Assignment 01 - Mobile & Wearable Computing

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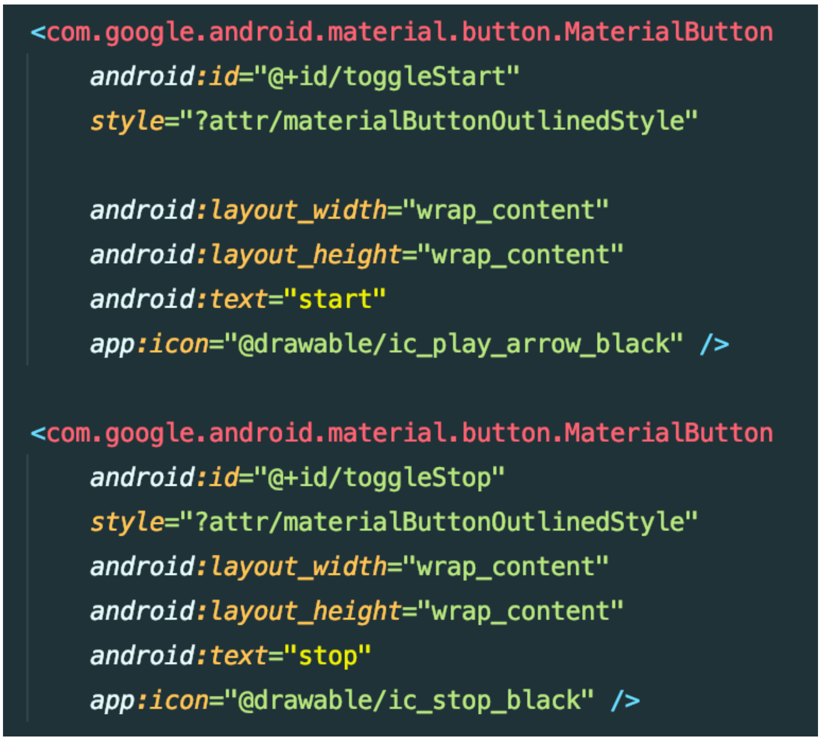
GitHub repo of the project : https://github.com/OttavioBuonomoUSI/assignment01_mwc.git

Add icons to the toggle button

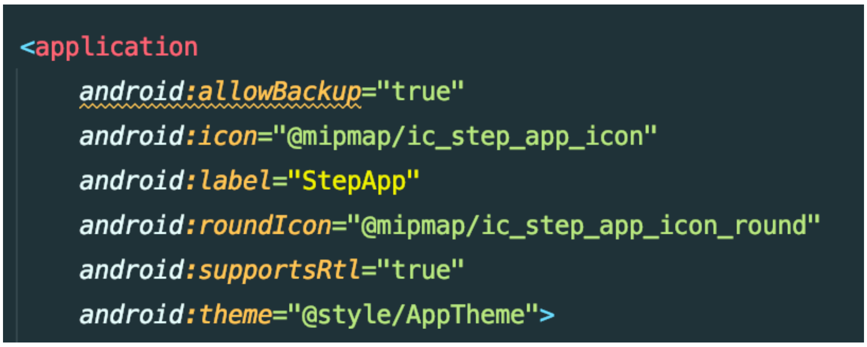
home_fragment.xml



```
<com.google.android.material.button.MaterialButton
    android:id="@+id/toggleStart"
    style="?attr/materialButtonOutlinedStyle"

    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="start"
    app:icon="@drawable/ic_play_arrow_black" />

<com.google.android.material.button.MaterialButton
    android:id="@+id/toggleStop"
    style="?attr/materialButtonOutlinedStyle"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="stop"
    app:icon="@drawable/ic_stop_black" />
```

Change the icon of the app

manifest.xml



```
<application
    android:allowBackup="true"
    android:icon="@mipmap/ic_step_app_icon"
    android:label="StepApp"
    android:roundIcon="@mipmap/ic_step_app_icon_round"
    android:supportsRtl="true"
    android:theme="@style/AppTheme">
```

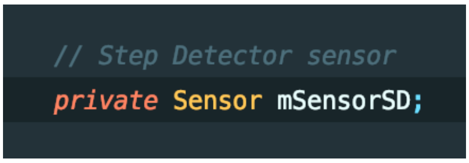
Icon of the app & result

App Icon

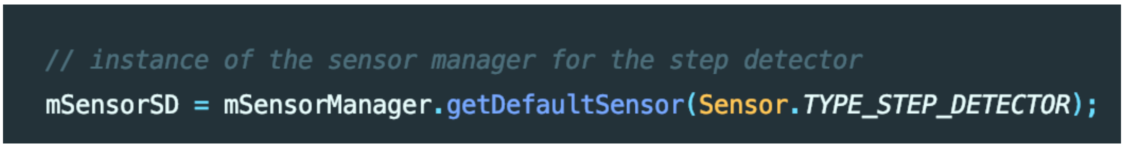
App in the app library of Android

Android STEP_DETECTOR

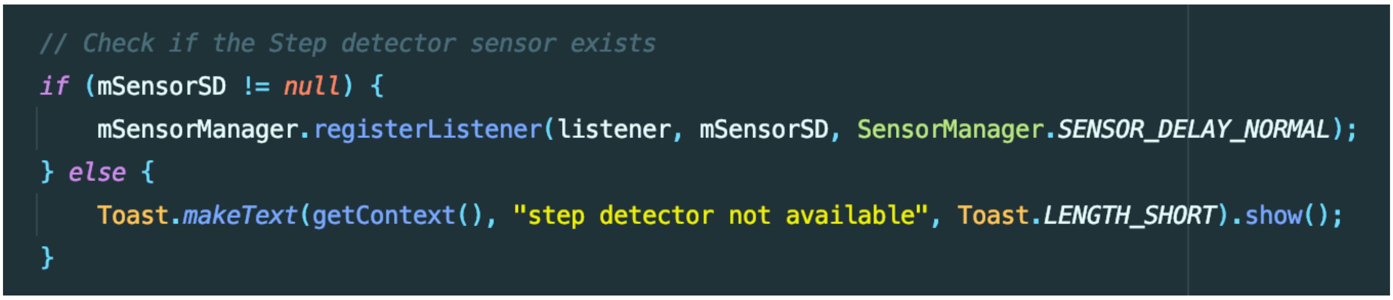
HomeFragment.java



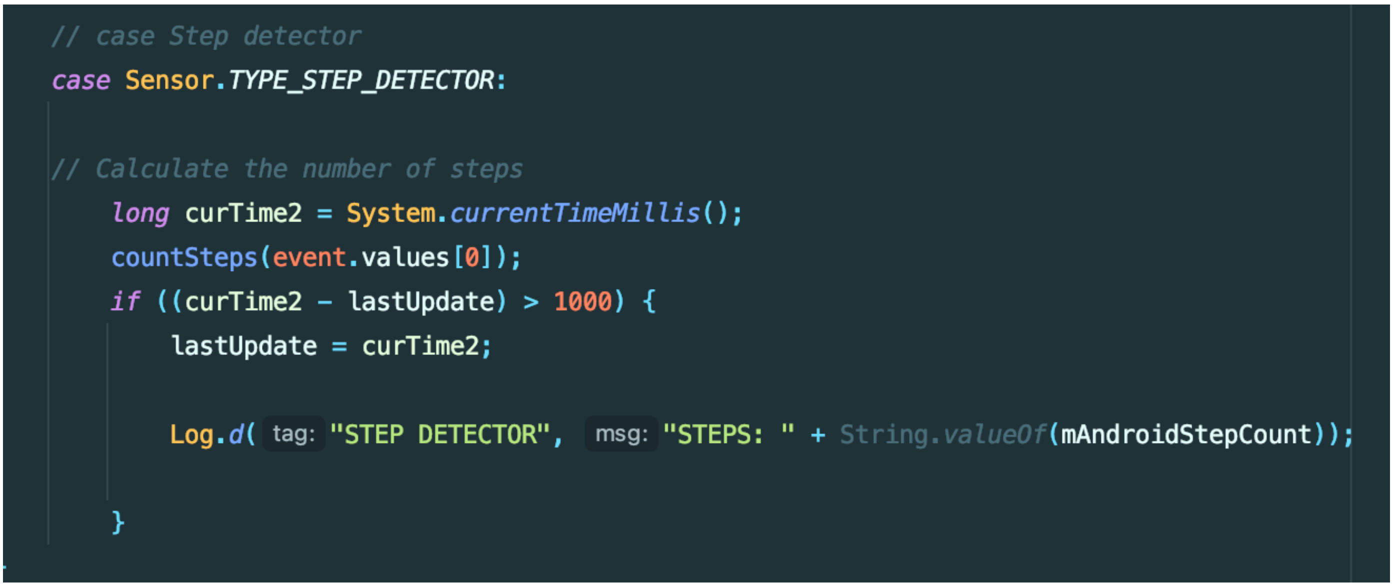
```java
// Step Detector sensor
private Sensor mSensorSD;
```



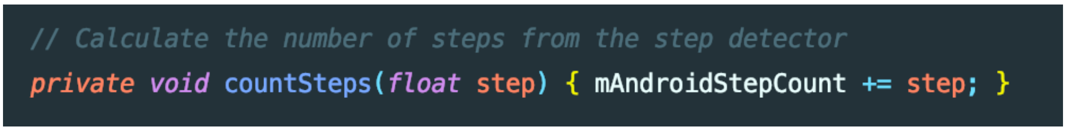
```java
// instance of the sensor manager for the step detector
mSensorSD = mSensorManager.getDefaultSensor(Sensor.TYPE_STEP_DETECTOR);
```



```java
// Check if the Step detector sensor exists
if (mSensorSD != null) {
    mSensorManager.registerListener(listener, mSensorSD, SensorManager.SENSOR_DELAY_NORMAL);
} else {
    Toast.makeText(getContext(), "step detector not available", Toast.LENGTH_SHORT).show();
}
```



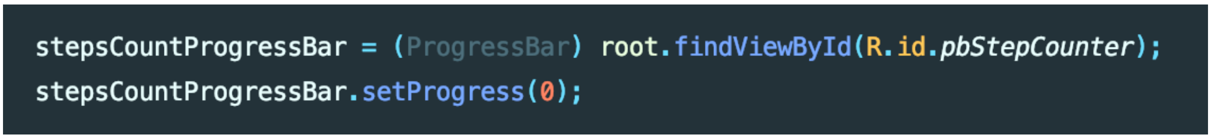
```
// case Step detector
case Sensor.TYPE_STEP_DETECTOR:

// Calculate the number of steps
    long curTime2 = System.currentTimeMillis();
    countSteps(event.values[0]);
    if ((curTime2 - lastUpdate) > 1000) {
        lastUpdate = curTime2;

        Log.d( tag: "STEP DETECTOR",  msg: "STEPS: " + String.valueOf(mAndroidStepCount));

    }
```



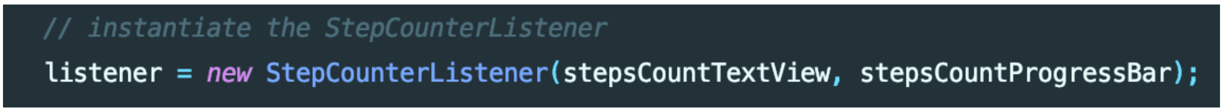
```
// Calculate the number of steps from the step detector
private void countSteps(float step) { mAndroidStepCount += step; }
```

Update the Circular Progress Bar

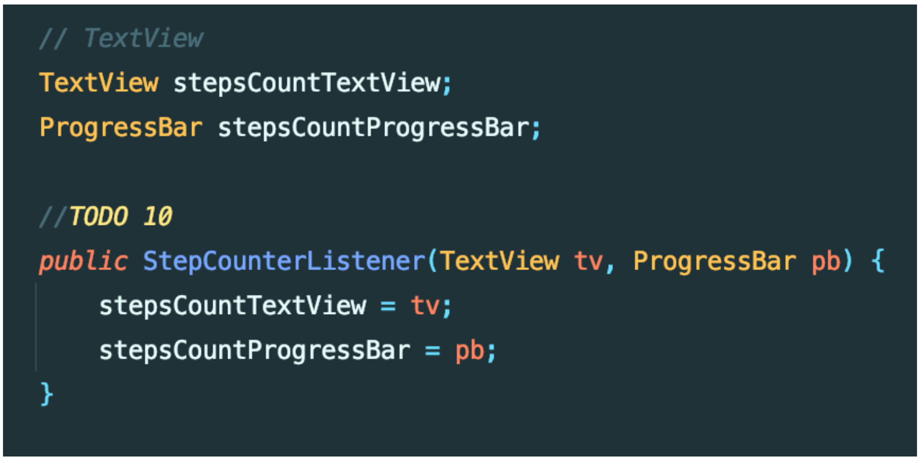
HomeFragment.java



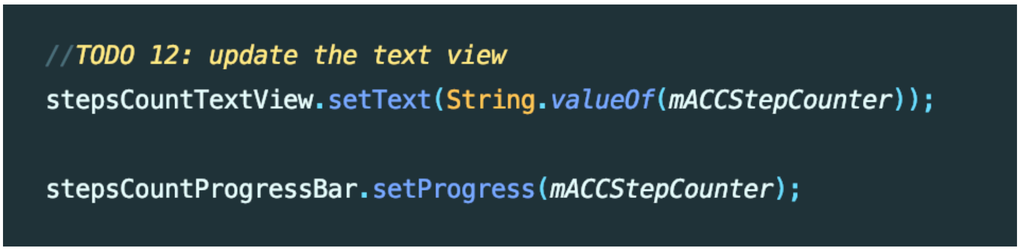
```
stepsCountProgressBar = (ProgressBar) root.findViewById(R.id.pbStepCounter);
stepsCountProgressBar.setProgress(0);
```



```
// instantiate the StepCounterListener
listener = new StepCounterListener(stepsCountTextView, stepsCountProgressBar);
```

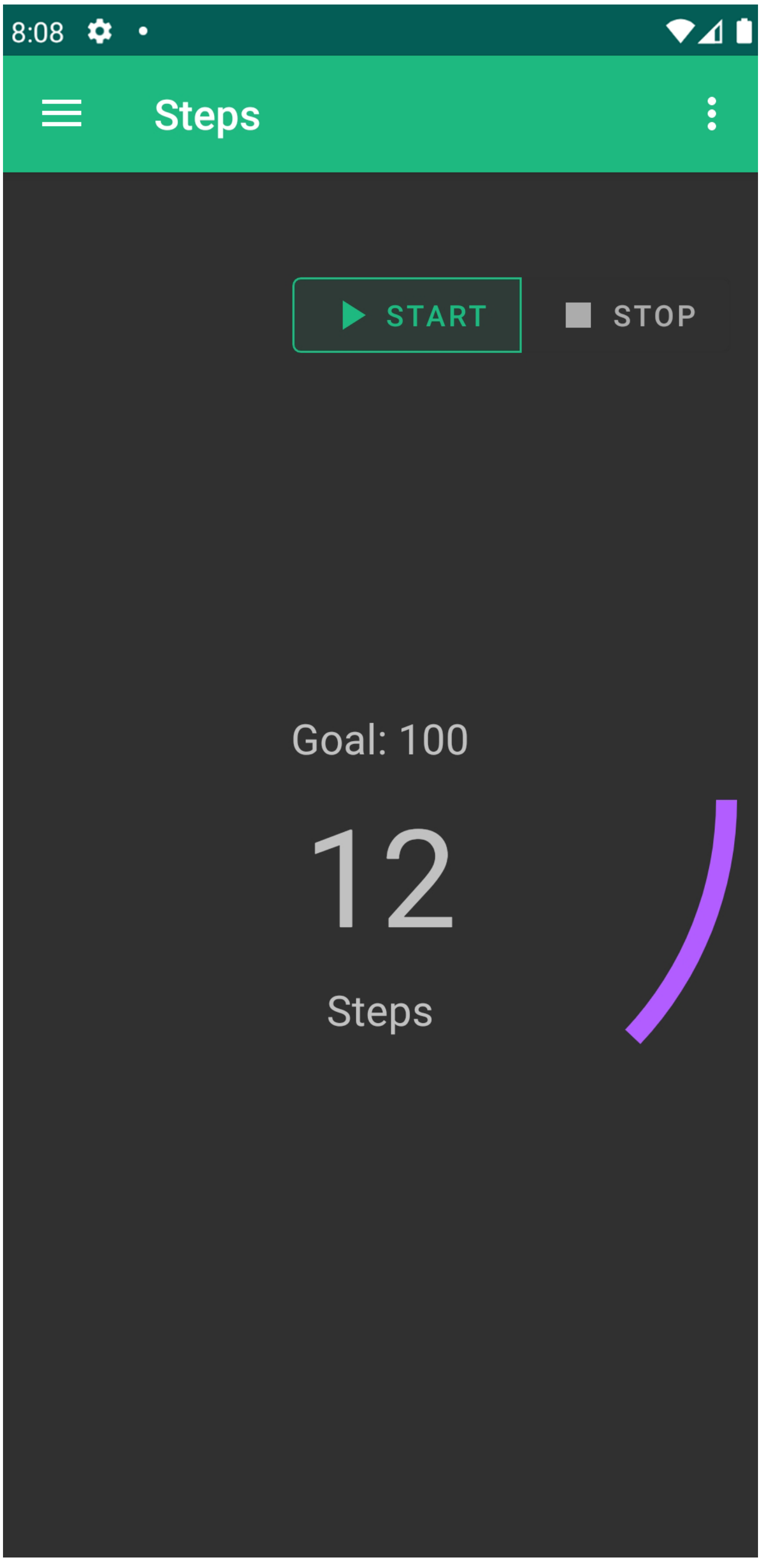


```
// TextView
TextView stepsCountTextView;
ProgressBar stepsCountProgressBar;

//TODO 10
public StepCounterListener(TextView tv, ProgressBar pb) {
    stepsCountTextView = tv;
    stepsCountProgressBar = pb;
}
```



```
//TODO 12: update the text view
stepsCountTextView.setText(String.valueOf(mACCStepCounter));

stepsCountProgressBar.setProgress(mACCStepCounter);
```

Final result


8:08
Steps
START
STOP
Goal: 100
12
Steps