EXERCISE NO:13

PROGRAM:

MainActivity.java:

package com.example.ex13;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Context;  
import android.hardware.Sensor;  
import android.hardware.SensorEvent;  
import android.hardware.SensorEventListener;  
import android.hardware.SensorManager;  
import android.os.Bundle;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity implements SensorEventListener {  
 EditText e1;  
 SensorManager sm;  
 Sensor tm;  
 Boolean tempAvailable;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 e1 = (EditText)findViewById(R.id.*editTextTextPersonName*);  
 sm = (SensorManager) getSystemService(Context.*SENSOR\_SERVICE*);  
 if(sm.getDefaultSensor(Sensor.*TYPE\_AMBIENT\_TEMPERATURE*)!=null)  
  
 {  
 tm = sm.getDefaultSensor(Sensor.*TYPE\_AMBIENT\_TEMPERATURE*);  
 tempAvailable = true;  
 }  
 else  
 {  
 e1.setText("Temperature sensor is not available");  
 tempAvailable = false;  
 }  
  
  
 }  
  
 @Override  
 public void onSensorChanged(SensorEvent sensorEvent) {  
 e1.setText(sensorEvent.values[0]+"°C");  
  
 }  
  
 @Override  
 public void onAccuracyChanged(Sensor sensor, int i) {  
  
 }  
  
 @Override  
 protected void onPause() {  
 super.onPause();  
 if(tempAvailable){  
 sm.unregisterListener(this);  
 }  
 }  
  
 @Override  
 protected void onPostResume() {  
 super.onPostResume();  
 if(tempAvailable){  
 sm.registerListener(this,tm,SensorManager.*SENSOR\_DELAY\_NORMAL*);  
 }  
 }  
}

activity\_main.xml:

*<?*xml version="1.0" encoding="utf-8"*?>*<androidx.constraintlayout.widget.ConstraintLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical">  
 <TextView android:id="@+id/textView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="TEMPERATURE SENSOR" />  
 <EditText android:id="@+id/editTextTextPersonName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="textPersonName" />  
 </LinearLayout>  
  
</androidx.constraintlayout.widget.ConstraintLayout>

OUTPUT:







