

Flutter Under the UI

István Juhos



@stewemetal

Flutter 3 apps run on...

Android API 19 & above

iOS iOS 9 & above

Linux Debian 10 & above

macOS El Capitan & above

Web Chrome 84 & above

Web Firefox 72.0 & above

Web Safari on El Capitan & above

Web Edge 1.2.0 & above

Windows Windows 7 & above

<https://docs.flutter.dev/development/tools/sdk/release-notes/supported-platforms>

One codebase to implement...

- UI
- State handling
- Network communication
- Persistent data storage
- Accessibility
- Testing
- Etc.

One codebase to implement...

...the same app for multiple platforms!

UI

Flutter apps are not just

UI

UI

App state handling

Use-cases

DiskDataSources

NetworkDataSources

Preferences

Database

Network APIs

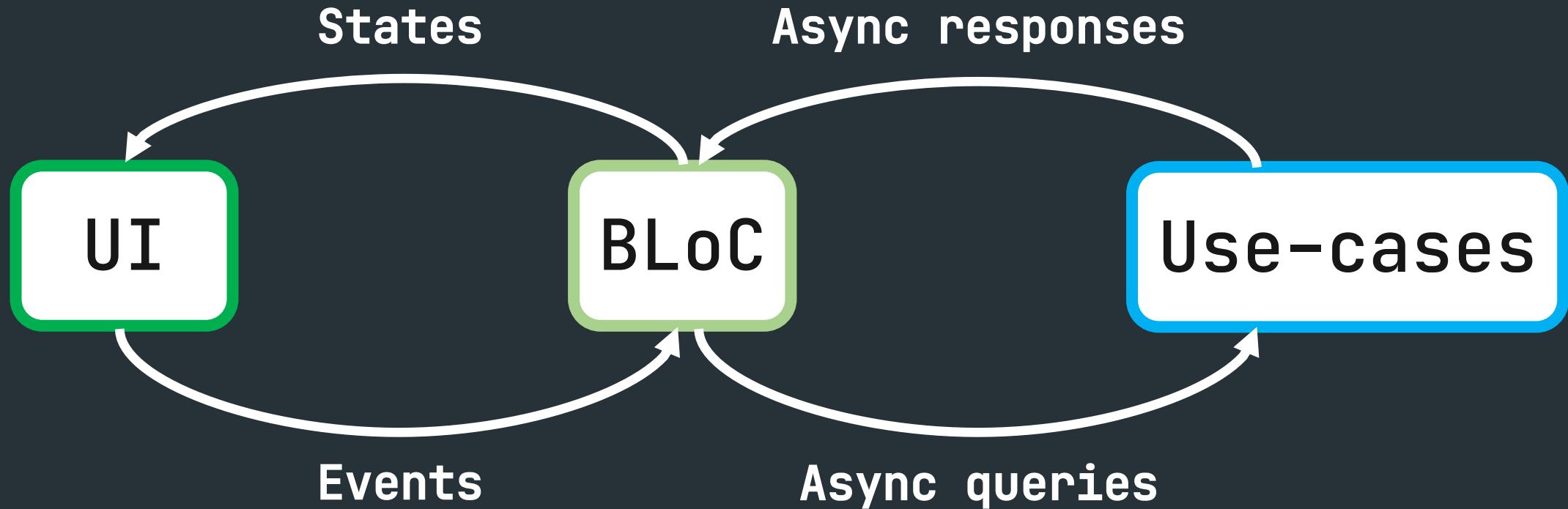
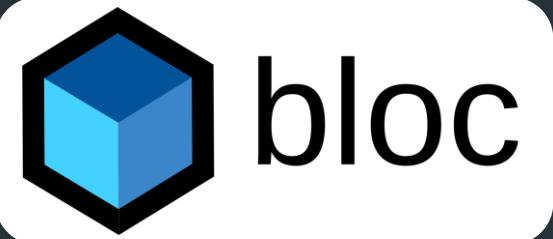
Flutter app architectures

App state handling

Flutter app architectures

- ◆ **BLoC**
- ◆ **MobX**
- ◆ **Redux**

BLoC

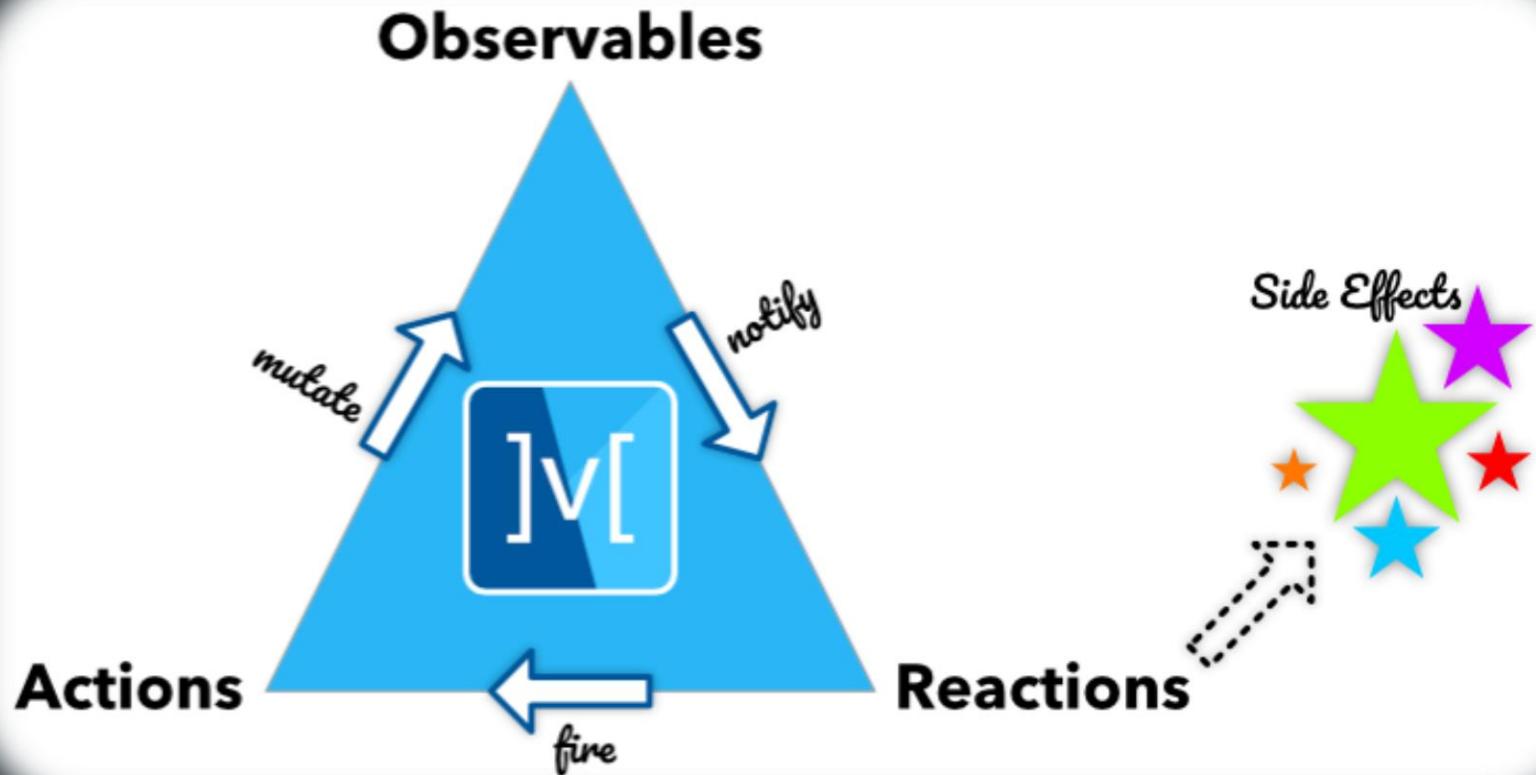


https://pub.dev/packages/flutter_bloc/

Flutter app architectures

- ◆ **BLoC**
- ◆ **MobX**
- ◆ **Redux**

MobX

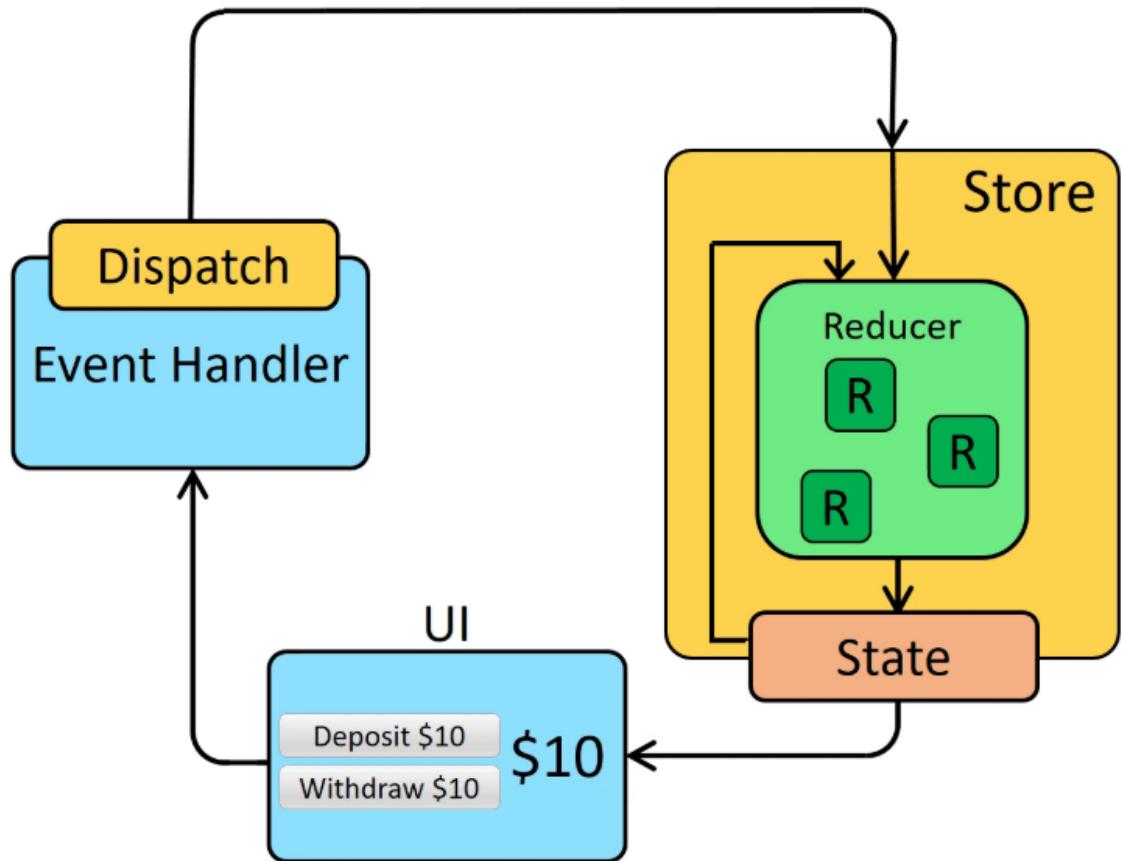


<https://mobx.js.org/>
<https://pub.dev/packages/mobx>

Flutter app architectures

- ◆ **BLoC**
- ◆ **MobX**
- ◆ **Redux**

Redux



<https://redux.js.org/>

<https://pub.dev/packages/redux>

https://pub.dev/packages/flutter_redux

Flutter app architectures

- ◆ **BLoC**
- ◆ **MobX**
- ◆ **Redux**

UI

App state handling

Use-cases

DiskDataSources

NetworkDataSources

Preferences

Database

Network APIs

Packages for lower layers

- Network calls
- Database handling
- JSON serialization
- Dependency injection

Packages for lower layers

- ◆ Network calls
 - ◆ http
 - ◆ Dio + Retrofit
 - ◆ Chopper

◆ Database handling

Packages for lower layers



NETWORK CALLS

- Database handling
 - sqflite
 - moor
 - sembast



JSON serialization

Packages for lower layers



Database handling

- ◆ JSON serialization
 - ◆ json_serializable
 - ◆ json_annotation
 - ◆ dart:convert



Dependency injection

Packages for lower layers

-  JSON serialization
-  Dependency injection
-  Provider
-  GetIt
-  Modular

UI

App state handling

Use-cases

DiskDataSources

NetworkDataSources

Preferences

Database

Network APIs

Resources

- ◆ docs.flutter.dev/get-started/codelab
- ◆ docs.flutter.dev/get-started/codelab-web
- ◆ pub.dev/packages/flutter_bloc
- ◆ pub.dev/packages/mobx
- ◆ pub.dev/packages/flutter_redux

Flutter App Architectures

István Juhos

TIER

   stewemetal

- Flutter apps are not just about UI
- Concepts from supported platforms made it into Flutter
- More and more packages support all available target platforms