Mobile Application Development

🔶 Practical 8: Recycle View

CODE:

Andriod_manifest.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.recycleview">

    <uses-permission android:name="android.permission.CALL_PHONE"/>
    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.RecycleView">
        <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>
```

Activity_main.xml

```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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <androidx.recyclerview.widget.RecyclerView
        android:id="@+id/recyclerView"
        android:layout_width="417dp"
```

```
        android:layout_height="729dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

Activity_raw.xml

```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/mainLayout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_margin="10dp"
    android:background="#D6F4F8"
    android:orientation="vertical">

    <androidx.cardview.widget.CardView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="MissingConstraints">

        <androidx.constraintlayout.widget.ConstraintLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent">

            <ImageView
                android:id="@+id/myImageView"
                android:layout_width="100dp"
                android:layout_height="100dp"
                android:layout_margin="10dp"
                app:layout_constraintBottom_toBottomOf="parent"
                app:layout_constraintStart_toStartOf="parent"
                app:layout_constraintTop_toTopOf="parent"
                app:srcCompat="@drawable/ic_launcher_background"
                tools:ignore="VectorDrawableCompat" />

            <TextView
```

```xml
            android:id="@+id/myText1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginStart="20dp"
            android:layout_marginLeft="20dp"
            android:layout_marginTop="10dp"
            android:text="Name"
            android:textSize="20sp"
            android:textStyle="bold"
            app:layout_constraintStart_toEndOf="@+id/myImageView"
            app:layout_constraintTop_toTopOf="parent" />

        <TextView
            android:id="@+id/myText2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:text="Enrollment Number"
            android:textSize="14sp"
            app:layout_constraintStart_toStartOf="@+id/myText1"
            app:layout_constraintTop_toBottomOf="@+id/myText1" />

        <TextView
            android:id="@+id/myText3"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:text="Email"
            android:textSize="14sp"
            app:layout_constraintStart_toStartOf="@+id/myText2"
            app:layout_constraintTop_toBottomOf="@+id/myText2" />

        <TextView
            android:id="@+id/myText4"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="10dp"
            android:text="Phone"
            android:textSize="14sp"
            app:layout_constraintStart_toStartOf="@+id/myText3"
            app:layout_constraintTop_toBottomOf="@+id/myText3" />

        </androidx.constraintlayout.widget.ConstraintLayout>
    </androidx.cardview.widget.CardView>
</androidx.constraintlayout.widget.ConstraintLayout>
```

MainActivity.java

```java
package com.example.recycleview;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;
import android.os.Bundle;
```

```java
public class MainActivity extends AppCompatActivity {
    RecyclerView recyclerView;
    String s1[], s2[], s3[], s4[];
    int images[] = {R.drawable.principal,R.drawable.kkimg, R.drawable.avn,
            R.drawable.cav, R.drawable.kkr, R.drawable.hardi,
            R.drawable.scan00031, R.drawable.passport, R.drawable.vra,
            R.drawable.urv};
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        recyclerView = findViewById(R.id.recyclerView);
        s1 = getResources().getStringArray(R.array.names);
        s2 = getResources().getStringArray(R.array.Interest);
        s3 = getResources().getStringArray(R.array.emails);
        s4 = getResources().getStringArray(R.array.phone);
        MyAdapter myAdapter = new MyAdapter(this, s1, s2, s3,s4, images);
        recyclerView.setAdapter(myAdapter);
        recyclerView.setLayoutManager(new LinearLayoutManager(this));

    }
}
```

Myadepter.java

```java
package com.example.recycleview;

import android.annotation.SuppressLint;
import android.content.Context;
import android.content.Intent;
import android.net.Uri;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;
import androidx.annotation.NonNull;
import androidx.constraintlayout.widget.ConstraintLayout;
import androidx.recyclerview.widget.RecyclerView;
public class MyAdapter extends
        RecyclerView.Adapter<MyAdapter.MyViewHolder> {


    String data1[], data2[], data3[], data4[];
    int images[];
    Context context;
    public MyAdapter(Context ct, String s1[], String s2[], String s3[],
String s4[],
                     int img[]) {
        context = ct;
        data1 = s1;
        data2 = s2;
```

```java
        data3 = s3;
        data4 = s4;

        images = img;
    }
    @NonNull
    @Override
    public MyViewHolder onCreateViewHolder(@NonNull ViewGroup parent,
                                           int viewType) {
        LayoutInflater inflater = LayoutInflater.from(context);
        View view = inflater.inflate(R.layout.my_row, parent, false);
        return new MyViewHolder(view);
    }
    @Override
    public void onBindViewHolder(@NonNull MyViewHolder holder,
                                 @SuppressLint("RecyclerView") final int
                                         position) {
        holder.mytext1.setText(data1[position]);
        holder.mytext2.setText(data2[position]);
        holder.mytext3.setText(data3[position]);
        holder.mytext4.setText(data4[position]);

        holder.myImage.setImageResource(images[position]);

        holder.mainLayout.setOnClickListener(view ->
                Toast.makeText(context,
                        "Click on "+data1[position],
                        Toast.LENGTH_SHORT).show());
    }

    @Override
    public int getItemCount() {
        return images.length;
    }
    public static class MyViewHolder extends RecyclerView.ViewHolder {

        TextView mytext1;
        TextView mytext2;
        TextView mytext3;
        private TextView mytext4;
        ImageView myImage;
        ConstraintLayout mainLayout;
        public MyViewHolder(@NonNull View itemView) {
            super(itemView);
            mytext1 = itemView.findViewById(R.id.myText1);
            mytext2 = itemView.findViewById(R.id.myText2);
            mytext3 = itemView.findViewById(R.id.myText3);
            setMytext4(itemView.findViewById(R.id.myText4));
            myImage = itemView.findViewById(R.id.myImageView);
            mainLayout = itemView.findViewById(R.id.mainLayout);

        }

        public TextView getMytext4() {
            return mytext4;
        }
    }
```

```
        public void setMytext4(TextView mytext4) {
            this.mytext4 = mytext4;
        }
    }
}
```

Output