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Subject: UCS1711---Mobile Application Development Lab

#### Ex. No.9 Implement an application that send a SMS

#### AIM:

To create an android application that sends a SMS and creates an alert upon receiving the SMS.

#### **CODE:**

## activity\_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout</pre>
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:backgroundTint="@color/teal 700"
  tools:context=".MainActivity">
  <TextView
       android:id="@+id/textView1"
       android:layout width="107dp"
       android:layout_height="70dp"
       android:layout_alignParentTop="true"
       android:layout centerHorizontal="true"
       android:layout marginTop="32dp"
       android: text="SMS"
       android:textColor="@color/black"
       android:textSize="50dp"
       android:textStyle="bold"
       app:layout constraintEnd toEndOf="parent"
       app:layout constraintStart toStartOf="parent"
       app:layout constraintTop toTopOf="parent" />
```

```
<EditText
      android:id="@+id/editTextNumber"
       android:layout width="211dp"
       android:layout height="43dp"
       android:layout below="@+id/imageButton"
       android:layout_centerHorizontal="true"
       android:layout marginTop="236dp"
       android:hint="Enter Phone Number"
       android:textColorHint="@color/abc primary text material dark"
       android:textSize="20dp"
       app:layout constraintEnd toEndOf="parent"
       app:layout constraintHorizontal bias="0.47"
       app:layout_constraintStart_toStartOf="parent"
       app:layout constraintTop toTopOf="parent"
       tools:ignore="UnknownId" />
  <EditText
      android:id="@+id/editTextMsg"
       android:layout width="224dp"
       android:layout height="87dp"
       android:layout below="@+id/editTextNumber"
       android:layout alignStart="@+id/editTextNumber"
       android:layout alignLeft="@+id/editTextNumber"
       android:layout marginTop="328dp"
       android:hint="Enter message to be sent"
       android:textColorHint="@color/abc_primary_text_material_dark"
       app:layout constraintEnd toEndOf="parent"
       app:layout constraintStart toStartOf="parent"
       app:layout constraintTop toTopOf="parent" />
  <Button
      android:id="@+id/btnSend"
       android:layout width="128dp"
       android:layout height="72dp"
       android:layout below="@+id/editTextMsg"
       android: layout centerHorizontal="true"
       android:layout marginTop="472dp"
       android:backgroundTint="@color/teal 700"
       android:onClick="sendSMSMessage"
       android: text="Send"
       android:textSize="30dp"
       app:layout constraintEnd toEndOf="parent"
       app:layout constraintHorizontal bias="0.498"
       app:layout constraintStart toStartOf="parent"
       app:layout constraintTop toTopOf="parent" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

## MainActivity.java:

```
package com.example.v1 sms;
import android.Manifest;
import android.content.pm.PackageManager;
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.appcompat.app.AppCompatActivity;
import androidx.core.app.ActivityCompat;
import androidx.core.content.ContextCompat;
public class MainActivity extends AppCompatActivity {
  private static final int REQUEST SEND SMS PERMISSION =1 ;
  Button sendBtn;
  EditText phoneNo;
  EditText message;
  String number;
  String msg content;
   @Override
  protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity main);
       sendBtn = (Button) findViewById(R.id.btnSend);
       phoneNo = (EditText) findViewById(R.id.editTextNumber);
       message = (EditText) findViewById(R.id.editTextMsg);
   }
  public void sendSMSMessage(View view) {
       number = phoneNo.getText().toString();
       msg content = message.getText().toString();
       if (ContextCompat.checkSelfPermission(this,
Manifest.permission.SEND SMS)
              != PackageManager.PERMISSION GRANTED) {
           if (ActivityCompat.shouldShowRequestPermissionRationale(this,
                  Manifest.permission.SEND SMS)) {
               Toast.makeText(getApplicationContext(), "Need permission.",
                       Toast.LENGTH LONG) .show();
           } else {
               ActivityCompat.requestPermissions(this,
                       new String[] {Manifest.permission.SEND SMS},
                       REQUEST SEND SMS PERMISSION);
```

```
}
   }
   @Override
   public void onRequestPermissionsResult(int requestCode,String
permissions[], int[] grantResults) {
       super.onRequestPermissionsResult(requestCode, permissions,
grantResults);
       Toast.makeText(getApplicationContext(), "control here.",
               Toast.LENGTH LONG) .show();
          super.onRequestPermissionsResult(requestCode, permissions,
grantResults);
       switch (requestCode) {
           case REQUEST SEND SMS PERMISSION: {
(permissions[0].equalsIqnoreCase(Manifest.permission.SEND SMS)
                       && grantResults[0] ==
PackageManager.PERMISSION GRANTED) {
                   try {
                       SmsManager smsManager = SmsManager.getDefault();
                       smsManager.sendTextMessage(number, null, msg content,
null, null);
                       Toast.makeText(getApplicationContext(), "SMS SENT.",
                               Toast.LENGTH LONG) .show();
                   } catch (Exception e) {
                       Toast.makeText(getApplicationContext(), e.toString(),
                               Toast.LENGTH LONG) .show();
                   }
               } else {
                   Toast.makeText(getApplicationContext(),
                           "SMS failed, please try again.",
Toast.LENGTH LONG) .show();
                   return;
```

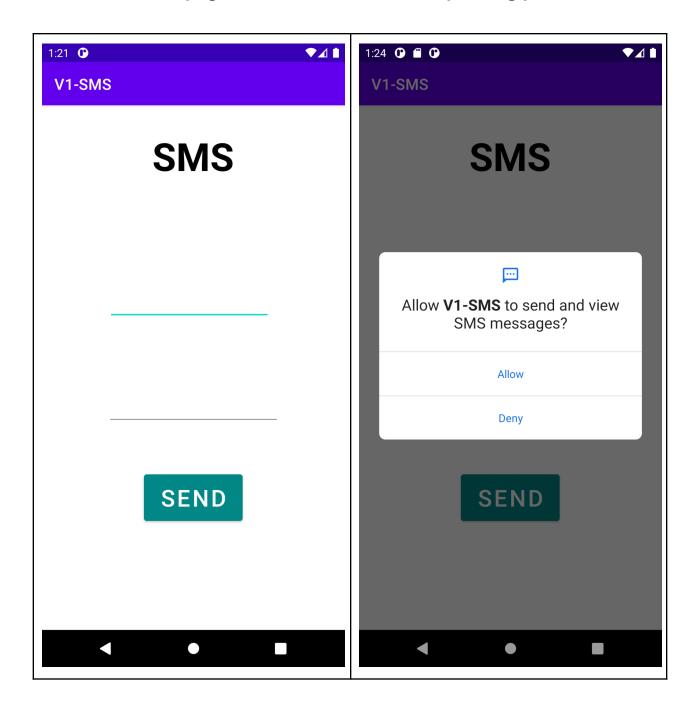
#### AndroidManifest.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  package="com.example.v1 sms">
  <uses-permission android:name="android.permission.SEND SMS" />
  <uses-permission android:name="android.permission.RECETVE 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.V1SMS">
       <activity android:name=".MainActivity">
           <intent-filter>
               <action android:name="android.intent.action.MAIN" />
               <category android:name="android.intent.category.LAUNCHER" />
           </intent-filter>
       </activity>
  </application>
</manifest>
```

# **Output Snapshots:**

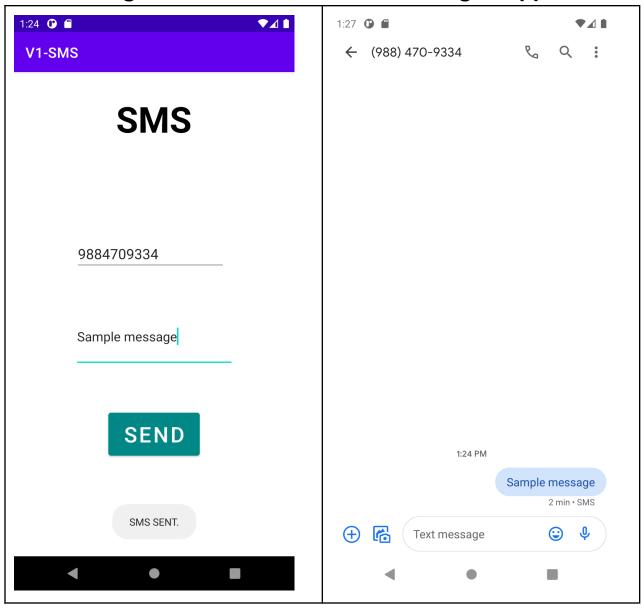
## Home page

## Requesting permission



# Message sent

# **Messages App**



# **LEARNING OUTCOMES**: