Bài 1:

A screenshot of a cell phone

AI-generated content may be incorrect.

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">  
  
 <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"  
 tools:targetApi="31">  
  
 <!-- SplashActivity: Mở đầu ứng dụng -->  
 <activity  
 android:name=".SplashActivity"  
 android:exported="true"  
 android:theme="@style/Theme.MaterialComponents.DayNight.NoActionBar">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
  
 <!-- MainActivity: màn chính sau Splash -->  
 <activity  
 android:name=".MainActivity"  
 android:exported="true" />  
 </application>  
  
</manifest>

SplashActivity.java

package com.example.lab7;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.os.Handler;  
import android.os.Looper;  
import android.view.View;  
import android.widget.ImageView;  
import androidx.appcompat.app.AppCompatActivity;  
import java.util.Random;  
  
public class SplashActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_splash*);  
  
 View root = findViewById(R.id.*rootSplash*);  
 ImageView ivIcon = findViewById(R.id.*ivIcon*);  
  
 // Danh sách màu nền (có thể lấy từ colors.xml)  
 int[] bgColors = new int[]{  
 getColor(R.color.*bg\_1*),  
 getColor(R.color.*bg\_2*),  
 getColor(R.color.*bg\_3*),  
 getColor(R.color.*bg\_4*)  
 };  
  
 // Danh sách icon  
 int[] icons = new int[]{  
 R.drawable.*i*,  
 R.drawable.*m*,  
 R.drawable.*r*,  
 };  
  
 // Random icon và màu nền mỗi lần mở app  
 Random rnd = new Random(System.*currentTimeMillis*());  
 int color = bgColors[rnd.nextInt(bgColors.length)];  
 int iconRes = icons[rnd.nextInt(icons.length)];  
  
 root.setBackgroundColor(color);  
 ivIcon.setImageResource(iconRes);  
  
 // Tự chuyển qua MainActivity sau 1.5 giây  
 new Handler(Looper.*getMainLooper*()).postDelayed(() -> {  
 startActivity(new Intent(this, MainActivity.class));  
 finish();  
 }, 1500);  
 }  
}

activity\_splash.xml

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:id="@+id/rootSplash"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:gravity="center"  
 android:orientation="vertical">  
  
 <ImageView  
 android:id="@+id/ivIcon"  
 android:layout\_width="128dp"  
 android:layout\_height="128dp"  
 android:src="@drawable/ic\_launcher\_foreground" />  
  
 <TextView  
 android:id="@+id/tvApp"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="12dp"  
 android:text="@string/app\_name"  
 android:textSize="22sp"/>  
</LinearLayout>

Colors.xml

<?xml version="1.0" encoding="utf-8"?>  
<resources>  
 <color name="bg\_1">#512DA8</color>  
 <color name="bg\_2">#1976D2</color>  
 <color name="bg\_3">#00796B</color>  
 <color name="bg\_4">#455A64</color>  
 <color name="black">#FF000000</color>  
 <color name="white">#FFFFFFFF</color>  
</resources>

Bài 2:

A screenshot of a video game

AI-generated content may be incorrect.

custom\_progress.xml

<?xml version="1.0" encoding="utf-8"?>  
<rotate xmlns:android="http://schemas.android.com/apk/res/android"  
 android:fromDegrees="0"  
 android:toDegrees="360">  
  
 <shape  
 android:shape="ring"  
 android:innerRadiusRatio="3"  
 android:thicknessRatio="8"  
 android:useLevel="false">  
 <gradient  
 android:type="sweep"  
 android:startColor="#FF6F00"  
 android:centerColor="#FFD54F"  
 android:endColor="#FFA000"  
 android:useLevel="false" />  
 </shape>  
</rotate>

item\_loading.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:background="#80000000"  
 android:gravity="center"  
 android:orientation="vertical">  
  
 <ProgressBar  
 android:layout\_width="80dp"  
 android:layout\_height="80dp"  
 android:indeterminate="true"  
 android:indeterminateDrawable="@drawable/custom\_progress" />  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp"  
 android:fontFamily="sans-serif-light"  
 android:text="Đang tải dữ liệu..."  
 android:textColor="@color/white"  
 android:textSize="16sp" />  
</LinearLayout>

SplashActivity.java

package com.example.lab7;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.os.Handler;  
import android.os.Looper;  
import android.view.View;  
import android.widget.ImageView;  
import androidx.appcompat.app.AppCompatActivity;  
import java.util.Random;  
  
public class SplashActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_splash*);  
  
 View root = findViewById(R.id.*rootSplash*);  
 ImageView ivIcon = findViewById(R.id.*ivIcon*);  
  
 // Danh sách màu nền (có thể lấy từ colors.xml)  
 int[] bgColors = new int[]{  
 getColor(R.color.*bg\_1*),  
 getColor(R.color.*bg\_2*),  
 getColor(R.color.*bg\_3*),  
 getColor(R.color.*bg\_4*)  
 };  
  
 // Danh sách icon  
 int[] icons = new int[]{  
 R.drawable.*i*,  
 R.drawable.*m*,  
 R.drawable.*r*,  
 };  
  
 // Random icon và màu nền mỗi lần mở app  
 Random rnd = new Random(System.*currentTimeMillis*());  
 int color = bgColors[rnd.nextInt(bgColors.length)];  
 int iconRes = icons[rnd.nextInt(icons.length)];  
  
 root.setBackgroundColor(color);  
 ivIcon.setImageResource(iconRes);  
  
 // Tự chuyển qua MainActivity sau 1.5 giây  
 new Handler(Looper.*getMainLooper*()).postDelayed(() -> {  
 startActivity(new Intent(this, MainActivity.class));  
 finish();  
 }, 1500);  
 }  
}

Bài 3:

A screen shot of a cell phone

AI-generated content may be incorrect.

A screenshot of a phone

AI-generated content may be incorrect.

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:id="@+id/main"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity">  
  
 <TextView  
 android:id="@+id/tvHello"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Hello World!"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintBottom\_toTopOf="@id/ivPhone"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 android:layout\_marginBottom="20dp" />  
  
 <ImageView  
 android:id="@+id/ivPhone"  
 android:layout\_width="80dp"  
 android:layout\_height="80dp"  
 android:layout\_marginTop="16dp"  
 android:src="@drawable/ic\_phone"  
 android:contentDescription="Call"  
 app:tint="@color/purple\_500"  
 app:layout\_constraintTop\_toBottomOf="@id/tvHello"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent" />  
  
</androidx.constraintlayout.widget.ConstraintLayout>

MainActivity.java

package com.example.lab7;  
  
import android.content.Intent;  
import android.net.Uri;  
import android.os.Bundle;  
import android.widget.ImageView;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class MainActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 ImageView ivPhone = findViewById(R.id.*ivPhone*);  
  
 ivPhone.setOnClickListener(v -> {  
 String phoneNumber = "6505551234"; // hoặc getString(R.string.txt\_phone1)  
 Intent intent = new Intent(Intent.*ACTION\_DIAL*);  
 intent.setData(Uri.*parse*("tel:" + phoneNumber));  
 startActivity(intent);  
 });  
 }  
}