**LAB 7**

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**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"  
 package="com.example.lab7">  
  
  
 <uses-permission android:name="android.permission.INTERNET"/>  
 <uses-permission android:name="android.permission.POST\_NOTIFICATIONS" />  
 <uses-permission android:name="android.permission.FOREGROUND\_SERVICE" />  
 <uses-permission android:name="android.permission.FOREGROUND\_SERVICE\_DATA\_SYNC" />  
  
  
 <uses-permission android:name="android.permission.RECEIVE\_SMS" />  
 <uses-permission android:name="android.permission.SEND\_SMS" />  
 <uses-permission android:name="android.permission.READ\_SMS"/>  
  
 <uses-permission android:name="android.permission.ACCESS\_FINE\_LOCATION" />  
 <uses-permission android:name="android.permission.ACCESS\_COARSE\_LOCATION" />  
  
 <uses-feature android:name="android.hardware.telephony" android:required="false" />  
  
 <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.Lab7">  
  
  
 <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>  
  
  
 <service  
 android:name=".DownloadService"  
 android:exported="false"  
 android:foregroundServiceType="dataSync" />  
  
 <receiver  
 android:name=".DownloadReceiver"  
 android:exported="true" />  
  
   
 <receiver  
 android:name=".SmsReceiver"  
 android:exported="true">  
 <intent-filter android:priority="1000">  
 <action android:name="android.provider.Telephony.SMS\_RECEIVED"/>  
 </intent-filter>  
 </receiver>  
  
   
 <receiver  
 android:name=".PowerStateChangeReceiver"  
 android:exported="false">  
 <intent-filter>  
 <action android:name="android.intent.action.ACTION\_POWER\_CONNECTED"/>  
 <action android:name="android.intent.action.ACTION\_POWER\_DISCONNECTED"/>  
 </intent-filter>  
 </receiver>  
  
 </application>  
  
</manifest>

**MainActivity.java**

package com.example.lab7;  
  
import android.app.AlertDialog;  
import android.app.role.RoleManager;  
import android.content.Intent;  
import android.content.pm.PackageManager;  
import android.os.Build;  
import android.os.Bundle;  
import android.provider.Telephony;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
import androidx.activity.EdgeToEdge;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
 public static boolean *isRunning* = false;  
  
 EditText etUrl;  
 Button btnDownload, btnStopService;  
 TextView tvStatus;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 EdgeToEdge.*enable*(this);  
 setContentView(R.layout.*activity\_main*);  
  
 // Giữ nguyên phần xin quyền SMS  
 requestSmsPermissions();  
 requestNotificationPermission();  
 requestDefaultSmsApp();  
  
  
 etUrl = findViewById(R.id.*et\_url*);  
 btnDownload = findViewById(R.id.*btn\_download*);  
 btnStopService = findViewById(R.id.*btn\_stop\_service*);  
 tvStatus = findViewById(R.id.*tv\_status*);  
  
  
 btnDownload.setOnClickListener(v -> {  
 String url = etUrl.getText().toString().trim();  
 if (url.isEmpty()) {  
 tvStatus.setText("Trạng thái: Vui lòng nhập URL!");  
 return;  
 }  
 Intent intent = new Intent(this, DownloadService.class);  
 intent.setAction(DownloadService.*ACTION\_START*);  
 intent.putExtra(DownloadService.*EXTRA\_DOWNLOAD\_URL*, url);  
 startService(intent);  
 tvStatus.setText("Trạng thái: Đã gửi yêu cầu tải...");  
 });  
  
  
 btnStopService.setOnClickListener(v -> {  
 Intent intent = new Intent(this, DownloadService.class);  
 intent.setAction(DownloadService.*ACTION\_STOP*);  
 startService(intent);  
 tvStatus.setText("Trạng thái: Yêu cầu dừng Service.");  
 });  
 }  
  
   
 private void requestSmsPermissions() {  
 if (checkSelfPermission(android.Manifest.permission.*RECEIVE\_SMS*) != PackageManager.*PERMISSION\_GRANTED* ||  
 checkSelfPermission(android.Manifest.permission.*SEND\_SMS*) != PackageManager.*PERMISSION\_GRANTED* ||  
 checkSelfPermission(android.Manifest.permission.*READ\_SMS*) != PackageManager.*PERMISSION\_GRANTED*) {  
  
 requestPermissions(  
 new String[]{  
 android.Manifest.permission.*RECEIVE\_SMS*,  
 android.Manifest.permission.*SEND\_SMS*,  
 android.Manifest.permission.*READ\_SMS* },  
 100  
 );  
 }  
 }  
  
 private void requestNotificationPermission() {  
 if (Build.VERSION.*SDK\_INT* >= Build.VERSION\_CODES.*TIRAMISU*) {  
 if (checkSelfPermission(android.Manifest.permission.*POST\_NOTIFICATIONS*)  
 != PackageManager.*PERMISSION\_GRANTED*) {  
 requestPermissions(  
 new String[]{android.Manifest.permission.*POST\_NOTIFICATIONS*},  
 101  
 );  
 }  
 }  
 }  
  
 private void requestDefaultSmsApp() {  
 if (Build.VERSION.*SDK\_INT* >= Build.VERSION\_CODES.*Q*) {  
 RoleManager roleManager = getSystemService(RoleManager.class);  
 if (roleManager != null && !roleManager.isRoleHeld(RoleManager.*ROLE\_SMS*)) {  
 Intent intent = roleManager.createRequestRoleIntent(RoleManager.*ROLE\_SMS*);  
 startActivityForResult(intent, 200);  
 }  
 } else {  
 String defaultSmsPackage = Telephony.Sms.*getDefaultSmsPackage*(this);  
 if (defaultSmsPackage == null || !defaultSmsPackage.equals(getPackageName())) {  
 Intent intent = new Intent(Telephony.Sms.Intents.*ACTION\_CHANGE\_DEFAULT*);  
 intent.putExtra(Telephony.Sms.Intents.*EXTRA\_PACKAGE\_NAME*, getPackageName());  
 startActivity(intent);  
 }  
 }  
 }  
  
 @Override  
 protected void onResume() {  
 super.onResume();  
 *isRunning* = true;  
 }  
  
 @Override  
 protected void onPause() {  
 super.onPause();  
 *isRunning* = false;  
 }  
}

**activity\_main**

<?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">  
  
  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Tải về"  
 android:textSize="18sp"  
 android:layout\_marginBottom="8dp"/>  
  
 <EditText  
 android:id="@+id/et\_url"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Nhập URL file cần tải"  
 android:inputType="textUri"/>  
  
 <LinearLayout  
 android:orientation="horizontal"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp">  
  
 <Button  
 android:id="@+id/btn\_download"  
 android:layout\_width="0dp"  
 android:layout\_weight="1"  
 android:layout\_height="wrap\_content"  
 android:text="Tải"/>  
  
 <Button  
 android:id="@+id/btn\_stop\_service"  
 android:layout\_width="0dp"  
 android:layout\_weight="1"  
 android:layout\_height="wrap\_content"  
 android:text="Dừng"/>  
 </LinearLayout>  
  
 <TextView  
 android:id="@+id/tv\_status"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Trạng thái: Xong"  
 android:layout\_marginTop="12dp"/>  
  
</LinearLayout>

A screenshot of a computer

AI-generated content may be incorrect.