

```
import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;

import android.Manifest;
import android.annotation.SuppressLint;
import android.app.Activity;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.database.Cursor;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageButton;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    String pn, mess;
    Button send_sms;
    ImageButton ib;
    EditText na, num, message;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Intent pickcontact = new Intent(
            Intent.ACTION_PICK,
            ContactsContract.CommonDataKinds.Phone.CONTENT_URI);
        Toast t = new Toast(this);
        na = findViewById(R.id.name);
        num = findViewById(R.id.Number);
        message = findViewById(R.id.message);
        ib = findViewById(R.id.ib);
        send_sms = findViewById(R.id.Send_sms);
        ib.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivityForResult(pickcontact, 1);
            }
        });
        requestContactsPermission();
        send_sms.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                pn = num.getText().toString();
                mess = message.getText().toString();
                if (pn.equalsIgnoreCase("") ||
mess.equalsIgnoreCase("")) {
                    t.setText("phone number or message is empty");
                    t.setDuration(Toast.LENGTH_SHORT);
                }
            }
        });
    }
}
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        t.show();
        na.requestFocus();
    } else {
        SmsManager smsManager = SmsManager.getDefault();
        smsManager.sendTextMessage(pn, null, mess, null,
null);

        t.setText("SMS Sent");
        t.setDuration(Toast.LENGTH_SHORT);
        t.show();
    }
}

});
}

// Request contact permission if it
// has not been granted already
private void requestContactsPermission() {
    if (!hasContactsPermission()) {
        ActivityCompat.requestPermissions(this,
            new String[]{Manifest.permission.READ_CONTACTS},
1);
    }
    if (!hasSendSMSPermission()) {
        ActivityCompat.requestPermissions(this,
            new String[]{Manifest.permission.SEND_SMS}, 1);
    }
}

private boolean hasContactsPermission() {
    return ContextCompat.checkSelfPermission(this,
Manifest.permission.READ_CONTACTS)
        ==
        PackageManager.PERMISSION_GRANTED;
}

private boolean hasSendSMSPermission() {
    return ContextCompat.checkSelfPermission(this,
Manifest.permission.SEND_SMS) ==
        PackageManager.PERMISSION_GRANTED;
}

@SuppressWarnings({"SuspiciousIndentation", "Range"})
@Override
protected void onActivityResult(int requestCode, int resultCode,
@Nullable Intent data) {
    super.onActivityResult(requestCode, resultCode, data);
    if (resultCode != Activity.RESULT_OK) return;
    Uri contactUri = data.getData();
    Cursor cursor = this.getContentResolver().query(contactUri,
        new String[]{"display_name", "data1"},
        null,
        null,
        null);

    try {
        if (cursor.getCount() == 0) return;
        cursor.moveToFirst();
        na.setText(cursor.getString(0));
        num.setText(cursor.getString(1));
    } finally {
        System.out.println("in phone cursor");
    }
}

```

```
}  
}  
}
```

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"  
android:orientation="vertical"  
tools:context=".MainActivity">  
  
    <LinearLayout  
        android:layout_width="wrap_content"  
        android:layout_height="match_parent"  
        android:orientation="vertical"  
        app:layout_constraintEnd_toEndOf="parent"  
        app:layout_constraintStart_toStartOf="parent">  
        <TextView  
            android:layout_width="match_parent"  
            android:layout_height="wrap_content"  
            android:gravity="center"  
            android:textSize="30dp"  
            android:text="SMS Application"/>  
        <LinearLayout  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content"  
            android:orientation="horizontal">  
            <TextView  
                android:layout_width="wrap_content"  
                android:layout_height="wrap_content"  
                android:gravity="center"  
                android:textSize="30dp"  
                android:text="Name:" />  
            <EditText  
                android:layout_width="250dp"  
                android:layout_height="50dp"  
                android:layout_gravity="top"  
                android:id="@+id/name" />  
            <ImageButton  
                android:layout_width="50dp"  
                android:layout_height="50dp"  
                android:id="@+id/ib"  
                android:src="@drawable/ic_launcher_background" />  
        </LinearLayout> <LinearLayout  
            android:layout_width="wrap_content"  
            android:layout_height="wrap_content"  
            android:orientation="horizontal">  
            <TextView  
                android:layout_width="wrap_content"  
                android:layout_height="wrap_content"
```

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        android:gravity="center"
        android:textSize="30dp"
        android:text="Number:"/>
    <EditText
        android:layout_width="400dp"
        android:layout_height="50dp"
        android:layout_gravity="top"
        android:id="@+id/Number"/>
</LinearLayout> <LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:textSize="30dp"
        android:text="Message:"/>
    <EditText
        android:layout_width="400dp"
        android:layout_height="50dp"
        android:layout_gravity="top"
        android:id="@+id/message"/>
</LinearLayout>
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:clickable="true"
        android:text="Send SMS"
        android:id="@+id/Send_sms"/>
</LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>

```

Manifest

```

<uses-permission android:name="android.permission.SEND_SMS"/>
<uses-permission android:name="android.permission.READ_CONTACTS"/>
<uses-permission android:name="android.permission.WRITE_CONTACTS"/>

```