Ex. No. : 08-A **Date: 24/04/2025**

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Send SMS

Aim

Develop an application to Send SMS.

Procedure:

Step 1 : *File -> NewProject*

Provide the application name and Click "Next"

Step 2 : *Select the target android devices*

Select the minimum SDK to run the application. Click "Next".

Step 3 : *Choose the activity for the application (By default choose "Blank Activity).*

Click "Next".

Step 4 : *Enter activity name and click.*

Step 5 : *Edit the program.*

Step 6 : *Run the application, 2-ways to run the application.*

1. Running through emulator

2. Running through mobile device

AndroidManifest.xml

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

    <uses-feature
        android:name="android.hardware.telephony"
        android:required="false" />
    <uses-permission android:name="android.permission.SEND_SMS" />

    <application
        android:allowBackup="true"
        android:label="8aexp"
        android:supportsRtl="true"
        android:theme="@style/Theme.Material3.DayNight.NoActionBar">
        <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>
```

Activity_main.xml

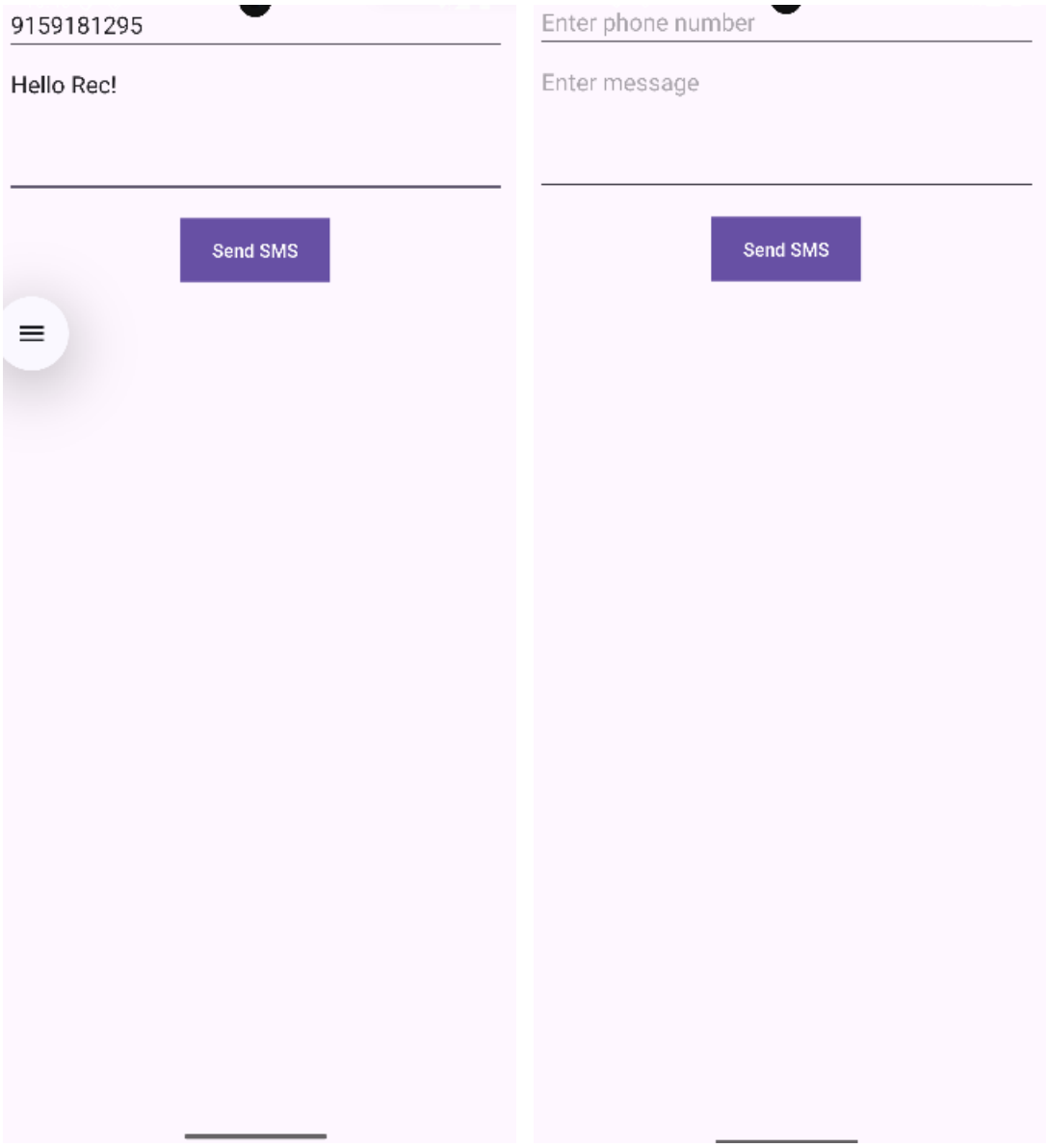
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:padding="16dp">

    <EditText
        android:id="@+id/etPhoneNumber"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter phone number"
        android:inputType="phone" />

    <EditText
        android:id="@+id/etMessage"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter message"
        android:minLines="4"
        android:gravity="top"
        android:inputType="textMultiLine" />

    <Button
        android:id="@+id/btnSend"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Send SMS"
        android:layout_gravity="center_horizontal"
        android:layout_marginTop="16dp"
        android:textColor="#FFFFFF"
        android:background="#B30568" />

</LinearLayout>
```

MainActivity.kt

```
package com.example.a8aexp

import android.Manifest
import android.content.pm.PackageManager
import android.os.Bundle
import android.telephony.SmsManager
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

class MainActivity : AppCompatActivity() {

    private val SMS_PERMISSION_CODE = 101

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)

        val phoneEditText = findViewById<EditText>(R.id.etPhoneNumber)
        val messageEditText = findViewById<EditText>(R.id.etMessage)
        val sendButton = findViewById<Button>(R.id.btnSend)

        sendButton.setOnClickListener {
            val phoneNumber = phoneEditText.text.toString()
            val message = messageEditText.text.toString()

            if (ContextCompat.checkSelfPermission(this, Manifest.permission.SEND_SMS)
                != PackageManager.PERMISSION_GRANTED
            ) {
                ActivityCompat.requestPermissions(
                    this,
                    arrayOf(Manifest.permission.SEND_SMS),
                    SMS_PERMISSION_CODE
                )
            } else {
                sendSMS(phoneNumber, message)
            }
        }
```

```
    }

    private fun sendSMS(phone: String, message: String) {
        if (phone.isNotEmpty() && message.isNotEmpty()) {
            try {
                val smsManager = SmsManager.getDefault()
                smsManager.sendTextMessage(phone, null, message, null, null)
                Toast.makeText(this, "SMS Sent!", Toast.LENGTH_SHORT).show()
            } catch (e: Exception) {
                Toast.makeText(this, "Error: ${e.message}", Toast.LENGTH_LONG).show()
            }
        } else {
            Toast.makeText(this, "Enter both number and message",
Toast.LENGTH_SHORT).show()
        }
    }

    override fun onRequestPermissionsResult(requestCode: Int, permissions: Array<String>,
grantResults: IntArray) {
        super.onRequestPermissionsResult(requestCode, permissions, grantResults)
        if (requestCode == SMS_PERMISSION_CODE && grantResults.isNotEmpty() &&
grantResults[0] == PackageManager.PERMISSION_GRANTED) {
            Toast.makeText(this, "Permission Granted. Press Send again.",
Toast.LENGTH_SHORT).show()
        } else {
            Toast.makeText(this, "Permission Denied", Toast.LENGTH_SHORT).show()
        }
    }
}
```

Output



Result:

The Send SMS experiment has been successfully completed