EX NO:11 **REGISTER NO:210701509**

DATE:

SEND SMS

AIM:

Develop an application to send SMS.

PROCEDURE:

- Open Android Studio and import the package
- In activity_main.xml drag and drop the buttons
- The button needs to perform actions to change the colour, font size and background colour
- Click android virtual device that should control the toolbar
- Design the graphical layout with the textview and buttons
- Run the application
- The version of android and name is displayed
- The theme of the file is also mentioned in a file
- Run the file using the version which is displayed to the users.

PROGRAM CODE:

AndroidManifest.xml:

```
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
package="com.example.smssenderreceiver">
<uses-permission android:name="android.permission.SEND_SMS" />
<uses-permission android:name="android.permission.RECEIVE_SMS" />
<uses-permission android:name="android.permission.READ_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/AppTheme">
<activity android:name=".MainActivity">
<intent-filter>
<action android:name="android.intent.action.MAIN" />
<category android:name="android.intent.category.LAUNCHER" />
</intent-filter>
</activity>
<receiver android:name=".SmsReceiver">
<intent-filter>
<action android:name="android.provider.Telephony.SMS_RECEIVED" />
</intent-filter>
</receiver>
</application>
```

</manifest>

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
tools:context=".MainActivity">
<!-- Input field to enter phone number -->
<EditText
android:id="@+id/editTextPhone"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:hint="Phone Number" />
<!-- Input field to enter message -->
<EditText
android:id="@+id/editTextMessage"
android:layout_below="@id/editTextPhone"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginTop="16dp"
android:hint="Message" />
<!-- Button to send SMS -->
<Button
android:id="@+id/buttonSend"
android:layout_below="@id/editTextMessage"
android:layout_width="wrap_content"
android:layout_height="wrap_content"
android:layout_centerHorizontal="true"
android:layout_marginTop="16dp"
android:text="Send SMS" />
<!-- TextView to display received SMS -->
<TextView
android:id="@+id/textViewReceivedSms"
android:layout_below="@id/buttonSend"
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:layout_marginTop="16dp"
android:text="Received SMS:"
android:textStyle="bold" />
</RelativeLayout>
```

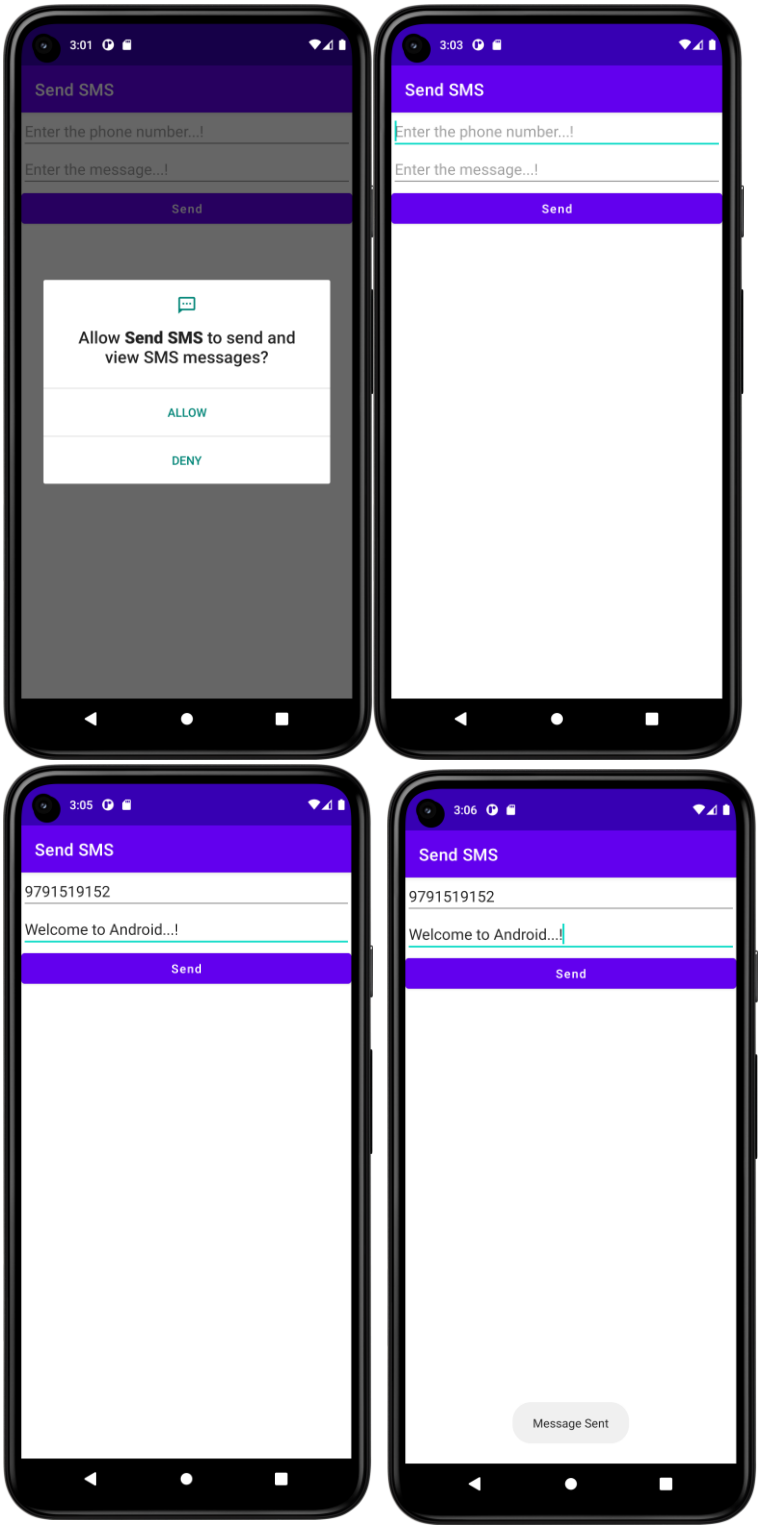
MainActivity.kt:

```
package com.example.smssenderreceiver
import android.Manifest
```

```
import android.content.BroadcastReceiver
import android.content.Context
import android.content.Intent
import android.content.IntentFilter
import android.content.pm.PackageManager
import android.os.Build
import androidx.appcompat.app.AppCompatActivity
import android.os.Bundle
import android.telephony.SmsManager
import android.widget.Button
import android.widget.EditText
import android.widget.TextView
import android.widget.Toast
class MainActivity : AppCompatActivity() {
private lateinit var editTextPhone: EditText
private lateinit var editTextMessage: EditText
private lateinit var buttonSend: Button
private lateinit var textViewReceivedSms: TextView
private val smsReceiver: BroadcastReceiver = object : BroadcastReceiver() {
override fun onReceive(context: Context, intent: Intent) {
if (intent.action == "android.provider.Telephony.SMS_RECEIVED") {
val bundle = intent.extras
if (bundle != null) {
val pdus = bundle.get("pdus") as Array<*>
for (pdu in pdus) {
val smsMessage = SmsMessage.createFromPdu(pdu as ByteArray)
val sender = smsMessage.originatingAddress
val messageBody = smsMessage.messageBody
val receivedMessage = "From: $sender\nMessage: $messageBody"
textViewReceivedSms.append("\n\n$receivedMessage")
}
}
}
}
}
override fun onCreate(savedInstanceState: Bundle?) {
super.onCreate(savedInstanceState)
setContentView(R.layout.activity_main)
editTextPhone = findViewById(R.id.editTextPhone)
editTextMessage = findViewById(R.id.editTextMessage)
buttonSend = findViewById(R.id.buttonSend)
textViewReceivedSms = findViewById(R.id.textViewReceivedSms)
// Request SMS permissions if not granted
if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.M &&
checkSelfPermission(Manifest.permission.SEND_SMS) != PackageManager.PERMISSION_GRANTED
) {
requestPermissions(arrayOf(Manifest.permission.SEND_SMS), 1)
}
```

```
// Register SMS receiver
registerReceiver(smsReceiver, IntentFilter("android.provider.Telephony.SMS_RECEIVED"))
// Send SMS button click listener
buttonSend.setOnClickListener {
val phoneNumber = editTextPhone.text.toString().trim()
val message = editTextMessage.text.toString().trim()
if (phoneNumber.isNotEmpty() && message.isNotEmpty()) {
sendSms(phoneNumber, message)
} else {
Toast.makeText(this, "Phone number and message cannot be empty", Toast.LENGTH_SHORT).show()
}
}
}
override fun onDestroy() {
super.onDestroy()
// Unregister SMS receiver
unregisterReceiver(smsReceiver)
}
private fun sendSms(phoneNumber: String, message: String) {
try {
val smsManager = SmsManager.getDefault()
smsManager.sendTextMessage(phoneNumber, null, message, null, null)
Toast.makeText(this, "SMS sent successfully", Toast.LENGTH_SHORT).show()
} catch (e: Exception) {
e.printStackTrace()
Toast.makeText(this, "Failed to send SMS", Toast.LENGTH_SHORT).show()
}
}
}
```

OUTPUT:



RESULT: