

Requirement

- Minimum SDK Version: 14
- Need add android.permission.CAMERA permission to AndroidManifest.xml
- Need add android.permission.INTERNET permission to AndroidManifest.xml

Initial setting

1. Add SDK (cocololo-sdk.aar) to the project.

Copy cocololo-sdk.aar to libs folder in app module. Default name app
project/app/libs/cocololo-sdk.aar

2. Settings AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.sample">

    <uses-permission android:name="android.permission.CAMERA"/>
    <uses-permission android:name="android.permission.INTERNET"/>

    .....

</manifest>
```

Option

android.hardwareAccelerated="true" to application block.

Hardware will used in image processing

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.sample">

    <uses-permission android:name="android.permission.CAMERA"/>
    <uses-permission android:name="android.permission.INTERNET"/>

    .....

    <application
        android:label="@string/app_name"
        android:theme="@style/AppTheme"
        ...
        android:hardwareAccelerated="true"> // Add this line. Set to
true if it is false
        ....
    </application>

</manifest>
```

3. Dependencies in build.gradle

Default `project/app/build.gradle`

```
apply plugin: 'com.android.application'

repositories {
    jcenter()
    mavenCentral()
    flatDir {
        dirs 'libs' // Need to load sdk in libs folder
    }
}

android {
    .....
}

dependencies {
    compile(name: 'cocololo-sdk', ext: 'aar') // Load cocololo sdk
}
```

How to use ?

1. Init Layout

Add HeartbeatGraphView and SurfaceView into Layout `activity_main.xml`

- HeartbeatGraphView: Show chart brightness data
- SurfaceView: need for images processing

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/activity_main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:keepScreenOn="true"
    android:paddingBottom="@dimen/activity_vertical_margin"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    tools:context=".MainActivity">

    <SurfaceView
        android:id="@+id/surface_view"
        android:layout_width="100dp"
        android:layout_height="100dp"
        android:layout_alignParentRight="true"/>

    <com.winfrontier.cocololo.sdk.View.Measurement.HeartbeatGraphView
        android:id="@+id/heart_beat_graph_view"
```

```

        android:layout_width="match_parent"
        android:layout_height="150dp"
        android:layout_below="@id/surface_view"
        android:layout_marginTop="25dp"
    />

</RelativeLayout>

```

2. Init Activity

Create CocololoMeasument into your activity

```

public class MainActivity extends AppCompatActivity {
    private CocololoMeasument mCocololoMeasument;

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

        mCocololoMeasument = new CocololoMeasument(this, // "This"
is your activity
                                (HeartbeatGraphView)
findViewById(R.id.heart_beat_graph_view),
                                (SurfaceView)
findViewById(R.id.surface_view)
                                );
    }
}

```

Controller Close/Open camera when your activity onPause/onResume

```

@Override
protected void onPause() {
    super.onPause();
    cocololoMeasument.onPause();
}

@Override
protected void onResume() {
    super.onResume();
    cocololoMeasument.onResume();
}

```

Release memory and exit Cocololo SDK

```

@Override
protected void onDestroy() {
    cocololoMeasument.onDestroy();
    super.onDestroy();
}

```

3. Measurement

For Android 6 or higher, you need to obtain the right to use the camera.

Follow the instructions of google

via <https://developer.android.com/training/permissions/requesting.html>

Prepare measurement to call `cocololoPrepareMeasument` function.

```
cocololoMeasument.cocololoPrepareMeasument(new
CocololoMeasument.OnPrepareCamera() {
    @Override
    public void onCameraSuccess() {
        // Must succeed you can use
        // To do something as enable measure button
    }

    @Override
    public void onCameraFailure() {
        // Maybe you not have privileges Camera, or Camera not
        available
    }
});
```

Start Measurement

Call `cocololoStart` function.

```
cocololoMeasument.cocololoStart(new
CocololoMeasument.OnMeasuringListener() {
    @Override
    public void onStared() {
        // start
        // You can show loading, progress ...
    }

    @Override
    public void onProgress(float percent) {
        // Min 0.0 and Max 1.0
    }

    @Override
    public void onSuccess() {
        // Complete the measurement process
        // Become to get Life Score
    }

    @Override
    public void onError() {
        // The process fails
    }
});
```

Get Life Score

- First time create profile

```
Profile profile = new Profile(
    "cocololokey", // Your access key
    UUID.randomUUID(), // User ID
    UUID.randomUUID().toString(), // Nick Name
    1, // Sex
    "19900717", // Birthday
    "Vietnam", // Region
    "No", // Action as There are sports activities
    178, // Height (cm)
```

```
        82 // Weight (kg)
    );
```

- Get Data

```
cocololoMeasurement.getLifeScoreResult(profile,
    new CocololoMeasurement.OnGetLifeScoreResult() {
        @Override
        public void onResult(GetLifescoreResult lifescoreResult) {
            if (lifescoreResult.getErrorStatus() ==
EnumSet.ErrorStatus.NoError ) {
                Log.d("GetLifeScoreResult", " Data: " +
lifescoreResult);
            } else {
                // Show error
            }
        }
    });
```

- ErrorStatus info

NoError no error, you have data

NoNetworkConnection Network trouble

Timeout Usually occurs when a network connection is weak

InvalidParameter Parameter passed wrong

FailAnalysis Unable to parse the data submitted

OtherError Undefined error

InsertMeasurementInfoError Service errors due COCOLOLO