# Exercise 8 – SMS Sending and Notification

## Aim:

Develop an android app that sends SMS and creates an alert upon receiving the SMS with text in the notification.

## 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: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/smstv"

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 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 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) {

sendSMSMessage();

}

});

}

protected void sendSMSMessage() {

phoneNo = txtphoneNo.getText().toString();

message = txtMessage.getText().toString();

if (ContextCompat.checkSelfPermission(this, Manifest.permission.SEND\_SMS) != PackageManager.PERMISSION\_GRANTED) {

if (ActivityCompat.shouldShowRequestPermissionRationale(

this, Manifest.permission.SEND\_SMS)) {

} else {

ActivityCompat.requestPermissions(this,

new String[] {Manifest.permission.SEND\_SMS},

MY\_PERMISSIONS\_REQUEST\_SEND\_SMS);

}

}

}

@Override

public void{onRequestPermissionsResult(int requestCode, String permissions[], int[] grantResults)

switch (requestCode) {

case MY\_PERMISSIONS\_REQUEST\_SEND\_SMS: {

if (grantResults.length > 0

&& grantResults[0] == PackageManager.PERMISSION\_GRANTED) {

SmsManager smsManager = SmsManager.getDefault();

smsManager.sendTextMessage(phoneNo, null, message, null, null); Toast.makeText(getApplicationContext(), "SMS sent.",

Toast.LENGTH\_LONG).show();

}

else {

Toast.makeText(getApplicationContext(), "SMS failed, please try again.",Toast.LENGTH\_LONG).show();

return;

}

}

}

}

}

## Output:

****

# Learning outcomes:

● An android application to send an SMS was implemented.

● A notification for the SMS was also implemented.