

Jetpack Architecture

- Android/Fragment
 - ViewModel #LiveData(s)
 - Repository
 - Model #Room
 - SQLite
 - Remote Data Source #Retrofit
 - Webservice
 - Separation Of Concerns
 - Stable
 - Testable
 - Reactive
 - Single Source Of Truth
- Room
- ViewModel
- ViewModelFactory
 - Dagger2 Multibindings: Map<Key, Provider>
 - Key: ViewModel class
 - Value: ViewModel
- Repository
 - Take harvy data request logic from ViewModel
- LiveData
 - Immutable
 - `onActive()` called when there is any observer
 - `onInactive` called when there is no observer
 - Stick
- MutableLiveData
 - Mutable
- MediatorLiveData
 - LiveData subclass which may observe other LiveData objects and react on OnChanged events from them
- SingleLiveEvent
 - A lifecycle-aware observable that sends only new updates after subscription(explicit call to `setValue()/call()`), used for events like navigation and Snackbar messages.

- Only one observer is going to be notified of changes.
 - Solution: Use an Event wrapper instead of SingleLiveEvent
- Avoid harvy Activity <--Intent--> Fragment
- Usually:
 - ViewModel use MutableLiveData, but it exposes the immutable LiveData.
 - Observe in `onCreate()`, bind LifecycleOwner.
- Lifecycle.Transformations
 - `static <X, Y> LiveData<Y> map(LiveData<X> source, final Function<X, Y> func)`
 - `static <X, Y> LiveData<Y> switchMap(LiveData<X> source, final Function<X, LiveData<Y>> func)`
- Navigation
- WorkManager
 - Long-running HTTP downloads?
 - YES: DownloadManager
 - NO: Deferrable?
 - NO: Foreground service
 - YES: Triggered by system condition?
 - YES: WorkManager
 - NO: Run at precise time?
 - YES: AlarmManager
 - NO: WorkManager