**Ex. No. : 8a** **Date: 03/05/2025**

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# SMS Send

**Aim**

To 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 "Finish".

***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"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.SDCard"
        tools:targetApi="31">
        <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:padding="16dp"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">

    <EditText
        android:id="@+id/nameInput"
        android:hint="Enter Name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>

    <EditText
        android:id="@+id/cgpaInput"
        android:hint="Enter CGPA"
        android:inputType="numberDecimal"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"/>

    <Button
        android:id="@+id/saveButton"
        android:text="Save to SD Card"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"/>

    <TextView
        android:id="@+id/statusText"
        android:layout_width="match_parent"
```



```
        android:layout_height="wrap_content"
        android:textSize="16sp"
        android:layout_marginTop="20dp"/>
</LinearLayout>
```

***MainActivity.kt***

```
package com.example.smssend

import android.Manifest
import android.content.pm.PackageManager
import android.os.Bundle
import android.telephony.SmsManager
import android.widget.*
import androidx.appcompat.app.AppCompatActivity
import androidx.core.app.ActivityCompat
import androidx.core.content.ContextCompat

class MainActivity : AppCompatActivity() {

    private val SMS_PERMISSION_CODE = 123

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

        val phoneInput = findViewById<EditText>(R.id.phoneInput)
        val messageInput = findViewById<EditText>(R.id.messageInput)
        val sendButton = findViewById<Button>(R.id.sendButton)

        sendButton.setOnClickListener {
            val phone = phoneInput.text.toString()
```

```
        val message = messageInput.text.toString()

        if (phone.isEmpty() || message.isEmpty()) {
            Toast.makeText(this, "Fill all fields", Toast.LENGTH_SHORT).show()
            return@setOnClickListener
        }

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

private fun sendSMS(phone: String, message: String) {
    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, "Failed to send SMS: ${e.message}",
Toast.LENGTH_LONG).show()
    }
}
```

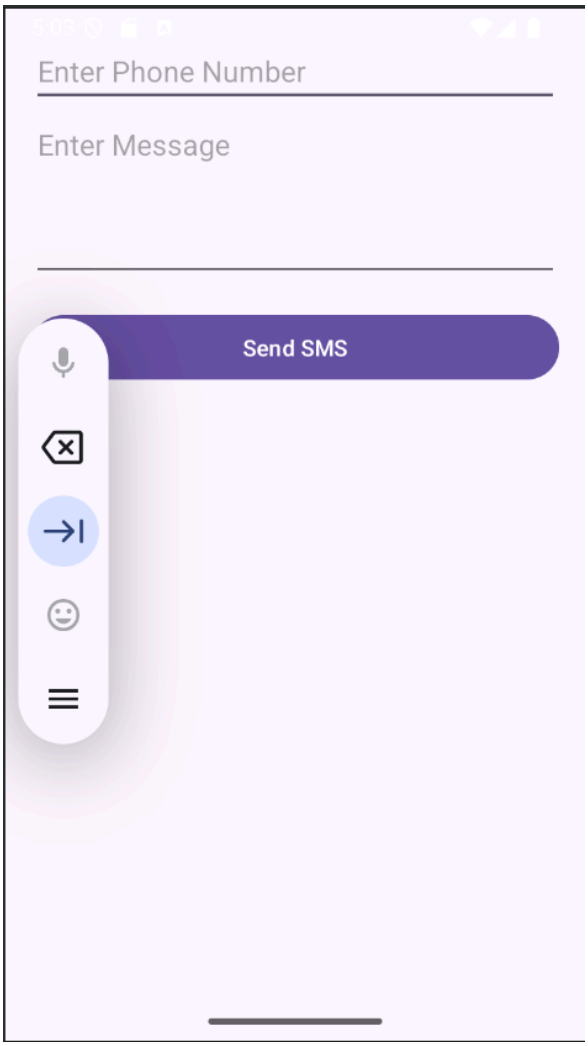


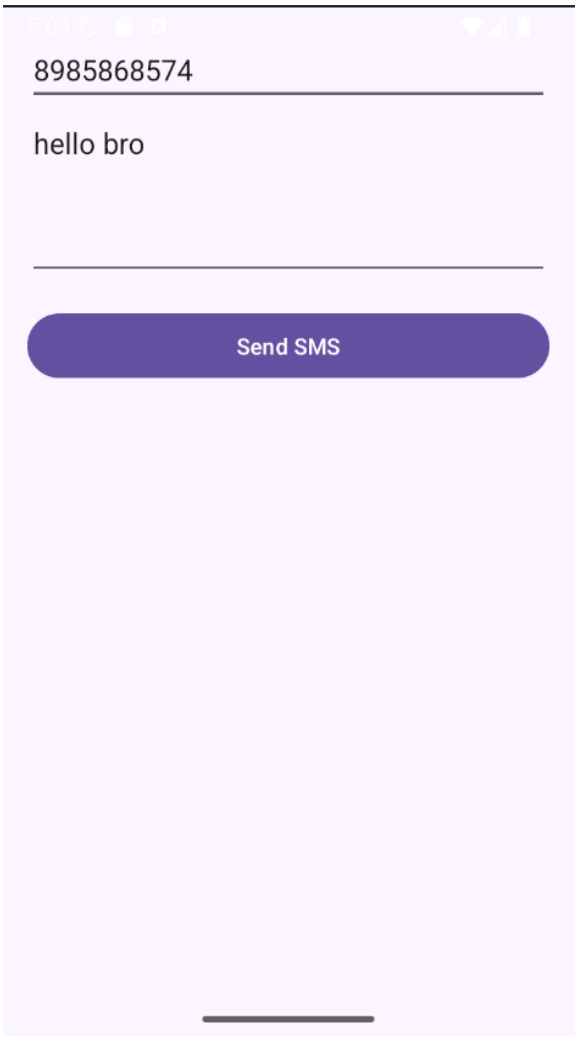
```
    override fun onRequestPermissionsResult(
        requestCode: Int, permissions: Array<out String>, grantResults: IntArray
    ) {
        super.onRequestPermissionsResult(requestCode, permissions, grantResults)
        if (requestCode == SMS_PERMISSION_CODE && grantResults.isNotEmpty()
            && grantResults[0] == PackageManager.PERMISSION_GRANTED) {
            Toast.makeText(this, "Permission granted. Tap again to send SMS.",
Toast.LENGTH_SHORT).show()
        } else {
            Toast.makeText(this, "SMS permission denied",
Toast.LENGTH_SHORT).show()
        }
    }
}



}
```

***Output***




**Result:**

| |
|---|
| Android application using Kotlin and Android Studio that SMS send is successfully executed. |