**APPCONTACTS - RECYCLERVIEW**

**I. 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">  
  
 <uses-permission android:name="android.permission.INTERNET" />  
  
 <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.AppContacts"  
 android:usesCleartextTraffic="true"  
 tools:targetApi="31">  
 <activity  
 android:name=".ContactAdapter"  
 android:exported="false" />  
 <activity  
 android:name=".ContactActivity"  
 android:exported="false" />  
 <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>

**II. build.gradle (Module :app)**

buildFeatures **{** viewBinding true  
**}**

dependencies **{**  
 *// round images* implementation 'de.hdodenhof:circleimageview:3.1.0'  
  
 *// corountines* implementation 'org.jetbrains.kotlinx:kotlinx-coroutines-core:1.3.7'  
 implementation 'org.jetbrains.kotlinx:kotlinx-coroutines-android:1.3.5'  
  
 *// retrofit2* implementation 'com.squareup.retrofit2:converter-gson:2.9.0'  
 implementation 'com.squareup.retrofit2:retrofit:2.9.0'  
  
 *// loading images* implementation 'com.github.bumptech.glide:glide:4.14.2'  
 annotationProcessor 'com.github.bumptech.glide:compiler:4.14.2'  
**}**

**III. Java**

**1. MainActivity**

package com.example.appcontacts  
  
import androidx.appcompat.app.AppCompatActivity  
import android.os.Bundle  
import android.util.Log  
import androidx.recyclerview.widget.LinearLayoutManager  
import androidx.recyclerview.widget.RecyclerView  
import com.example.appcontacts.api.ContactRequestApi  
import com.example.appcontacts.databinding.ActivityMainBinding  
import kotlinx.coroutines.CoroutineScope  
import kotlinx.coroutines.Dispatchers  
import kotlinx.coroutines.launch  
import kotlinx.coroutines.withContext  
import retrofit2.Retrofit  
import retrofit2.awaitResponse  
import retrofit2.converter.gson.GsonConverterFactory  
  
class MainActivity : AppCompatActivity() {  
 lateinit var binding: ActivityMainBinding  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 binding = ActivityMainBinding.inflate(*layoutInflater*)  
 setContentView(binding.*root*)  
 binding.lsvContacts.*layoutManager* = LinearLayoutManager(this, RecyclerView.*VERTICAL*, false)  
 *CoroutineScope*(Dispatchers.IO).*launch* **{** getContactsFromApi()  
 **}** }  
  
 suspend fun getContactsFromApi() {  
 val api = Retrofit.Builder()  
 .baseUrl("https://randomuser.me/")  
 .addConverterFactory(GsonConverterFactory.create())  
 .build()  
 .create(ContactRequestApi::class.*java*)  
  
 val response = api.getContacts().awaitResponse()  
 val data = response.body()!!  
 Log.i("contact", data.results.size.toString())  
 withContext(Dispatchers.Main) **{** var adapter = ContactAdapter(*applicationContext*, data.results)  
 binding.lsvContacts.*adapter* = adapter  
 **}** }  
}

**2. ContactActivity**

package com.example.appcontacts  
  
import androidx.appcompat.app.AppCompatActivity  
import android.os.Bundle  
import com.bumptech.glide.Glide  
import com.example.appcontacts.databinding.ActivityContactBinding  
  
class ContactActivity : AppCompatActivity() {  
 lateinit var binding: ActivityContactBinding  
 override fun onCreate(savedInstanceState: Bundle?) {  
 super.onCreate(savedInstanceState)  
 binding = ActivityContactBinding.inflate(*layoutInflater*)  
 setContentView(binding.*root*)  
  
 val name = *intent*.getStringExtra("name")  
 val email = *intent*.getStringExtra("email")  
 val phone = *intent*.getStringExtra("phone")  
 val address = *intent*.getStringExtra("address")  
 val img = *intent*.getStringExtra("img")  
  
 binding.tvName.*text* = name  
 binding.tvEmail.*text* = email  
 binding.tvPhone.*text* = phone  
 binding.tvAddress.*text* = address  
 Glide.with(this).load(img).into(binding.ivAvatar);  
 }  
}

**3. ContactAdapter**

package com.example.appcontacts  
  
import android.content.Context  
import android.content.Intent  
import android.view.LayoutInflater  
import android.view.View  
import android.view.ViewGroup  
import android.widget.ImageView  
import android.widget.TextView  
import androidx.recyclerview.widget.RecyclerView  
import com.bumptech.glide.Glide  
import com.example.appcontacts.api.Result  
  
class ContactAdapter(private val context: Context, private val arrayList: ArrayList<Result>):  
 RecyclerView.Adapter<ContactAdapter.ViewHolder>() {  
 class ViewHolder(view: View) : RecyclerView.ViewHolder(view) {  
 val ivAvatar: ImageView  
 val tvFullName: TextView  
 val tvEmail: TextView  
 val tvPhone: TextView  
 val tvCity: TextView  
  
 init {  
 ivAvatar = view.findViewById(R.id.*iv\_avatar*)  
 tvFullName = view.findViewById(R.id.*tv\_name*)  
 tvPhone = view.findViewById(R.id.*tv\_phone*)  
 tvEmail = view.findViewById(R.id.*tv\_email*)  
 tvCity = view.findViewById(R.id.*tv\_city*)  
 }  
 }  
  
 override fun onCreateViewHolder(parent: ViewGroup, viewType: Int): ViewHolder {  
 val view = LayoutInflater.from(parent.*context*).inflate(R.layout.*contact\_item*, null)  
 return ViewHolder(view)  
 }  
  
 override fun getItemCount(): Int {  
 return arrayList.size;  
 }  
  
 override fun onBindViewHolder(holder: ViewHolder, position: Int) {  
 holder.tvFullName.*text* = arrayList[position].name.title + ". " +  
 arrayList[position].name.last + " " +  
 arrayList[position].name.first  
 holder.tvPhone.*text* = arrayList[position].phone  
 holder.tvEmail.*text* = arrayList[position].email  
 holder.tvCity.*text* = arrayList[position].location.city  
  
 Glide.with(context).load(arrayList[position].picture.thumbnail).circleCrop().into(holder.ivAvatar);  
  
 holder.itemView.setOnClickListener **{** val i = Intent(holder.itemView.*context*, ContactActivity::class.*java*)  
 i.putExtra("name", arrayList[position].name.last)  
 i.putExtra("email", arrayList[position].email)  
 i.putExtra("phone", arrayList[position].phone)  
 i.putExtra("address", arrayList[position].location.city)  
 i.putExtra("img", arrayList[position].picture.thumbnail)  
 holder.itemView.*context*.startActivity(i)  
 **}** }  
}

**IV. api**

1. **ContactRequestApi (interface)**

package com.example.appcontacts.api  
  
import retrofit2.Call  
import retrofit2.http.GET  
  
interface ContactRequestApi {  
 @GET("api/?results=10")  
 fun getContacts(): Call<Response>  
}

1. **Response (data class)**

package com.example.appcontacts.api  
  
data class Response(  
 val info: Info,  
 val results: ArrayList<Result>  
)

* 1. **Coordinates**

package com.example.appcontacts.api  
  
data class Coordinates(  
 val latitude: String,  
 val longitude: String  
)

* 1. **Dob**

package com.example.appcontacts.api  
  
data class Dob(  
 val age: Int,  
 val date: String  
)

* 1. **Id**

package com.example.appcontacts.api  
  
data class Id(  
 val name: String,  
 val value: String  
)

* 1. **Info**

package com.example.appcontacts.api  
  
data class Info(  
 val page: Int,  
 val results: Int,  
 val seed: String,  
 val version: String  
)

* 1. **Location**

package com.example.appcontacts.api  
  
data class Location(  
 val city: String,  
 val coordinates: Coordinates,  
 val country: String,  
 val postcode: String,  
 val state: String,  
 val street: Street,  
 val timezone: Timezone  
)

* 1. **Login**

package com.example.appcontacts.api  
  
data class Login(  
 val md5: String,  
 val password: String,  
 val salt: String,  
 val sha1: String,  
 val sha256: String,  
 val username: String,  
 val uuid: String  
)

* 1. **Name**

package com.example.appcontacts.api  
  
data class Name(  
 val first: String,  
 val last: String,  
 val title: String  
)

* 1. **Picture**

package com.example.appcontacts.api  
  
data class Picture(  
 val large: String,  
 val medium: String,  
 val thumbnail: String  
)

* 1. **Registered**

package com.example.appcontacts.api  
  
data class Registered(  
 val age: Int,  
 val date: String  
)

* 1. **Result**

package com.example.appcontacts.api  
  
data class Result(  
 val cell: String,  
 val dob: Dob,  
 val email: String,  
 val gender: String,  
 val id: Id,  
 val location: Location,  
 val login: Login,  
 val name: Name,  
 val nat: String,  
 val phone: String,  
 val picture: Picture,  
 val registered: Registered  
)

* 1. **Street**

package com.example.appcontacts.api  
  
data class Street(  
 val name: String,  
 val number: Int  
)

* 1. **Timezone**

package com.example.appcontacts.api  
  
data class Timezone(  
 val description: String,  
 val offset: String  
)

**V. Layout**

**1. activity\_main**

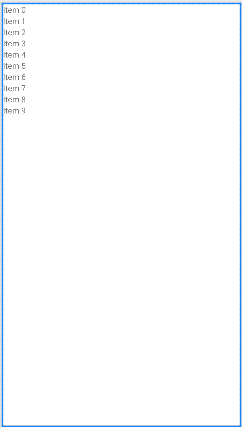
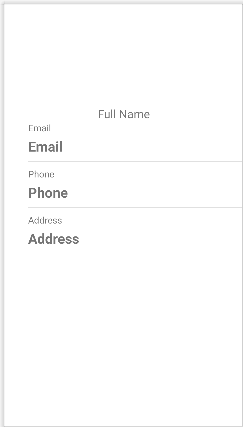
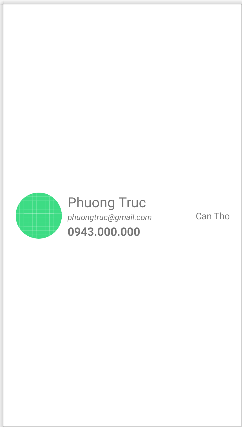
*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="horizontal"  
 tools:context=".MainActivity">  
  
 <androidx.recyclerview.widget.RecyclerView  
 android:id="@+id/lsvContacts"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:ignore="MissingConstraints">  
  
 </androidx.recyclerview.widget.RecyclerView>  
</LinearLayout>

**2. activity\_contact**

*<?*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=".ContactActivity">  
  
 <de.hdodenhof.circleimageview.CircleImageView  
 android:id="@+id/iv\_avatar"  
 android:layout\_width="150dp"  
 android:layout\_height="150dp"  
 android:layout\_marginTop="20dp"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"/>  
  
 <TextView  
 android:id="@+id/tv\_name"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="5dp"  
 android:textSize="20sp"  
 android:textAlignment="center"  
 tools:text="Full Name"  
 app:layout\_constraintTop\_toBottomOf="@id/iv\_avatar"/>  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="40dp"  
 android:orientation="vertical"  
 app:layout\_constraintTop\_toBottomOf="@id/tv\_name">  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Email"  
 android:textSize="16sp"/>  
  
 <TextView  
 android:id="@+id/tv\_email"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="5dp"  
 android:text="Email"  
 android:textSize="24sp"  
 android:textStyle="bold"/>  
  
 <com.google.android.material.divider.MaterialDivider  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp"  
 android:layout\_marginBottom="10dp"  
 android:scaleY="2"/>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Phone"  
 android:textSize="16sp"/>  
  
 <TextView  
 android:id="@+id/tv\_phone"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="5dp"  
 android:text="Phone"  
 android:textSize="24sp"  
 android:textStyle="bold"/>  
  
 <com.google.android.material.divider.MaterialDivider  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp"  
 android:layout\_marginBottom="10dp"  
 android:scaleY="2"/>  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Address"  
 android:textSize="16sp"/>  
  
 <TextView  
 android:id="@+id/tv\_address"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="5dp"  
 android:text="Address"  
 android:textSize="24sp"  
 android:textStyle="bold"/>  
  
 </LinearLayout>  
</androidx.constraintlayout.widget.ConstraintLayout>

**3. contact\_item**

*<?*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"  
android:layout\_width="match\_parent"  
android:layout\_height="match\_parent">  
  
<de.hdodenhof.circleimageview.CircleImageView  
 android:id="@+id/iv\_avatar"  
 android:layout\_width="80dp"  
 android:layout\_height="80dp"  
 android:layout\_margin="20dp"  
 android:src="@drawable/ic\_launcher\_background"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintBottom\_toBottomOf="parent"/>  
  
<TextView  
 android:id="@+id/tv\_name"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="10dp"  
 android:textSize="24sp"  
 android:text="Phuong Truc"  
 app:layout\_constraintStart\_toEndOf="@+id/iv\_avatar"  
 app:layout\_constraintTop\_toTopOf="@+id/iv\_avatar"/>  
  
<TextView  
 android:id="@+id/tv\_email"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="10dp"  
 android:textSize="14sp"  
 android:textStyle="italic"  
 android:text="phuongtruc@gmail.com"  
 app:layout\_constraintStart\_toEndOf="@+id/iv\_avatar"  
 app:layout\_constraintTop\_toBottomOf="@+id/tv\_name"/>  
  
<TextView  
 android:id="@+id/tv\_phone"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="10dp"  
 android:layout\_marginTop="2dp"  
 android:textSize="20sp"  
 android:textStyle="bold"  
 android:text="0943.000.000"  
 app:layout\_constraintStart\_toEndOf="@+id/iv\_avatar"  
 app:layout\_constraintTop\_toBottomOf="@+id/tv\_email"/>  
  
<TextView  
 android:id="@+id/tv\_city"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginEnd="20dp"  
 android:textSize="16sp"  
 android:text="Can Tho"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintTop\_toTopOf="@id/iv\_avatar"  
 app:layout\_constraintBottom\_toBottomOf="@+id/iv\_avatar"/>  
</androidx.constraintlayout.widget.ConstraintLayout>

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