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Practical No: 29

1. Write a program to send SMS and receive SMS

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">  
  
 <EditText  
 android:id="@+id/e1"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="phone"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 android:layout\_marginTop="50dp"  
 />  
  
 <EditText  
 android:id="@+id/e2"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:inputType="text"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 android:layout\_marginTop="100dp"  
 app:layout\_constraintTop\_toBottomOf="@+id/e1" />  
  
 <TextView  
 android:id="@+id/t1"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="PHONE"  
 android:textSize="20sp"  
 app:layout\_constraintEnd\_toEndOf="@+id/e1"  
 app:layout\_constraintStart\_toStartOf="@+id/e1"  
 android:layout\_marginTop="150dp"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <TextView  
 android:id="@+id/t2"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="MESSAGE"  
 android:textSize="20sp"  
 app:layout\_constraintEnd\_toEndOf="@+id/e2"  
 app:layout\_constraintStart\_toStartOf="@+id/e2"  
 android:layout\_marginTop="200dp"  
 app:layout\_constraintTop\_toBottomOf="@+id/t1" />  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="SEND SMS"  
 android:textColor="@android:color/white"  
 android:textSize="20sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 android:layout\_marginTop="250dp"  
 app:layout\_constraintTop\_toBottomOf="@+id/e2" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

MainActivity.java

package com.example.mad\_playground;  
  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.content.ContextCompat;  
  
import android.Manifest;  
import android.content.pm.PackageManager;  
import android.os.Build;  
import android.os.Bundle;  
import android.telephony.SmsManager;  
import android.view.View;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
public class MainActivity extends AppCompatActivity {  
 Button sms;  
 EditText phone;  
 EditText msg;  
 String phoneNo;  
 String message;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 phone = (EditText) findViewById(R.id.*e1*);  
 msg = (EditText) findViewById(R.id.*e2*);  
 sms = findViewById(R.id.*button*);  
  
 sms.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 sendSMS();  
 }  
 });  
 }  
  
 protected void sendSMS() {  
 SmsManager smsManager = SmsManager.*getDefault*();  
 phoneNo = phone.getText().toString();  
 message = msg.getText().toString();  
 if (Build.VERSION.*SDK\_INT* >= Build.VERSION\_CODES.*M*) {  
 if (checkSelfPermission(Manifest.permission.*SEND\_SMS*) == PackageManager.*PERMISSION\_DENIED*) {  
 Toast.*makeText*(getApplicationContext(), "Permission Denied", Toast.*LENGTH\_LONG*).show();  
 String[] permissions = {Manifest.permission.*SEND\_SMS*};  
 requestPermissions(permissions, 1);  
 } else {  
 smsManager.sendTextMessage(phoneNo, null, message, null, null);  
 Toast.*makeText*(getApplicationContext(), "SMS sent.", Toast.*LENGTH\_LONG*).show();  
 }  
 }  
 }  
}

AndriodManifest.xml:

<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 package="com.example.mad\_playground">  
  
 <uses-permission android:name="android.permission.SEND\_SMS" />  
  
 <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.MAD\_Playground"  
 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>

OUTPUT:

 