

Activity_compose.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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".ComposeActivity">

    <LinearLayout
        android:id="@+id/containersend"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="175px"
        android:orientation="vertical">

        <EditText
            android:id="@+id/ph"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="25px"
            android:ems="10"
            android:hint="Phone Number"
            android:inputType="phone" />

        <EditText
            android:id="@+id/msg"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_margin="25px"
            android:ems="10"
            android:hint="Message"
            android:inputType="textPersonName" />
    </LinearLayout>

    <Button
        android:id="@+id/send"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="100px"
        android:text="Send" />

</LinearLayout>
```

Activity_inbox.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:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".InboxActivity">

    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent">
```

```

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

            <TextView
                android:id="@+id/msgs"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_margin="50px" />

        </LinearLayout>
    </ScrollView>

</LinearLayout>

```

Activity_main.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"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="123dp"
        android:layout_marginTop="226dp"
        android:layout_marginEnd="123dp"
        android:text="SMS Messages"
        android:textColor="@android:color/black"
        android:textSize="24sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/buttonc"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="88dp"
        android:layout_marginTop="341dp"
        android:onClick="launchCompose"
        android:text="Compose"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/buttoni"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="341dp"
        android:layout_marginEnd="88dp"
        android:onClick="launchInbox"
        android:text="Inbox"

```

```

        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>

```

ComposeActivity.java

```

package com.app.smsmessages;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class ComposeActivity extends AppCompatActivity {

    Button b;
    EditText ph, msg;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_compose);
        b = findViewById(R.id.send);
        ph = findViewById(R.id.ph);
        msg = findViewById(R.id.msg);
        b.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                SmsManager smsManager = SmsManager.getDefault();
                smsManager.sendTextMessage(ph.getText().toString(), null,
msg.getText().toString(), null, null);
                Toast.makeText(getApplicationContext(), "Sent!",
Toast.LENGTH_SHORT).show();
            }
        });
    }
}

```

InboxActivity.java

```

package com.app.smsmessages;

import androidx.annotation.RequiresApi;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.NotificationCompat;

import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.BroadcastReceiver;
import android.content.ContentResolver;
import android.content.Context;
import android.content.Intent;
import android.database.Cursor;

```

```
import android.net.Uri;
import android.os.Build;
import android.os.Bundle;
import android.telephony.SmsMessage;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.TextView;
import android.widget.Toast;

public class InboxActivity extends AppCompatActivity {

    public static boolean active = false;
    public static InboxActivity inst;
    TextView msgs;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        inst = this;
        refreshInbox();
    }

    void refreshInbox() {
        InboxActivity.this.runOnUiThread(new Runnable() {
            @Override
            public void run() {
                setContentView(R.layout.activity_inbox);
                msgs = findViewById(R.id.msgs);
                String m = "";
                ContentResolver c = getContentResolver();
                Cursor i = c.query(Uri.parse("content://sms/inbox"), null,
null, null, null);
                if(!i.moveToFirst()) {
                    return;
                }
                else {
                    do {
                        m = m + "From: " +
i.getString(i.getColumnIndex("address")) + "\nMessage: " +
i.getString(i.getColumnIndex("body")) + "\n\n";
                    } while(i.moveToNext());
                    msgs.setText(m);
                }
            }
        });
    }

    public static InboxActivity instance() {
        return inst;
    }

    @Override
    protected void onStart() {
        super.onStart();
        active = true;
        inst = this;
    }

    @Override
    protected void onStop() {
        super.onStop();
        active = false;
    }
}
```

```
        inst = null;
    }
}
```

MainActivity.java

```
package com.app.smsmessages;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;

import static android.Manifest.permission.READ_SMS;
import static android.Manifest.permission.RECEIVE_SMS;
import static android.Manifest.permission.SEND_SMS;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ActivityCompat.requestPermissions(MainActivity.this, new String[]
{READ_SMS, SEND_SMS, RECEIVE_SMS}, 1);
    }
    public void launchCompose(View view) {
        Intent intent = new Intent(MainActivity.this,
ComposeActivity.class);
        startActivity(intent);
    }
    public void launchInbox(View view) {
        Intent intent = new Intent(MainActivity.this, InboxActivity.class);
        startActivity(intent);
    }
}
```

SmsBroadcastReceiver.java

```
package com.app.smsmessages;

import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.app.PendingIntent;
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.os.Build;
import android.os.Bundle;
import android.telephony.SmsMessage;

import java.util.Date;

import androidx.annotation.RequiresApi;
import androidx.core.app.NotificationCompat;

public class SmsBroadcastReceiver extends BroadcastReceiver {
```

```

public static final String SMS_BUNDLE = "pdus";

@RequiresApi(api = Build.VERSION_CODES.M)
public void onReceive(Context context, Intent intent) {
    Object[] sms;
    String format, smsBody, address;
    SmsMessage smsMessage;
    Bundle intentExtras = intent.getExtras();
    if (intentExtras != null) {
        sms = (Object[]) intentExtras.get(SMS_BUNDLE);
        format = intentExtras.getString("format");
        smsMessage = SmsMessage.createFromPdu((byte[]) sms[0], format);
        smsBody = smsMessage.getMessageBody().toString();
        address = smsMessage.getOriginatingAddress();
    }
    else {
        return;
    }
    if(InboxActivity.active) {
        try {
            Thread.sleep(1000);
        } catch (InterruptedException e) {
            e.printStackTrace();
        }
        InboxActivity.instance().refreshInbox();
    }
    else {
        NotificationCompat.Builder builder =
            new NotificationCompat.Builder(context,
"notify_channel")
                .setSmallIcon(R.mipmap.ic_launcher_round)
                .setContentTitle("New Message from " + address)
                .setContentText(smsBody)
                .setAutoCancel(true)

        .setPriority(NotificationCompat.PRIORITY_DEFAULT);
        Intent notificationIntent = new Intent(context,
InboxActivity.class);
        notificationIntent.setFlags(Intent.FLAG_ACTIVITY_NEW_TASK);
        PendingIntent pendingIntent =
PendingIntent.getActivity(context, 0, notificationIntent, 0);
        builder.setContentIntent(pendingIntent);
        NotificationManager manager = (NotificationManager)
context.getSystemService(Context.NOTIFICATION_SERVICE);
        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.O)
        {
            String channelId = "notify_channel";
            NotificationChannel channel = new NotificationChannel(
                channelId,
                "Notification channel",
                NotificationManager.IMPORTANCE_HIGH);
            manager.createNotificationChannel(channel);
            builder.setChannelId(channelId);
        }
        manager.notify((int) ((new Date().getTime()/1000) %
Integer.MAX_VALUE), builder.build());
    }
}
}

```