**Bài tập Lab3**

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**1. LinearLayout**

**MainActivity.java:**

package com.example.lab012;  
  
import android.os.Bundle;  
import android.widget.LinearLayout;  
import android.widget.TextView;  
  
import androidx.activity.EdgeToEdge;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.graphics.Insets;  
import androidx.core.view.ViewCompat;  
import androidx.core.view.WindowInsetsCompat;  
  
public class MainActivity extends AppCompatActivity {  
  
 private LinearLayout llNameContainer, llAddressContainer, llParentContainer;  
  
 // Tạo LinearLayout chứa Name  
 private void createNameContainer() {  
 llNameContainer = new LinearLayout(this);  
 llNameContainer.setLayoutParams(new LinearLayout.LayoutParams(  
 LinearLayout.LayoutParams.*MATCH\_PARENT*,  
 LinearLayout.LayoutParams.*WRAP\_CONTENT*));  
 llNameContainer.setOrientation(LinearLayout.*HORIZONTAL*);  
  
 TextView tvName = new TextView(this);  
 tvName.setText("Name: ");  
 llNameContainer.addView(tvName);  
  
 TextView tvNameValue = new TextView(this);  
 tvNameValue.setText("John Doe");  
 llNameContainer.addView(tvNameValue);  
 }  
  
 // Tạo LinearLayout chứa Address  
 private void createAddressContainer() {  
 llAddressContainer = new LinearLayout(this);  
 llAddressContainer.setLayoutParams(new LinearLayout.LayoutParams(  
 LinearLayout.LayoutParams.*MATCH\_PARENT*,  
 LinearLayout.LayoutParams.*WRAP\_CONTENT*));  
 llAddressContainer.setOrientation(LinearLayout.*HORIZONTAL*);  
  
 TextView tvAddress = new TextView(this);  
 tvAddress.setText("Address: ");  
 llAddressContainer.addView(tvAddress);  
  
 TextView tvAddressValue = new TextView(this);  
 tvAddressValue.setText("911 Hollywood Blvd");  
 llAddressContainer.addView(tvAddressValue);  
 }  
  
 // Tạo LinearLayout cha chứa tất cả  
 private void createParentContainer() {  
 llParentContainer = new LinearLayout(this);  
 llParentContainer.setLayoutParams(new LinearLayout.LayoutParams(  
 LinearLayout.LayoutParams.*MATCH\_PARENT*,  
 LinearLayout.LayoutParams.*MATCH\_PARENT*));  
 llParentContainer.setOrientation(LinearLayout.*VERTICAL*);  
  
 llParentContainer.addView(llNameContainer);  
 llParentContainer.addView(llAddressContainer);  
 }  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
  
 // Nếu muốn dùng hoàn toàn code -> bỏ activity\_main.xml  
 // EdgeToEdge.enable(this);  
  
 createNameContainer();  
 createAddressContainer();  
 createParentContainer();  
  
 setContentView(llParentContainer);  
  
 // Nếu muốn dùng activity\_main.xml thì thay vì trên,  
 // dùng setContentView(R.layout.activity\_main);  
 // và ánh xạ view bằng findViewById()  
 }  
}

**acticity\_main.xml:**

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context="com.example.lab012.MainActivity">  
  
 <!-- Hàng trên cùng -->  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1"  
 android:background="@color/color0"  
 android:orientation="horizontal" />  
  
 <!-- Hàng dưới (chia làm 2 cột) -->  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="2"  
 android:orientation="horizontal">  
  
 <!-- Cột trái (chia thành 2 hàng) -->  
 <LinearLayout  
 android:layout\_width="0dp"  
 android:layout\_height="match\_parent"  
 android:layout\_weight="1"  
 android:orientation="vertical">  
  
 <!-- Hàng trên của cột trái -->  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1"  
 android:background="@color/color2"  
 android:orientation="horizontal" />  
  
 <!-- Hàng dưới của cột trái -->  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1"  
 android:background="@color/color3"  
 android:orientation="horizontal" />  
 </LinearLayout>  
  
 <!-- Cột phải -->  
 <LinearLayout  
 android:layout\_width="0dp"  
 android:layout\_height="match\_parent"  
 android:layout\_weight="1"  
 android:background="@color/color1"  
 android:orientation="vertical" />  
 </LinearLayout>  
</LinearLayout>

**colors.xml:**

<?xml version="1.0" encoding="utf-8"?>  
<resources>  
 <color name="color0">#FFBB86FC</color>  
 <color name="color1">#FF6200EE</color>  
 <color name="color2">#FF03DAC5</color>  
 <color name="color3">#FFFF5722</color>  
</resources>

A screenshot of a cell phone

AI-generated content may be incorrect.

**2. RelativeLayout**

AndoidManifest.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.Lab012">  
 <activity  
 android:name=".LoginActivity"  
 android:exported="true">  
  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
  
 </activity>  
  
 <activity  
 android:name=".MainActivity"  
 android:exported="false" />  
  
 </application>  
  
</manifest>

LoginActivity.java:

package com.example.lab012;  
  
import android.os.Bundle;  
import androidx.appcompat.app.AppCompatActivity;  
  
public class LoginActivity extends AppCompatActivity {  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_login*);   
 }  
}

dimens.xml:

<?xml version="1.0" encoding="utf-8"?>  
<resources>  
   
 <dimen name="activity\_horizontal\_margin">16dp</dimen>  
 <dimen name="activity\_vertical\_margin">16dp</dimen>  
 <dimen name="margin\_base">5dp</dimen>  
 <dimen name="margin\_basex2">10dp</dimen>  
 <dimen name="margin\_basex3">15dp</dimen>  
 <dimen name="margin\_basex4">20dp</dimen>  
 <dimen name="text\_small">16sp</dimen>  
 <dimen name="text\_medium">18sp</dimen>  
 <dimen name="text\_large">20sp</dimen>  
</resources>

strings.xml:

<resources>  
 <string name="app\_name">Lab01.2</string>  
 <string name="sign\_in">Sign in</string>  
 <string name="username">Username: </string>  
 <string name="password">Password: </string>  
 <string name="signup">Sign up</string>  
</resources>

activity\_login.xml:

<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:paddingLeft="16dp"  
 android:paddingRight="16dp">  
  
 <!-- Tiêu đề Đăng nhập -->  
 <TextView  
 android:id="@+id/tv\_sign\_in"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="@string/sign\_in"  
 android:textAllCaps="true"  
 android:layout\_centerHorizontal="true"  
 android:layout\_marginTop="32dp"  
 android:textSize="24sp" />  
  
 <!-- Label Username -->  
 <TextView  
 android:id="@+id/tv\_user\_name"  
 android:layout\_width="100dp"  
 android:layout\_height="wrap\_content"  
 android:text="@string/username"  
 android:layout\_below="@id/tv\_sign\_in"  
 android:layout\_alignParentLeft="true"  
 android:layout\_marginTop="24dp" />  
  
 <!-- Ô nhập Username -->  
 <EditText  
 android:id="@+id/et\_username"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="name@gmail.com"  
 android:layout\_alignTop="@id/tv\_user\_name"  
 android:layout\_toRightOf="@id/tv\_user\_name" />  
  
 <!-- Label Password -->  
 <TextView  
 android:id="@+id/tv\_password"  
 android:layout\_width="100dp"  
 android:layout\_height="wrap\_content"  
 android:text="@string/password"  
 android:layout\_below="@id/et\_username"  
 android:layout\_alignParentLeft="true"  
 android:layout\_marginTop="16dp" />  
  
 <!-- Ô nhập Password -->  
 <EditText  
 android:id="@+id/et\_password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="\*\*\*\*\*\*"  
 android:inputType="textPassword"  
 android:layout\_alignTop="@id/tv\_password"  
 android:layout\_toRightOf="@id/tv\_password" />  
  
 <!-- Nút Sign in -->  
 <Button  
 android:id="@+id/btn\_sign\_in"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:padding="12dp"  
 android:text="@string/sign\_in"  
 android:layout\_below="@id/et\_password"  
 android:layout\_alignParentRight="true"  
 android:layout\_marginTop="16dp" />  
  
</RelativeLayout>

A screen shot of a phone

AI-generated content may be incorrect.