PROGRAM

Activity_main.xml

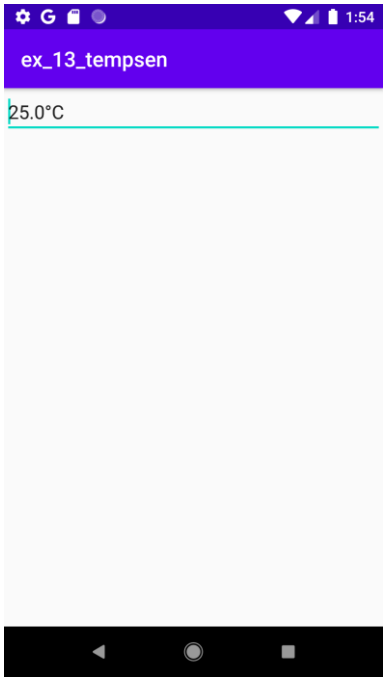
```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical">

        <EditText
            android:id="@+id/editTextTextPersonName"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:ems="10"
            android:inputType="textPersonName"
            android:text="Name" />
    </LinearLayout>
</android.support.constraint.ConstraintLayout>
```

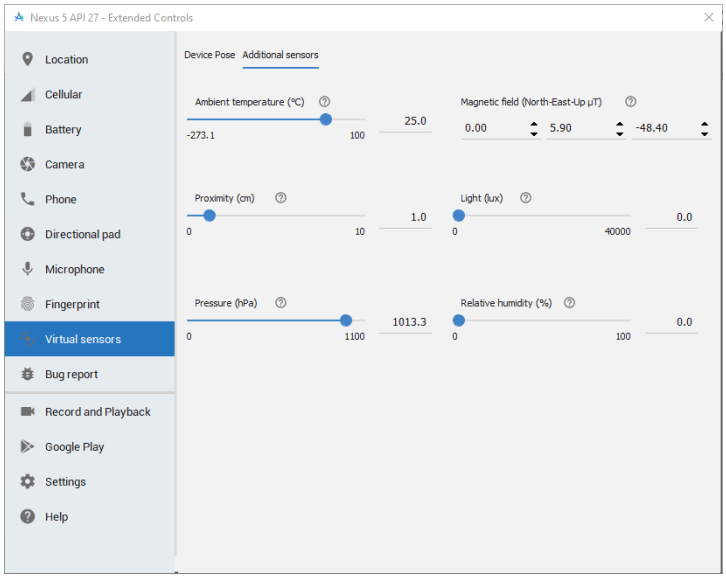
Main_activity.java

```
package com.example.ex_13_tempsen;

import android.annotation.SuppressLint;
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.support.v7.app.AppCompatActivity;
import android.widget.EditText;

//import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity implements
SensorEventListener {
    EditText e1;
    SensorManager sm;
    Sensor tm;
    Boolean tempAvailable;
```

```
    @SuppressLint("MissingInflatedId")
    @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);
        }
    }
}
```

OUTPUT


1:54
ex_13_tempsen
25.0°C


Nexus 5 API 27 - Extended Controls
Location
Cellular
Battery
Camera
Phone
Directional pad
Microphone
Fingerprint
Virtual sensors
Bug report
Record and Playback
Google Play
Settings
Help
Device Pose
Additional sensors
Ambient temperature (°C)
-273.1
100
25.0
Magnetic field (North-East-Up µT)
0.00
5.90
-48.40
Proximity (cm)
0
10
1.0
Light (lux)
0
40000
0.0
Pressure (hPa)
0
1100
1013.3
Relative humidity (%)
0
100
0.0