

SSN COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
UCS1711 - Mobile Application Development Lab
Exercise – 8 SMS Sending and Notification

Name : Nachammai Devi Pooja S

Reg : 185001096

Date : 13/10/2021

AIM:

To develop an android app that sends SMS and creates an alert upon receiving the SMS

CODE:

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/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SMS App"
        android:textAppearance="@style/TextAppearance.AppCompat.Display1"
        android:textColor="#067A6A"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.096" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SMS App"
        android:textAppearance="@style/TextAppearance.AppCompat.Display1"
        android:textColor="#067A6A"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintRight_toRightOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.096" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

```
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginTop="28dp"
android:layout_marginEnd="140dp"
android:text="Send an SMS"
android:textAppearance="@style/TextAppearance.AppCompat.Large"
android:textColor="#0C675A"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView2" />
```

<TextView

```
android:id="@+id/phno"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="44dp"
android:layout_marginTop="44dp"
android:text="Phone Number:"
android:textAppearance="@style/TextAppearance.AppCompat.Medium"
android:textColor="#304FFE"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView" />
```

<TextView

```
android:id="@+id/smsstv"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_marginStart="44dp"
android:layout_marginTop="104dp"
android:text="SMS Content:"
android:textAppearance="@style/TextAppearance.AppCompat.Medium"
android:textColor="#304FFE"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintTop_toBottomOf="@+id/textView" />
```

<EditText

```
android:id="@+id/etPhone"
android:layout_width="199dp"
android:layout_height="39dp"
android:layout_marginStart="12dp"
android:layout_marginTop="36dp"
android:ems="10"
```

```

        android:inputType="phone"
        android:textAppearance="@style/TextAppearance.AppCompat.Body1"
        app:layout_constraintStart_toEndOf="@+id/phno"
        app:layout_constraintTop_toBottomOf="@+id/textView" />

<EditText
    android:id="@+id/content"
    android:layout_width="341dp"
    android:layout_height="123dp"
    android:layout_marginTop="68dp"
    android:layout_marginEnd="32dp"
    android:ems="10"
    android:gravity="start|top"
    android:hint="Type here"
    android:inputType="textMultiLine"
    android:textAppearance="@style/TextAppearance.AppCompat.Body1"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/etPhone" />

<Button
    android:id="@+id/sendbtn"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginTop="48dp"
    android:layout_marginEnd="160dp"
    android:backgroundTint="#00BFA5"
    android:text="SEND"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/content" />

</androidx.constraintlayout.widget.ConstraintLayout>

```

MainActivity.java:

```

package com.example.ex8;

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

import android.Manifest;

```

```

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.content.pm.PackageManager;
import android.os.Bundle;
import android.telephony.SmsManager;
import android.telephony.SmsMessage;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

    private static final int MY_PERMISSIONS_REQUEST_SEND_SMS = 0;
    Button sendBtn;
    EditText txtphoneNo;
    EditText txtMessage;
    String phoneNo;
    String message;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        sendBtn = (Button) findViewById(R.id.sendbtn);
        txtphoneNo = (EditText) findViewById(R.id.etPhone);
        txtMessage = (EditText) findViewById(R.id.content);

        sendBtn.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                if (ActivityCompat.checkSelfPermission(MainActivity.this,
Manifest.permission.SEND_SMS) == PackageManager.PERMISSION_GRANTED) {
                    try {
                        SmsManager smsManager = SmsManager.getDefault();
                        smsManager.sendTextMessage(txtphoneNo.getText().toString(), null,
txtMessage.getText().toString(), null, null);
                        Toast.makeText(MainActivity.this, "SMS Sent!",

```

```

Toast.LENGTH_LONG).show();
        } catch (Exception e) {
            Toast.makeText(MainActivity.this, "Error!",
Toast.LENGTH_LONG).show();
        }
    } else {
        ActivityCompat.requestPermissions(MainActivity.this,
new String[]{Manifest.permission.SEND_SMS}, 0);
    }
}
});
}
}
}
}

```

SMSReceiver.java:

```

package com.example.ex8;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.telephony.SmsMessage;
import android.util.Log;
import android.widget.Toast;

public class SMSReceiver extends BroadcastReceiver {
    public static final String ACTION
="android.provider.Telephony.SMS_RECEIVED";
    private static final String SMS_SENDER="123456789";

    @Override
    public void onReceive(Context context, Intent intent) {
        if (intent != null && intent.getAction() != null &&
ACTION.compareToIgnoreCase(intent.getAction()) == 0)
    {
        Object[] pduArray = (Object[])
intent.getExtras().get("pdus");
        SmsMessage[] messages = new SmsMessage[pduArray.length];
        for (int i = 0; i < pduArray.length; i++) {

```

```

        messages[i] = SmsMessage.createFromPdu((byte[])
pduArray[i]);
    }

    String sms_from =
messages[0].getDisplayOriginatingAddress();

    if (sms_from.equalsIgnoreCase(SMS_SENDER)) {
        StringBuilder bodyText = new StringBuilder();

        for (int i = 0; i < messages.length; i++) {
            bodyText.append(messages[i].getMessageBody());
        }
        //SMS Body
        String body = bodyText.toString();
        // Lets get SMS Code
        String code = body.replaceAll("[^0-9]", "");

        String senderNum = SMS_SENDER;

        Log.i("SmsReceiver", "senderNum: " + senderNum + ";
message: " + body);

        // Show Alert
        int duration = Toast.LENGTH_LONG;
        Toast toast = Toast.makeText(context,
            "senderNum: " + senderNum + ", message: " +
body, duration);
        toast.show();
    }
}
}
}
}

```

AndroidManifest.xml:

```

<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.ex8">

```

```
<uses-permission android:name="android.permission.SEND_SMS" />
<uses-permission android:name="android.permission.RECEIVE_SMS" />

<application
    android:allowBackup="true"
    android:icon="@mipmap/ic_launcher"
    android:label="@string/app_name"
    android:roundIcon="@mipmap/ic_launcher_round"
    android:supportsRtl="true"
    android:theme="@style/Theme.Ex8">

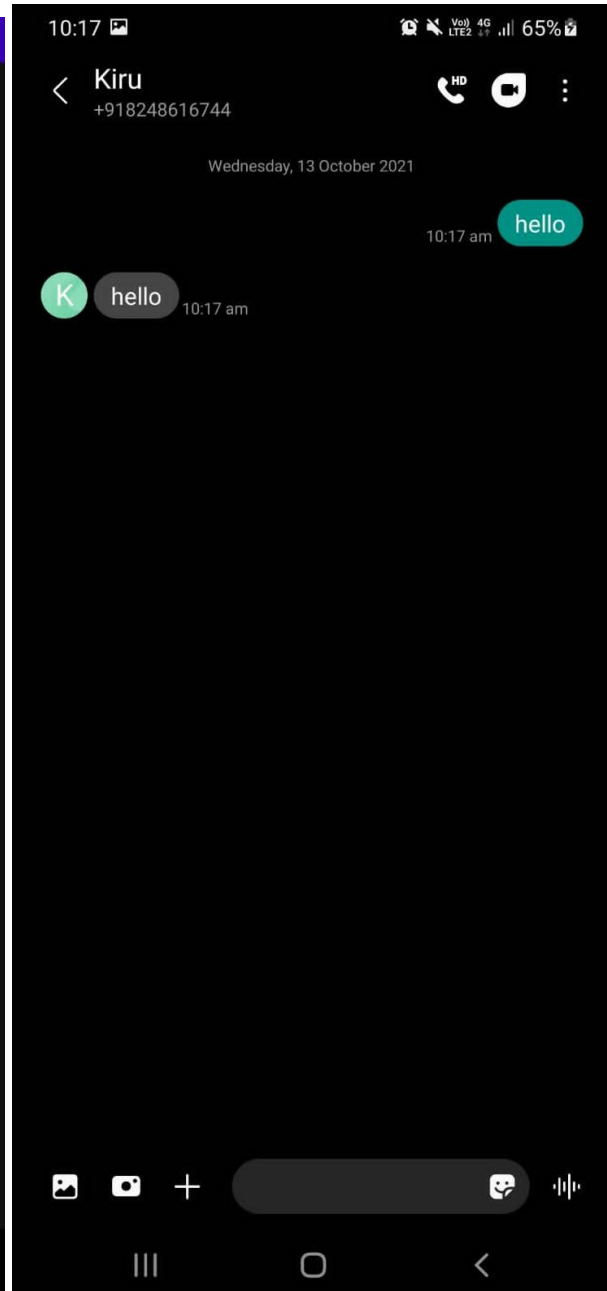
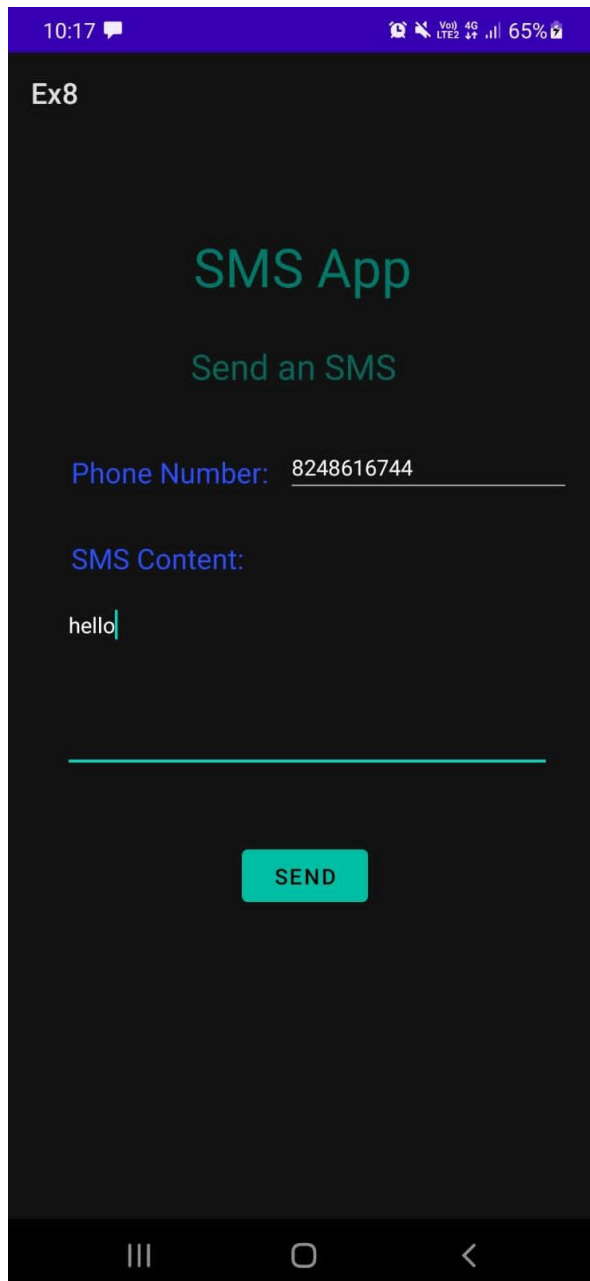
    <activity
        android:name=".MainActivity"
        android:exported="true">
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />

            <category android:name="android.intent.category.LAUNCHER"
/>

        </intent-filter>
    </activity>
</application>

</manifest>
```

OUTPUT:



RESULT:

Successfully developed an android app that sends SMS and creates an alert upon receiving the SMS.