**PR-20**

**20 Develop a program to implement light sensors.**

**XML Code**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center"  
 android:padding="16dp"  
 android:background="#ffffff">  
  
 <TextView  
 android:id="@+id/lightTextView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Current Light Level: "  
 android:textSize="24sp"  
 android:textColor="#000000" />  
</LinearLayout>

**Java Code**

package com.example.pr20\_light\_sensor;  
  
import androidx.appcompat.app.AppCompatActivity;  
import android.hardware.Sensor;  
import android.hardware.SensorEvent;  
import android.hardware.SensorEventListener;  
import android.hardware.SensorManager;  
import android.os.Bundle;  
import android.widget.TextView;  
  
public class MainActivity extends AppCompatActivity {  
  
 SensorManager sensorManager;  
 Sensor lightSensor;  
 SensorEventListener lightEventListener;  
 TextView lightValue;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 lightValue = findViewById(R.id.*lightTextView*);  
  
 sensorManager = (SensorManager) getSystemService(*SENSOR\_SERVICE*);  
 lightSensor = sensorManager.getDefaultSensor(Sensor.*TYPE\_LIGHT*);  
  
 if (lightSensor == null) {  
 lightValue.setText("Light Sensor not available");  
 return;  
 }  
  
 lightEventListener = new SensorEventListener() {  
 @Override  
 public void onSensorChanged(SensorEvent event) {  
 float light = event.values[0];  
 lightValue.setText("Current Light Level: " + light + " lx");  
 }  
  
 @Override  
 public void onAccuracyChanged(Sensor sensor, int accuracy) {  
 // Not used  
 }  
 };  
 }  
  
 @Override  
 protected void onResume() {  
 super.onResume();  
 sensorManager.registerListener(lightEventListener, lightSensor, SensorManager.*SENSOR\_DELAY\_NORMAL*);  
 }  
  
 @Override  
 protected void onPause() {  
 super.onPause();  
 sensorManager.unregisterListener(lightEventListener);  
 }  
}