Java

package com.example.lab11;  
import android.Manifest;  
import android.content.BroadcastReceiver;  
import android.content.Context;  
import android.content.Intent;  
import android.content.IntentFilter;  
import android.content.pm.PackageManager;  
import android.os.Bundle;  
import android.telephony.SmsManager;  
import android.telephony.SmsMessage;  
import android.util.Log;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
import android.widget.Toast;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.app.ActivityCompat;  
import androidx.core.content.ContextCompat;  
  
public class MainActivity extends AppCompatActivity {  
  
 private static final int *MY\_PERMISSIONS\_REQUEST\_SEND\_SMS* = 1;  
 private static final String *SMS\_RECEIVED* = "android.provider.Telephony.SMS\_RECEIVED";  
  
 private EditText editTextPhoneNumber;  
 private EditText editTextMessage;  
 private TextView textViewReceivedMessage;  
 private BroadcastReceiver receiver;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 editTextPhoneNumber = findViewById(R.id.*edit\_text\_phone\_number*);  
 editTextMessage = findViewById(R.id.*edit\_text\_message*);  
 textViewReceivedMessage = findViewById(R.id.*text\_view\_received\_message*);  
 Button buttonSend = findViewById(R.id.*button\_send*);  
  
 buttonSend.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 sendSMS();  
 }  
 });  
  
 if (ContextCompat.*checkSelfPermission*(this, Manifest.permission.*RECEIVE\_SMS*) != PackageManager.*PERMISSION\_GRANTED*) {  
 ActivityCompat.*requestPermissions*(this, new String[]{Manifest.permission.*RECEIVE\_SMS*}, *MY\_PERMISSIONS\_REQUEST\_SEND\_SMS*);  
 }  
  
 receiver = new BroadcastReceiver() {  
 @Override  
 public void onReceive(Context context, Intent intent) {  
 if (intent.getAction() != null && intent.getAction().equals(*SMS\_RECEIVED*)) {  
 Bundle bundle = intent.getExtras();  
 if (bundle != null) {  
 Object[] pdus = (Object[]) bundle.get("pdus");  
 if (pdus != null) {  
 for (Object pdu : pdus) {  
 SmsMessage smsMessage = SmsMessage.*createFromPdu*((byte[]) pdu);  
 String sender = smsMessage.getDisplayOriginatingAddress();  
 String message = smsMessage.getMessageBody();  
 textViewReceivedMessage.setText("From: " + sender + "\nMessage: " + message);  
 }  
 }  
 }  
 }  
 }  
 };  
 registerReceiver(receiver, new IntentFilter(*SMS\_RECEIVED*));  
 }  
  
 @Override  
 protected void onDestroy() {  
 super.onDestroy();  
 unregisterReceiver(receiver);  
 }  
  
 private void sendSMS() {  
 String phoneNumber = editTextPhoneNumber.getText().toString();  
 String message = editTextMessage.getText().toString();  
  
 if (ContextCompat.*checkSelfPermission*(this, Manifest.permission.*SEND\_SMS*) != PackageManager.*PERMISSION\_GRANTED*) {  
 ActivityCompat.*requestPermissions*(this, new String[]{Manifest.permission.*SEND\_SMS*}, *MY\_PERMISSIONS\_REQUEST\_SEND\_SMS*);  
 } else {  
 try {  
 SmsManager smsManager = SmsManager.*getDefault*();  
 smsManager.sendTextMessage(phoneNumber, null, message, null, null);  
 Toast.*makeText*(this, "SMS sent successfully", Toast.*LENGTH\_SHORT*).show();  
 } catch (Exception e) {  
 Log.*e*("Send SMS", "Sending SMS failed", e);  
 Toast.*makeText*(this, "SMS sending failed", Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
 }  
}

xml

<?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:padding="16dp">  
  
 <EditText  
 android:id="@+id/edit\_text\_phone\_number"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter phone number"  
 android:inputType="phone"  
 android:layout\_marginBottom="8dp" />  
  
 <EditText  
 android:id="@+id/edit\_text\_message"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter message"  
 android:inputType="textMultiLine"  
 android:layout\_marginBottom="8dp" />  
  
 <Button  
 android:id="@+id/button\_send"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Send SMS"  
 android:layout\_gravity="center"  
 android:layout\_marginBottom="16dp" />  
  
 <TextView  
 android:id="@+id/text\_view\_received\_message"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Received messages will appear here"  
 android:textSize="16sp"  
 android:padding="8dp"  
 android:background="#e0e0e0" />  
</LinearLayout>