Ex.No:4 Develop a simple application to display the avaliable sensor in android mobile devices using Sensor Manager in android studio.

AIM:

To develop a sensor application to use the sensor manager class to identify and get the list of available sensors on a device. in Android Studio.

EQUIPMENTS REQUIRED:

Android Studio(Min.required Artic Fox)

ALGORITHM:

Step 1: Open Android Stdio and then click on File -> New -> New project.

Step 2: Then type the Application name as Sensor and click Next.

Step 3: Then select the Minimum SDK as shown below and click Next.

Step 4: Then select the Empty Activity and click Next. Finally click Finish.

Step 5: Design layout in activity_main.xml.

Step 6: Display avaliable sensor in android mobile devices.

Step 7: Save and run the application.

PROGRAM:

```
/*
Program to print the avaliable sensor in android mobile devices".
Developed by: Kaushika A
Registeration Number : 212221230048
*/
```

activity_mail.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
```

```xml
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:gravity="center"
        android:text="Sensors"
        android:textSize="20dp"
        android:textStyle="bold" />
</LinearLayout>
```

MainActivity.java

```java
package com.kass.sensors;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Context;
import android.hardware.Sensor;
import android.hardware.SensorManager;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;

import java.util.List;

public class MainActivity extends AppCompatActivity {
    private SensorManager sm;
    private TextView text;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        text=(TextView) findViewById(R.id.textView);
        sm = (SensorManager)getSystemService(Context.SENSOR_SERVICE);
        List<Sensor> sensorlist = sm.getSensorList(Sensor.TYPE_ALL);
        StringBuilder sb = new StringBuilder();
        for(Sensor s:sensorlist)
        {
            sb.append(s.getName()+"\n");
        }
        text.setVisibility(View.VISIBLE);
        text.setText(sb);
    }
}
```
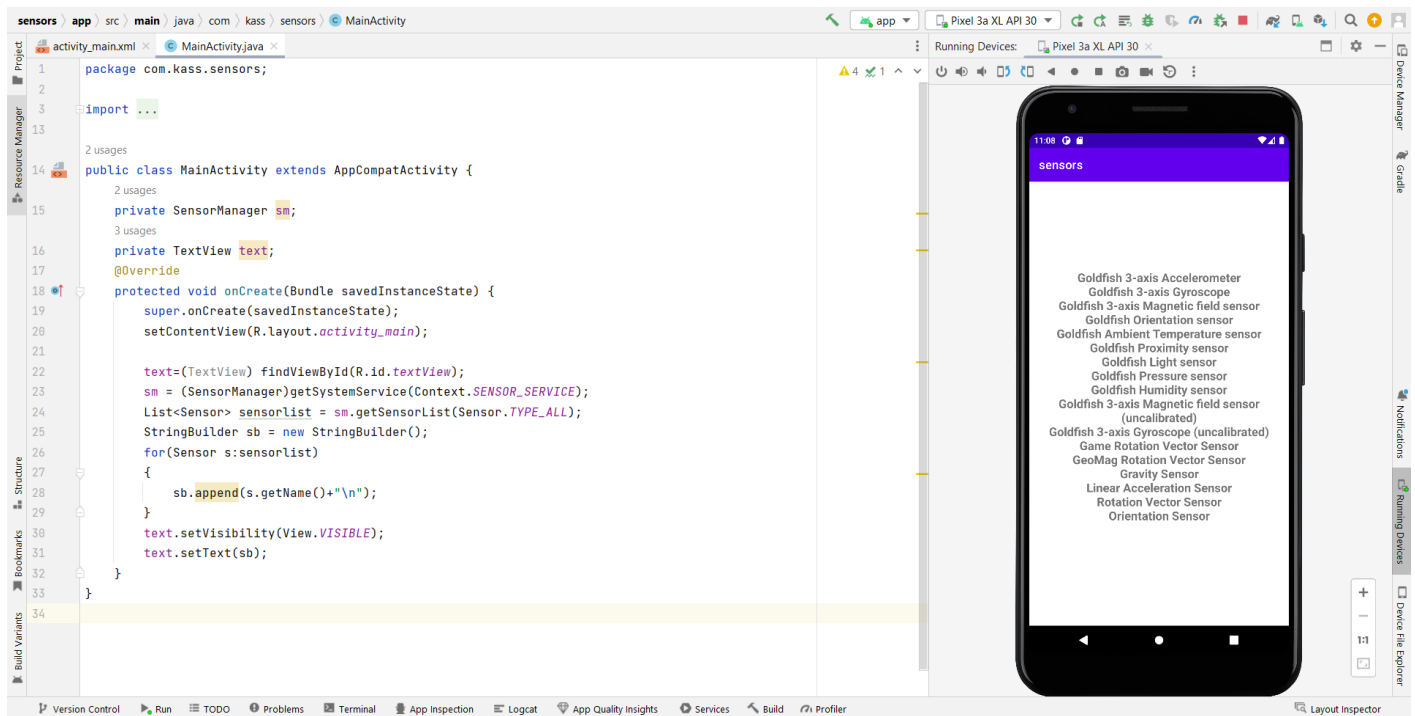
OUTPUT


```java
package com.kass.sensors;

import ...

2 usages
public class MainActivity extends AppCompatActivity {

    2 usages
    private SensorManager sm;

    3 usages
    private TextView text;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        text=(TextView) findViewById(R.id.textView);
        sm = (SensorManager)getSystemService(Context.SENSOR_SERVICE);
        List<Sensor> sensorlist = sm.getSensorList(Sensor.TYPE_ALL);
        StringBuilder sb = new StringBuilder();
        for(Sensor s:sensorlist)
        {
            sb.append(s.getName()+"\n");
        }
        text.setVisibility(View.VISIBLE);
        text.setText(sb);
    }
}
```

RESULT

Thus a Simple Android Application to display the avaliable sensor in android mobile devices using Sensor Manager in Android Studio is developed and executed successfully.