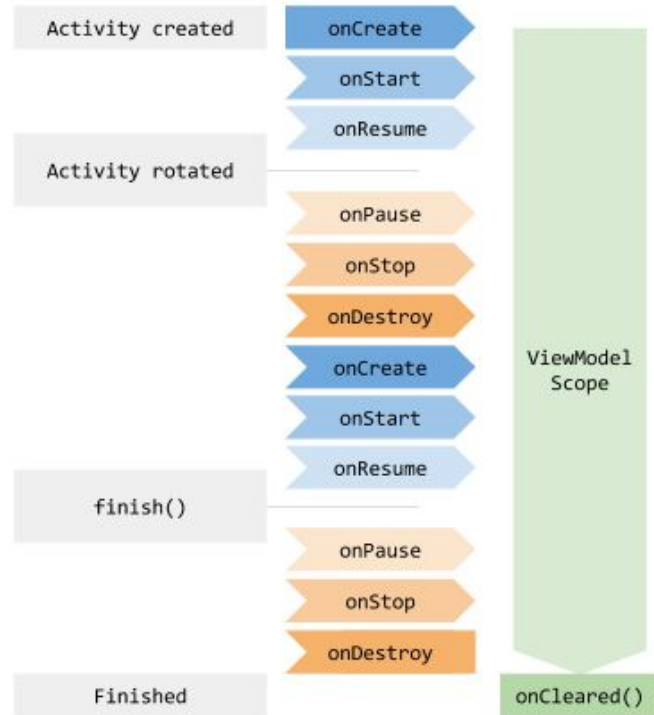# Android Development

Android Viewmodels

The ViewModel class is designed to store and manage UI-related data in a lifecycle conscious way. The ViewModel class allows data to survive configuration changes such as screen rotations.

It's easier and more efficient to separate out view data ownership from UI controller logic.

Viewmodel lifecycle

You usually request a ViewModel the first time the system calls an activity object's onCreate() method. The system may call onCreate() several times throughout the life of an activity, such as when a device screen is rotated. The ViewModel exists from when you first request a ViewModel until the activity is finished and destroyed.

The ViewModel remains in memory until the Lifecycle it's scoped to goes away permanently: in the case of an activity, when it finishes, while in the case of a fragment, when it's detached.

LiveData

Ensures your UI matches your data state

No memory leaks

No crashes due to stopped activities

No more manual lifecycle handling

Always up to date data

Proper configuration changes

Sharing resources

```
implementation "androidx.lifecycle:lifecycle-viewmodel-ktx:$lifecycle_version"

implementation "androidx.lifecycle:lifecycle-livedata-ktx:$lifecycle_version"

implementation "androidx.lifecycle:lifecycle-runtime-ktx:$lifecycle_version"

implementation "androidx.core:core-ktx:1.3.2"
```