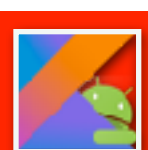# Android Architecture Components

@somkiat

Topics

What and Why ?
Components
Workshop

What ?

Components

Lifecycle component
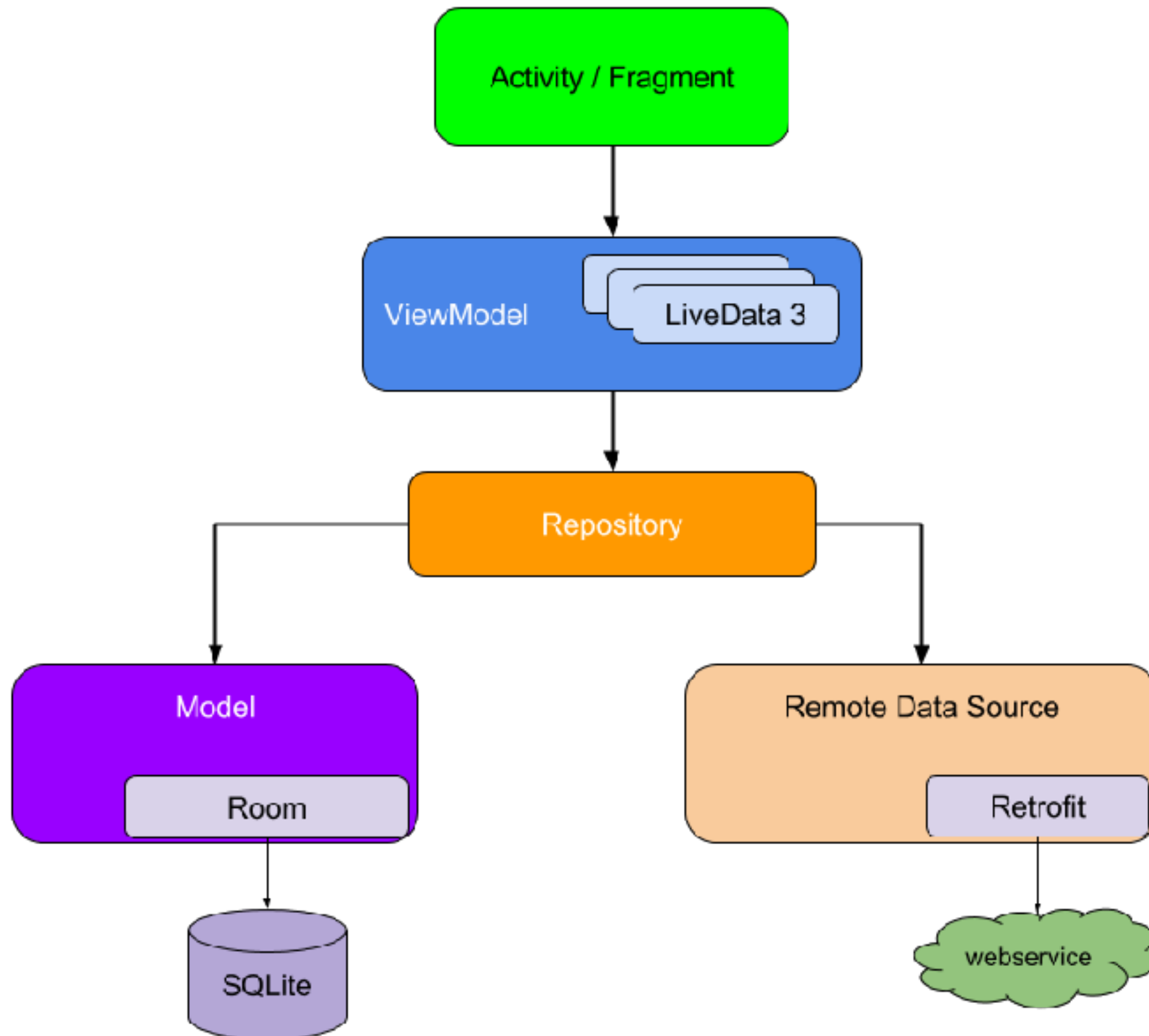LiveData
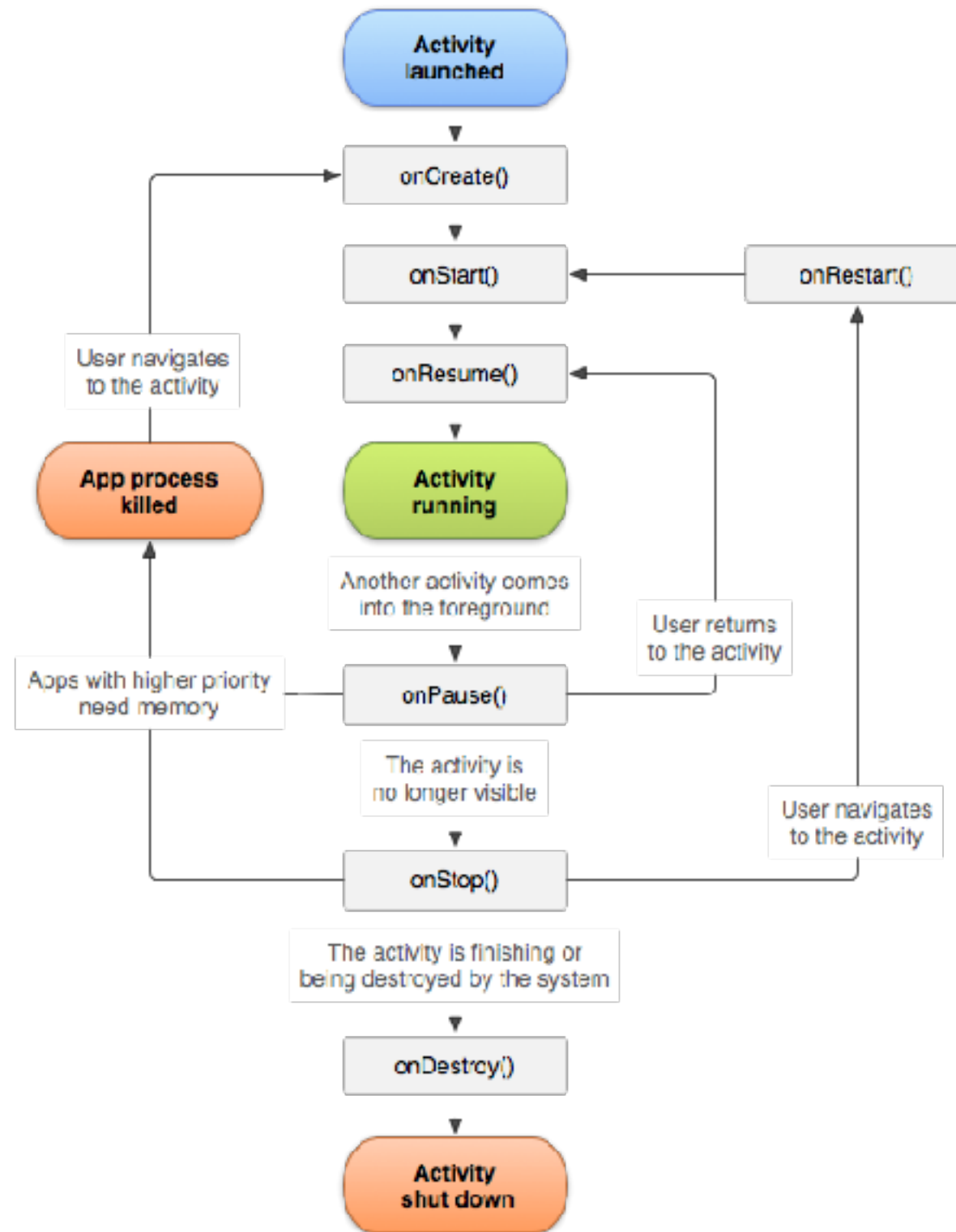**ViewModel**
Data persistence => Room

App Architecture

Why ?

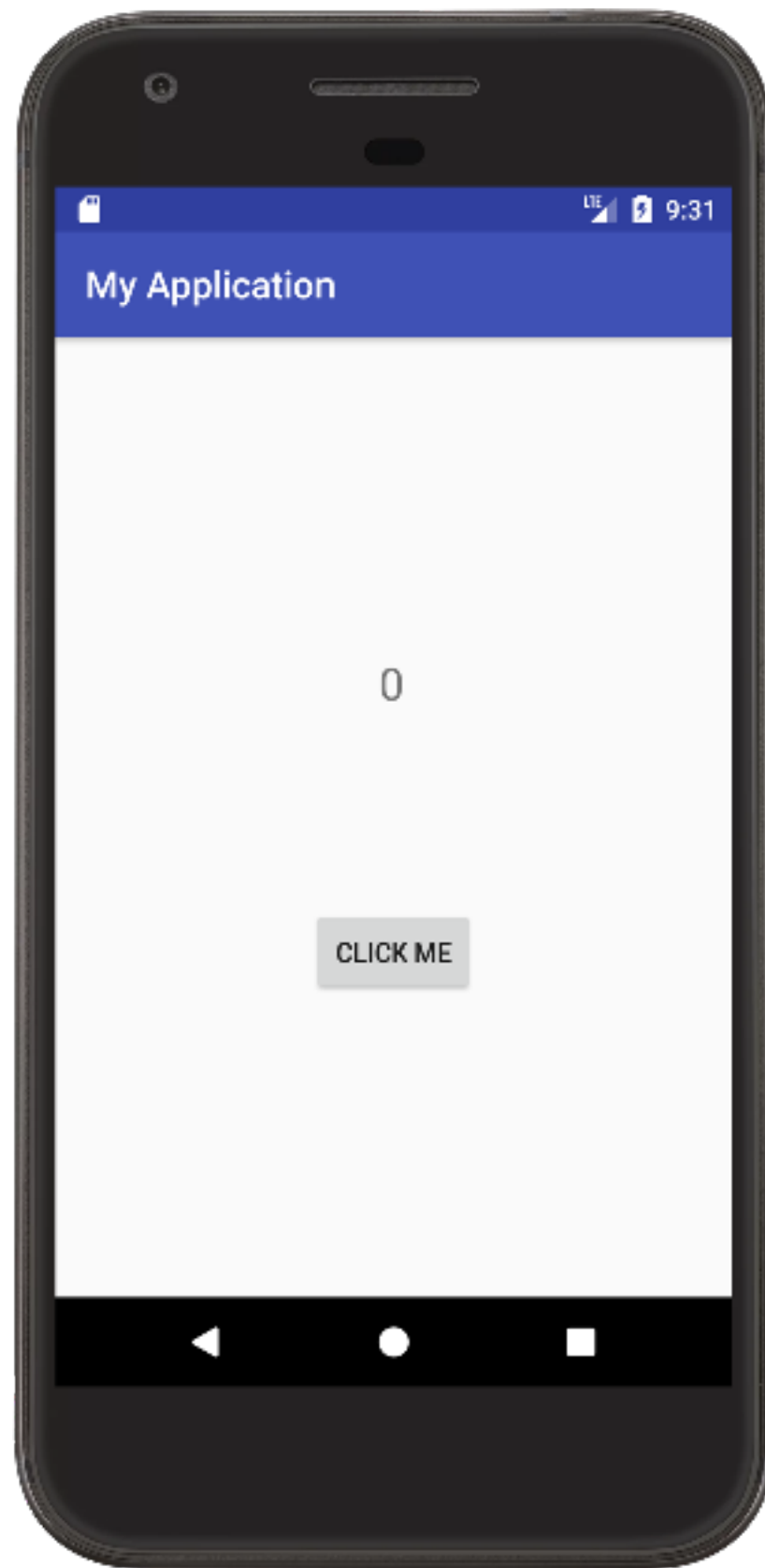# Activity LifeCycle

https://developer.android.com/guide/components/activities/activity-lifecycle.html

บริษัท สยามชำนาญกิจ จำกัด และเพื่อนพ้องน้องพี่

Workshop with ViewModel

My Application

0

CLICK ME

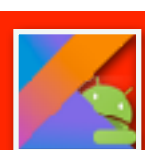บริษัท สยามชำนาญกิจ จำกัด และเพื่อนพ้องน้องพี่

Add dependency in build.gradle

```
dependencies {
    implementation fileTree(dir: 'libs', include: ['*.jar'])
    implementation 'com.android.support:appcompat-v7:26.1.0'
    implementation 'com.android.support.constraint:constraint-lay
    testImplementation 'junit:junit:4.12'
    androidTestImplementation 'com.android.support.test:runner:1.
    androidTestImplementation 'com.android.support.test.espresso:

    compile "android.arch.lifecycle:runtime:1.0.3"
    compile "android.arch.lifecycle:extensions:1.0.0"
    annotationProcessor "android.arch.lifecycle:compiler:1.0.0"
}
```

Create CounterViewModel

```java
import android.arch.lifecycle.ViewModel;

class CounterViewModel extends ViewModel {

    private int counter;

    int getCounter() {
        return counter;
    }

    void setCounter(int counter) {
        this.counter = counter;
    }
}
```

Use ViewModel in Activity(1)

```java
public class MainActivity extends AppCompatActivity {

    private CounterViewModel counterViewModel;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);


        counterViewModel = ViewModelProviders
                .of( activity: this).get(CounterViewModel.class);
        displayCounter();
    }
}
```
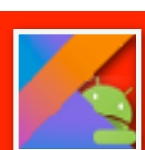
Use ViewModel in Activity (2)

```java
private void displayCounter() {
    TextView result = findViewById(R.id.result);
    result.setText(String.valueOf(counterViewModel.getCounter()));
}

public void onCounter(View view) {
    counterViewModel.setCounter(counterViewModel.getCounter() + 1);
    displayCounter();
}
```

Just the beginning ...

Resources

https://developer.android.com/topic/libraries/architecture/index.html

https://github.com/googlesamples/android-architecture-components/

https://developer.android.com/topic/libraries/architecture/guide.html

https://codelabs.developers.google.com/codelabs/android-lifecycles

https://codelabs.developers.google.com/codelabs/android-persistence