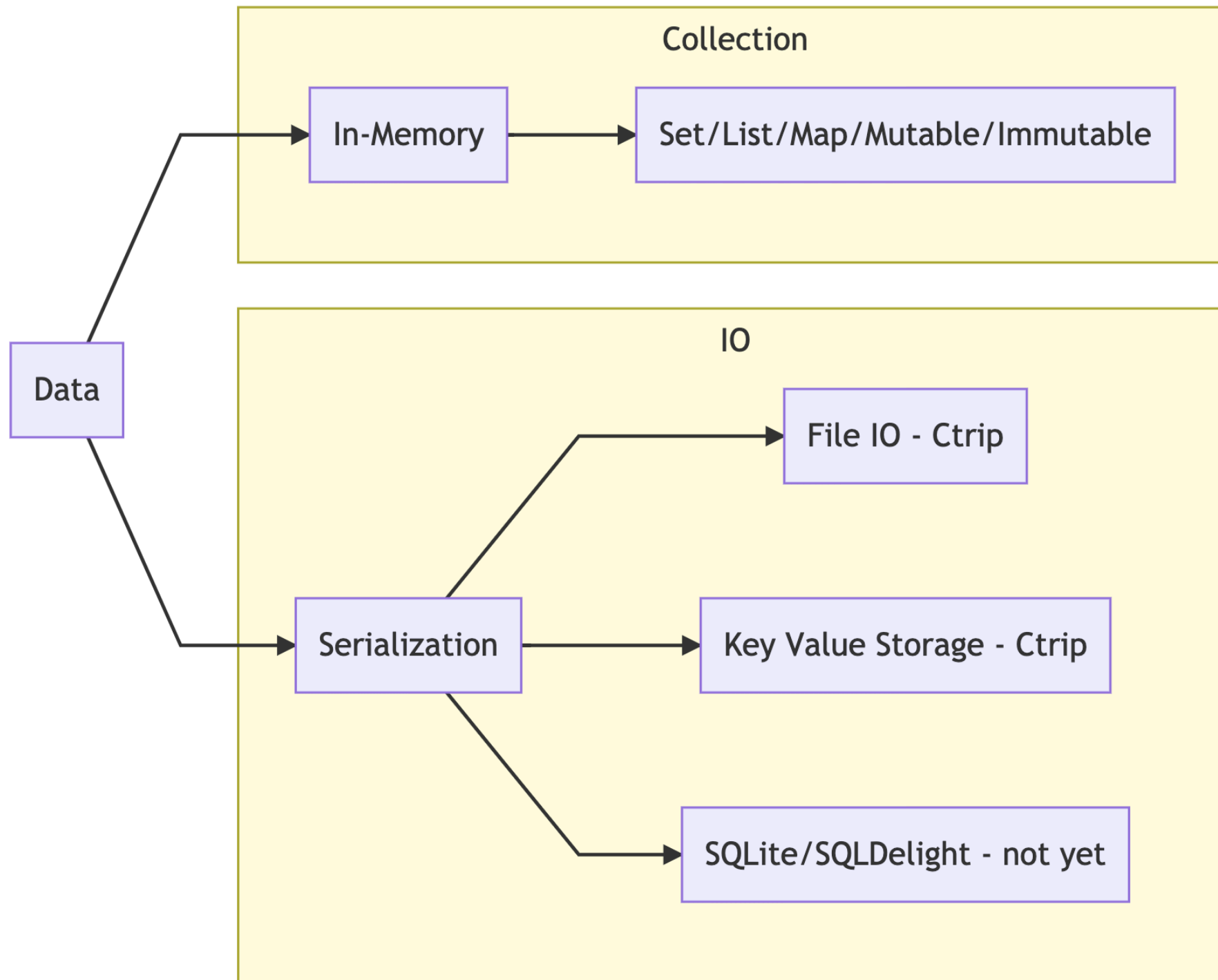
理想与现实 / 历史债代码 / 逐步迁移



VIPER reconstruct priority

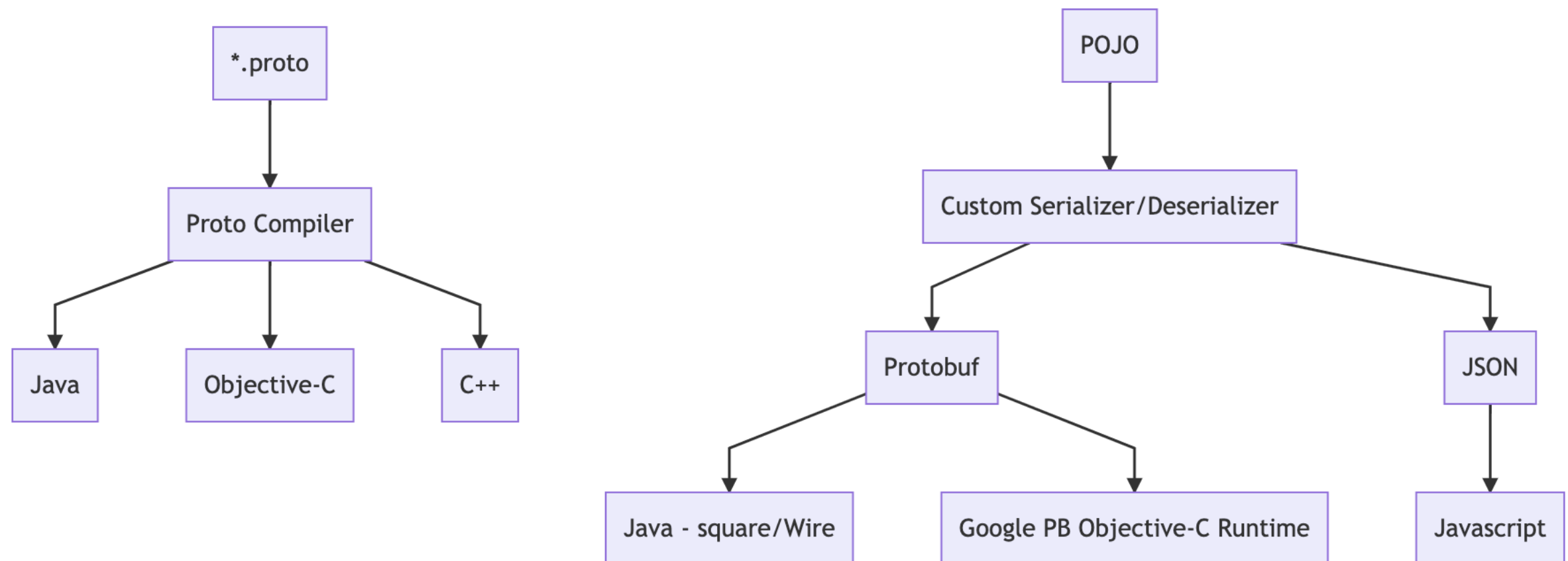
1. Entity (Data) - Platform independent
2. Interactor - Platform independent
3. Presenter - Platform independent
4. Router - Platform related
5. View - Platform strong dependent

Entity/Data



Network Protocol Redesign - The old way

- Base on Schema (Protobuf / JSON / XML / Swagger API)
- Base on Data Object Declaration (POJO / JavaBean)



Network Protocol Redesign - Kotlin

- Advantage:
- Kotlin Data Class + Serialization Annotation
- One Schema / One Object Declaration / One Source Code
- Support Multiple Serialization Format
- Disadvantage:
- Performance benchmark slower
- What is the benefit for Java Service Developer ?

Kotlin Native for iOS

Binary Size Integration

Case(Byte)	link size	OCsize.app	OCsize Framework	Link Size Delta	app size delta	framework size delta
Default	463691	1104029	1337821			
Int	464451	1105021	1340245	760	992	2424
Int?	465499	1110061	1343037	1048	5040	2792
Long	466259	1110861	1345325	760	800	2288
Long?	467163	1111533	1347758	904	672	2433
Float	467955	1112317	1350076	792	784	2318
Float?	468875	1112989	1352598	920	672	2522
Double	469683	1117949	1354941	808	4960	2343
Double?	470587	1118637	1357360	904	688	2419
Short	471347	1119437	1359682	760	800	2322
Short?	472251	1120125	1362134	904	688	2452
Byte	473011	1125037	1364421	760	4912	2287
Byte?	473915	1125725	1366830	904	688	2409
String	474819	1130541	1369304	904	4816	2474
String?	475691	1131213	1371741	872	672	2437
ArrayList<An	476675	1132013	1374442	984	800	2701
HashMap<An	477803	1133357	1378236	1128	1344	3794
HashSet<Any	478755	1134173	1380899	952	816	2663
LinkedHash	479659	1139133	1383539	904	4960	2640
LinkedHashS	480563	1139917	1386144	904	784	2605

Interactor / Presenter - `kotlinx.coroutines`

- `kotlinx.coroutines` is awesome!
- But more complicated with Kotlin Native for iOS.
- Still work in progress.

Thank you