1)write a program to send and receive SMS make use of following GUI.

Activity\_main.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"  
 android:id="@+id/main"  
 android:layout\_width="match\_parent"  
 android:orientation="vertical"  
 android:gravity="center\_horizontal"  
 android:padding="10dp"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Android SMS"  
 android:textSize="20dp"  
 android:gravity="center"  
 android:layout\_margin="10dp">  
  
 </TextView>  
 <EditText  
 android:id="@+id/edt1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Mobile No"  
 android:layout\_margin="10dp">  
  
 </EditText>  
 <EditText  
 android:id="@+id/edt2"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Message"  
 android:layout\_margin="10dp">  
  
 </EditText>  
  
 <Button  
 android:id="@+id/btn1"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Send SMS"  
 android:layout\_margin="10dp">  
  
 </Button>  
  
  
</LinearLayout>

**MainActivity.java**

package com.example.sms;  
  
import android.annotation.SuppressLint;  
import android.os.Bundle;  
import android.telephony.SmsManager;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
import androidx.activity.EdgeToEdge;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.graphics.Insets;  
import androidx.core.view.ViewCompat;  
import androidx.core.view.WindowInsetsCompat;  
  
public class MainActivity extends AppCompatActivity {  
 EditText edt1,edt2;  
 Button btn1;  
 @SuppressLint("MissingInflatedId")  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
  
 edt1=findViewById(R.id.edt1);  
 edt2=findViewById(R.id.edt2);  
 btn1=findViewById(R.id.btn1);  
  
 btn1.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 String num=edt1.getText().toString();  
 String msg=edt2.getText().toString();  
 SmsManager smsManager=SmsManager.getDefault();  
 smsManager.sendTextMessage(num,null,msg,null,null);  
 Toast.makeText(MainActivity.this, "Message Send Successfully", Toast.LENGTH\_SHORT).show();  
 }  
 });  
  
 }  
  
}

**smsReceiver.java**

package com.example.sms;  
  
import android.content.BroadcastReceiver;  
import android.content.Context;  
import android.content.Intent;  
import android.os.Bundle;  
import android.telephony.SmsMessage;  
import android.util.Log;  
import android.widget.Toast;  
  
public class smsReceiver extends BroadcastReceiver {  
  
 @Override  
 public void onReceive(Context context, Intent intent) {  
 Bundle bundel=intent.getExtras();  
 Object[] smsObj=(Object[]) bundel.get("pdus");  
  
 for(Object obj : smsObj)  
 {  
 SmsMessage message= SmsMessage.*createFromPdu*((byte[]) obj);  
 String mobno= message.getDisplayOriginatingAddress();  
 String msg=message.getDisplayMessageBody();  
 Toast.*makeText*(context, "Message From:"+mobno+"\nMsg:"+msg, Toast.*LENGTH\_SHORT*).show();  
  
 }  
 *// TODO: This method is called when the BroadcastReceiver is receiving  
 // an Intent broadcast.* throw new UnsupportedOperationException("Not yet implemented");  
 }  
}

**Androidmanifest.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools">  
  
 <uses-feature  
 android:name="android.hardware.telephony"  
 android:required="false"></uses-feature>  
  
 <uses-permission android:name="android.permission.SEND\_SMS" />  
 <uses-permission android:name="android.permission.RECEIVE\_SMS"></uses-permission>  
 <uses-permission android:name="android.permission.READ\_SMS"></uses-permission>  
  
 <application  
 android:allowBackup="true"  
 android:dataExtractionRules="@xml/data\_extraction\_rules"  
 android:fullBackupContent="@xml/backup\_rules"  
 android:icon="@mipmap/ic\_launcher"  
 android:label="@string/app\_name"  
 android:roundIcon="@mipmap/ic\_launcher\_round"  
 android:supportsRtl="true"  
 android:theme="@style/Theme.SMS"  
 tools:targetApi="31">  
 <receiver  
 android:name=".smsReceiver"  
 android:enabled="true"  
 android:permission="android.permission.BROADCAST\_SMS"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.provider.Telephony.SMS\_RECEIVED"></action>  
 </intent-filter>  
  
  
 </receiver>  
  
 <activity  
 android:name=".MainActivity"  
 android:exported="true">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
 </application>  
  
</manifest>



