Họ và tên: Đặng Ngọc Khuê

MSSV: 1150070024

Lớp: 11\_DH\_TMDT

**Bài tập lý thuyết 7**

Tạo project mới

Trong MainActitvity.java

|  |
| --- |
| package com.example.dnk\_1150070024\_11\_tmdt\_baitaplythuyet7;  import android.annotation.SuppressLint;  import android.content.Intent;  import android.os.Bundle;  import android.widget.Button;  import android.widget.EditText;  import android.widget.Toast;  import android.os.Build;  import android.content.pm.PackageManager;  import androidx.appcompat.app.AppCompatActivity;  public class MainActivity extends AppCompatActivity {  private EditText edtUrl;  private Button btnDownload;  @SuppressLint("NewApi")  @Override  protected void onCreate(Bundle savedInstanceState) {  super.onCreate(savedInstanceState);  setContentView(R.layout.activity\_main);  Button btnDownload = findViewById(R.id.btnDownload);  EditText edtUrl = findViewById(R.id.edtUrl);  btnDownload.setOnClickListener(v -> {  String url = edtUrl.getText().toString().trim();  if (url.isEmpty()) {  Toast.makeText(this, "Vui lòng nhập link tải!", Toast.LENGTH\_SHORT).show();  return;  }  if (Build.VERSION.SDK\_INT >= Build.VERSION\_CODES.TIRAMISU) {  if (checkSelfPermission(android.Manifest.permission.FOREGROUND\_SERVICE) != PackageManager.PERMISSION\_GRANTED) {  requestPermissions(new String[]{android.Manifest.permission.FOREGROUND\_SERVICE}, 1);  return;  }  if (checkSelfPermission(android.Manifest.permission.POST\_NOTIFICATIONS) != PackageManager.PERMISSION\_GRANTED) {  requestPermissions(new String[]{android.Manifest.permission.POST\_NOTIFICATIONS}, 2);  return;  }  }  Intent serviceIntent = new Intent(this, DownloadService.class);  serviceIntent.putExtra("url", url);  startService(serviceIntent);  });  }  } |

Tạo file DownloadService

|  |
| --- |
| package com.example.dnk\_1150070024\_11\_tmdt\_baitaplythuyet7;  import android.app.\*;  import android.content.\*;  import android.os.\*;  import androidx.core.app.NotificationCompat;  import java.io.\*;  import java.net.\*;  public class DownloadService extends Service {  public static final String CHANNEL\_ID = "download\_channel";  public static final String ACTION\_PAUSE = "PAUSE";  public static final String ACTION\_RESUME = "RESUME";  public static final String ACTION\_CANCEL = "CANCEL";  private static boolean isPaused = false;  private static boolean isCancelled = false;  private int progress = 0;  private String urlStr;  public static void setPaused(boolean value) { isPaused = value; }  public static void setCancelled(boolean value) { isCancelled = value; }  @Override  public int onStartCommand(Intent intent, int flags, int startId) {  urlStr = intent.getStringExtra("url");  createNotificationChannel();  Notification initial = new NotificationCompat.Builder(this, CHANNEL\_ID)  .setContentTitle("Chuẩn bị tải file...")  .setContentText("Đang khởi tạo kết nối mạng")  .setSmallIcon(android.R.drawable.stat\_sys\_download)  .setProgress(0, 0, true)  .build();  startForeground(1, initial);  new Thread(this::downloadFile).start();  return START\_STICKY;  }  private void downloadFile() {  try {  URL url = new URL(urlStr);  HttpURLConnection conn = (HttpURLConnection) url.openConnection();  conn.connect();  int length = conn.getContentLength();  if (length <= 0) {  showError("Không thể xác định kích thước file!");  stopSelf();  return;  }  InputStream input = new BufferedInputStream(url.openStream());  File file = new File(getFilesDir(), "downloaded\_file");  FileOutputStream output = new FileOutputStream(file);  byte[] buffer = new byte[1024];  int count;  int downloaded = 0;  while ((count = input.read(buffer)) != -1) {  if (isCancelled) break;  if (isPaused) {  Thread.sleep(300);  continue;  }  output.write(buffer, 0, count);  downloaded += count;  int percent = (int) ((downloaded \* 100L) / length);  updateNotification(percent);  }  output.flush();  output.close();  input.close();  if (isCancelled) {  showError("Tải file đã bị hủy.");  } else {  showCompleted();  }  stopForeground(true);  stopSelf();  } catch (Exception e) {  e.printStackTrace();  showError("Lỗi tải file: " + e.getMessage());  stopForeground(true);  stopSelf();  }  }  private void updateNotification(int percent) {  Intent pauseIntent = new Intent(this, DownloadReceiver.class);  pauseIntent.setAction(isPaused ? ACTION\_RESUME : ACTION\_PAUSE);  PendingIntent pPause = PendingIntent.getBroadcast(this, 0, pauseIntent, PendingIntent.FLAG\_IMMUTABLE);  Intent cancelIntent = new Intent(this, DownloadReceiver.class);  cancelIntent.setAction(ACTION\_CANCEL);  PendingIntent pCancel = PendingIntent.getBroadcast(this, 1, cancelIntent, PendingIntent.FLAG\_IMMUTABLE);  String pauseText = isPaused ? "Tiếp tục" : "Tạm dừng";  Notification notification = new NotificationCompat.Builder(this, CHANNEL\_ID)  .setContentTitle("Đang tải file...")  .setContentText("Tiến trình: " + percent + "%")  .setSmallIcon(android.R.drawable.stat\_sys\_download)  .setProgress(100, percent, false)  .addAction(android.R.drawable.ic\_media\_pause, pauseText, pPause)  .addAction(android.R.drawable.ic\_delete, "Hủy", pCancel)  .setOngoing(true)  .build();  startForeground(1, notification);  }  private void showCompleted() {  Notification done = new NotificationCompat.Builder(this, CHANNEL\_ID)  .setContentTitle("✅ Hoàn tất tải file!")  .setContentText("File đã lưu vào bộ nhớ trong của ứng dụng")  .setSmallIcon(android.R.drawable.stat\_sys\_download\_done)  .setAutoCancel(true)  .build();  NotificationManager nm = getSystemService(NotificationManager.class);  nm.notify(2, done);  }  private void showError(String msg) {  Notification error = new NotificationCompat.Builder(this, CHANNEL\_ID)  .setContentTitle("⚠️ Lỗi tải file")  .setContentText(msg)  .setSmallIcon(android.R.drawable.stat\_notify\_error)  .build();  NotificationManager nm = getSystemService(NotificationManager.class);  nm.notify(3, error);  }  private void createNotificationChannel() {  if (Build.VERSION.SDK\_INT >= Build.VERSION\_CODES.O) {  NotificationChannel channel = new NotificationChannel(  CHANNEL\_ID,  "Download Channel",  NotificationManager.IMPORTANCE\_LOW  );  getSystemService(NotificationManager.class).createNotificationChannel(channel);  }  }  @Override  public IBinder onBind(Intent intent) {  return null;  }  } |

Tạo file DownloadReceiver

|  |
| --- |
| package com.example.dnk\_1150070024\_11\_tmdt\_baitaplythuyet7;  import android.content.\*;  import android.widget.Toast;  public class DownloadReceiver extends BroadcastReceiver {  @Override  public void onReceive(Context context, Intent intent) {  String action = intent.getAction();  if (DownloadService.ACTION\_PAUSE.equals(action)) {  Toast.makeText(context, "⏸ Tạm dừng tải...", Toast.LENGTH\_SHORT).show();  DownloadService.setPaused(true);  } else if (DownloadService.ACTION\_RESUME.equals(action)) {  Toast.makeText(context, "▶️ Tiếp tục tải...", Toast.LENGTH\_SHORT).show();  DownloadService.setPaused(false);  } else if (DownloadService.ACTION\_CANCEL.equals(action)) {  Toast.makeText(context, "❌ Hủy tải...", Toast.LENGTH\_SHORT).show();  DownloadService.setCancelled(true);  }  }  } |

Trong activity\_main.xml

|  |
| --- |
| <?xml version="1.0" encoding="utf-8"?>  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  android:orientation="vertical"  android:padding="20dp"  android:gravity="center"  android:layout\_width="match\_parent"  android:layout\_height="match\_parent">  <EditText  android:id="@+id/edtUrl"  android:hint="Nhập link file cần tải"  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"/>  <Button  android:id="@+id/btnDownload"  android:text="Download"  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:layout\_marginTop="10dp"/>  </LinearLayout> |

Tạo file notification\_layout.xml

|  |
| --- |
| <?xml version="1.0" encoding="utf-8"?>  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  android:orientation="vertical"  android:padding="10dp"  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content">  <TextView  android:id="@+id/tvNotifyTitle"  android:text="Đang tải file..."  android:textStyle="bold"  android:textSize="15sp"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content" />  <ProgressBar  android:id="@+id/notifyProgress"  style="?android:attr/progressBarStyleHorizontal"  android:max="100"  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content"  android:progress="0" />  <LinearLayout  android:orientation="horizontal"  android:gravity="center"  android:layout\_width="match\_parent"  android:layout\_height="wrap\_content">  <Button  android:id="@+id/btnPause"  android:text="Pause"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginEnd="5dp" />  <Button  android:id="@+id/btnResume"  android:text="Resume"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content"  android:layout\_marginEnd="5dp" />  <Button  android:id="@+id/btnCancel"  android:text="Cancel"  android:layout\_width="wrap\_content"  android:layout\_height="wrap\_content" />  </LinearLayout>  </LinearLayout> |

Kết quả chạy được





