LAB9_RECYCLERVIEW

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

    <androidx.recyclerview.widget.RecyclerView
        android:layout_width="match_parent"
        android:id="@+id/recyclerview"
        android:layout_height="match_parent"
        tools:listitem="@layout/sample_course"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

ACTIVITY2.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:layout_width="match_parent"
        android:id="@+id/recyclerview"
        android:layout_height="match_parent"
        tools:listitem="@layout/sample_course"/>

    <com.google.android.material.floatingactionbutton.FloatingActionButton
        android:id="@+id/floatingActionButton"
        android:layout_width="65dp"
        android:layout_height="54dp"
        android:clickable="true"
        android:foregroundGravity="center"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.953"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.976"
        app:maxImageSize="50dp"
        app:srcCompat="@drawable/ic_baseline_add_24" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

ACTIVITY3.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=".MainActivity3">
```

```
    <ImageView
        android:id="@+id/imageView"
        android:layout_width="wrap_content"
        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"
        app:layout_constraintVertical_bias="0.07"
        app:srcCompat="@drawable/lab9_7" />

    <ScrollView
        android:layout_width="415dp"
        android:layout_height="488dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/imageView">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <TextView
                android:id="@+id/fulltext"
                android:layout_width="match_parent"
                android:layout_height="match_parent"
                android:layout_marginTop="166dp"
                android:fontFamily="@font/aldrich"
                android:text="@string/newtext"
                android:textAlignment="gravity"
                android:textSize="30sp" />
        </LinearLayout>
    </ScrollView>

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

SAMPLE_COURSE.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="190dp">

    <androidx.cardview.widget.CardView
        android:id="@+id/course1"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_margin="5dp"
        app:cardCornerRadius="8dp"
        app:cardElevation="5dp"
        tools:layout_editor_absoluteX="5dp"
        tools:layout_editor_absoluteY="5dp">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <ImageView
                android:id="@+id/bookimg"
                android:layout_width="match_parent"
```

```
                android:layout_height="140dp"
                android:scaleType="centerCrop"
                app:srcCompat="@drawable/lab9_1" />

            <TextView
                android:id="@+id/booktxt"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_margin="5dp"
                android:background="#FD5757"
                android:fontFamily="@font/aclonica"
                android:gravity="center"
                android:text="Android Course"
                android:textColor="#FFFFFF"
                android:textSize="24sp" />
        </LinearLayout>

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

MAINACTIVITY.JAVA

```
package com.example.lab9_recyclerview;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;
import android.widget.Toast;

import com.example.lab9_recyclerview.Adapters.courseadapter;
import com.example.lab9_recyclerview.Clases.RecyclerItemClickListener;
import com.example.lab9_recyclerview.Models.coursemodel;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {
    RecyclerView recyclerView;
//    ImageView imageView;


    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        recyclerView = findViewById(R.id.recyclerview);
//        imageView = findViewById(R.id.bookimg);
//        imageView.setOnClickListener(new View.OnClickListener() {
//            @Override
//            public void onClick(View view) {
//                Intent intent = new Intent(MainActivity.this,MainActivity2.class);
//                startActivity(intent);
//            }
//        });



        ArrayList<coursemodel> list = new ArrayList<>();
        list.add(new coursemodel(R.drawable.lab9_1,"Android JAVA"));
        list.add(new coursemodel(R.drawable.lab9_2,"Python"));
        list.add(new coursemodel(R.drawable.lab9_3,"C++"));
        list.add(new coursemodel(R.drawable.lab9_4,"Operating System"));
```

```
        list.add(new coursemodel(R.drawable.lab9_5,"Networking"));
        list.add(new coursemodel(R.drawable.lab9_6,"Java"));
        list.add(new coursemodel(R.drawable.lab9_7,"Software Engineering"));
        list.add(new coursemodel(R.drawable.lab9_8,"Data Analytics"));
        list.add(new coursemodel(R.drawable.lab9_9,"HED"));

        courseadapter adapter = new courseadapter(list, this);
        recyclerView.setAdapter(adapter);



        LinearLayoutManager layoutManager = new LinearLayoutManager(this);
        recyclerView.setLayoutManager(layoutManager);

//        LinearLayoutManager layoutManager = new LinearLayoutManager(this,
recyclerView.HORIZONTAL,true);
//        recyclerView.setLayoutManager(layoutManager);

        recyclerView.addOnItemTouchListener(new RecyclerItemClickListener(
                this, recyclerView, new
RecyclerItemClickListener.OnItemClickListener() {
            @Override
            public void onItemClick(View view, int position) {
                switch (position){
                    case 0:
                            Intent intent =new Intent(MainActivity.this ,
MainActivity2.class);
                            startActivity(intent);
                        break;

                    default:

                }
            }

            @Override
            public void onLongItemClick(View view, int position) {
                switch (position){
                    case 0:
                        Toast.makeText(MainActivity.this, "Click once to get to know",
Toast.LENGTH_SHORT).show();
                        break;

                    case 1:

                        break;
                    default:
                }
            }
        }
        ));

    }


}
```

MAINACTIVITY2.JAVA

```
package com.example.lab9_recyclerview;

import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.GridLayoutManager;
import androidx.recyclerview.widget.LinearLayoutManager;
import androidx.recyclerview.widget.RecyclerView;
import androidx.recyclerview.widget.StaggeredGridLayoutManager;
```

```
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import com.example.lab9_recyclerview.Adapters.courseadapter;
import com.example.lab9_recyclerview.Models.coursemodel;
import com.google.android.material.floatingactionbutton.FloatingActionButton;

import java.util.ArrayList;

public class MainActivity2 extends AppCompatActivity {
    RecyclerView recyclerView2;
     FloatingActionButton btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);

        recyclerView2 = findViewById(R.id.recyclerview);
        btn = findViewById(R.id.floatingActionButton);

        ArrayList<coursemodel> list = new ArrayList<>();
        list.add(new coursemodel(R.drawable.lab9_1,"Android_JAVA"));
        list.add(new coursemodel(R.drawable.lab9_2,"Python"));
        list.add(new coursemodel(R.drawable.lab9_3,"C++"));
        list.add(new coursemodel(R.drawable.lab9_4,"Operating System"));
        list.add(new coursemodel(R.drawable.lab9_5,"Networking"));
        list.add(new coursemodel(R.drawable.lab9_6,"Java"));
        list.add(new coursemodel(R.drawable.lab9_7,"Software Engineering"));
        list.add(new coursemodel(R.drawable.lab9_8,"Data Analytics"));
        list.add(new coursemodel(R.drawable.lab9_9,"HED"));

        courseadapter adapter = new courseadapter(list, this);
        recyclerView2.setAdapter(adapter);

//        GridLayoutManager gridLayoutManager = new GridLayoutManager(this,2);
//        recyclerView2.setLayoutManager(gridLayoutManager);

        StaggeredGridLayoutManager stagger = new
StaggeredGridLayoutManager(2,StaggeredGridLayoutManager.VERTICAL); //horizontal
        recyclerView2.setLayoutManager(stagger);
        btn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                coursemodel objnew = new coursemodel(R.drawable.lab9_10,"New Added");
                adapter.list.add(objnew);
                adapter.notifyItemInserted(adapter.getItemCount() - 1);
            }
        });



//        LinearLayoutManager layoutManager = new LinearLayoutManager(this,
recyclerView2.HORIZONTAL,true);
//        recyclerView2.setLayoutManager(layoutManager);
    }
}
```

MAINACTIVITY3.JAVA

```
package com.example.lab9_recyclerview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
```

```
public class MainActivity3 extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main3);
    }
}
```

ADAPTERS

Courseadapter

```
package com.example.lab9_recyclerview.Adapters;

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 android.widget.Toast;

import androidx.annotation.NonNull;
import androidx.recyclerview.widget.RecyclerView;

import com.example.lab9_recyclerview.MainActivity;
import com.example.lab9_recyclerview.MainActivity2;
import com.example.lab9_recyclerview.MainActivity3;
import com.example.lab9_recyclerview.Models.coursemodel;
import com.example.lab9_recyclerview.R;

import java.time.MonthDay;
import java.util.ArrayList;

public class courseadapter extends RecyclerView.Adapter<courseadapter.viewHolder>{
    public ArrayList<coursemodel> list;
    Context context;


    public courseadapter(ArrayList<coursemodel> list, Context context) {
        this.list = list;
        this.context = context;
    }

    @NonNull
    @Override
    public courseadapter.viewHolder onCreateViewHolder(@NonNull ViewGroup parent, int
viewType) {
        View view =
LayoutInflater.from(context).inflate(R.layout.sample_course,parent,false);

        return new viewHolder(view);
    }

    @Override
    public void onBindViewHolder(@NonNull courseadapter.viewHolder holder, int
position) {

        coursemodel model = list.get(position);
        holder.imageView.setImageResource(model.getPic());
```

```
        holder.textView.setText(model.getText());

//        holder.imageView.setOnClickListener(new View.OnClickListener() {
//            @Override
//            public void onClick(View v) {
//                Toast.makeText(context,"Clicked Item",Toast.LENGTH_SHORT).show();
//            }
//        });

        switch (position){
            case 0:
                    holder.imageView.setOnClickListener(new View.OnClickListener() {
                        @Override
                        public void onClick(View v) {
                            Toast.makeText(context,"Clicked Item 1
Image",Toast.LENGTH_SHORT).show();
                        }
                    });

                    holder.textView.setOnClickListener(new View.OnClickListener() {
                        @Override
                        public void onClick(View v) {
                            Toast.makeText(context,"C1 Text
Seleceted",Toast.LENGTH_SHORT).show();
                        }
                    });
                break;

            case 1:
                holder.imageView.setOnClickListener(new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
                        Toast.makeText(context,"Clicked Item 2
Image",Toast.LENGTH_SHORT).show();
                    }
                });

                holder.textView.setOnClickListener(new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
                        Toast.makeText(context,"C2 Text
Seleceted",Toast.LENGTH_SHORT).show();
                    }
                });
                break;

            case  2:
                holder.imageView.setOnClickListener(new View.OnClickListener() {
                    @Override
                    public void onClick(View v) {
                        Intent intent = new Intent(v.getContext(),
MainActivity3.class);
                        intent.setFlags(Intent.FLAG_ACTIVITY_NEW_TASK);
                        v.getContext().startActivity(intent);
                    }
                });
                break;
            default:

        }


    }

    @Override
    public int getItemCount() {
        return list.size();
    }
```

```
    public class viewHolder extends RecyclerView.ViewHolder {

        ImageView imageView;
        TextView textView;
        public viewHolder(@NonNull View itemView) {
            super(itemView);

            imageView = itemView.findViewById(R.id.bookimg);
            textView = itemView.findViewById(R.id.booktxt);

        }
    }
}
```

CLASS

RecyclerItemClickListener

```
package com.example.lab9_recyclerview.Clases;

import android.content.Context;

import android.view.GestureDetector;
import android.view.MotionEvent;
import android.view.View;

import androidx.recyclerview.widget.RecyclerView;

public class RecyclerItemClickListener implements RecyclerView.OnItemTouchListener {
    private OnItemClickListener mListener;

    public interface OnItemClickListener {
        public void onItemClick(View view, int position);

        public void onLongItemClick(View view, int position);
    }

    GestureDetector mGestureDetector;

    public RecyclerItemClickListener(Context context, final RecyclerView recyclerView,
OnItemClickListener listener) {
        mListener = listener;
        mGestureDetector = new GestureDetector(context, new
GestureDetector.SimpleOnGestureListener() {
            @Override
            public boolean onSingleTapUp(MotionEvent e) {
                return true;
            }

            @Override
            public void onLongPress(MotionEvent e) {
                View child = recyclerView.findChildViewUnder(e.getX(), e.getY());
                if (child != null && mListener != null) {
                    mListener.onLongItemClick(child,
recyclerView.getChildAdapterPosition(child));
                }
            }
        });
    }

    @Override public boolean onInterceptTouchEvent(RecyclerView view, MotionEvent e) {
        View childView = view.findChildViewUnder(e.getX(), e.getY());
        if (childView != null && mListener != null &&
mGestureDetector.onTouchEvent(e)) {
```

```
            mListener.onItemClick(childView, view.getChildAdapterPosition(childView));
            return true;
        }
        return false;
    }

    @Override public void onTouchEvent(RecyclerView view, MotionEvent motionEvent) { }

    @Override
    public void onRequestDisallowInterceptTouchEvent (boolean disallowIntercept){}
}
```

MODELS

Coursemodel

```
package com.example.lab9_recyclerview.Models;

public class coursemodel {
    int pic;
    String text;

    public coursemodel(int pic, String text) {
        this.pic = pic;
        this.text = text;
    }

    public int getPic() {
        return pic;
    }

    public void setPic(int pic) {
        this.pic = pic;
    }

    public String getText() {
        return text;
    }

    public void setText(String text) {
        this.text = text;
    }
}
```

MANIFEST

```
<?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.lab9_recyclerview">

    <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.Lab9_recyclerview"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity3"
```

```xml
            android:exported="false" />
        <activity
            android:name=".MainActivity2"
            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>

        <meta-data
            android:name="preloaded_fonts"
            android:resource="@array/preloaded_fonts" />
    </application>

</manifest>
```

STRINGS.XML

```xml
<resources>
    <string name="app_name">lab9_recyclerview</string>
    <string name="newtext">Android Intent is the message that is passed between
components such as activities, content providers, broadcast receivers, services etc.

It is generally used with startActivity() method to invoke activity, broadcast
receivers etc.

The dictionary meaning of intent is intention or purpose. So, it can be described as
the intention to do action.

The LabeledIntent is the subclass of android.content.Intent class.Android Intent is
the message that is passed between components such as activities, content providers,
broadcast receivers, services etc.

It is generally used with startActivity() method to invoke activity, broadcast
receivers etc.

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the intention to do action.

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the message that is passed between components such as activities, content providers,
broadcast receivers, services etc.

It is generally used with startActivity() method to invoke activity, broadcast
receivers etc.

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the intention to do action.

The LabeledIntent is the subclass of android.content.Intent class.Android Intent is
the message that is passed between components such as activities, content providers,
```

```
broadcast receivers, services etc.

It is generally used with startActivity() method to invoke activity, broadcast
receivers etc.

The dictionary meaning of intent is intention or purpose. So, it can be described as
the intention to do action.

The LabeledIntent is the subclass of android.content.Intent class.Android Intent is
the message that is passed between components such as activities, content providers,
broadcast receivers, services etc.

It is generally used with startActivity() method to invoke activity, broadcast
receivers etc.

The dictionary meaning of intent is intention or purpose. So, it can be described as
the intention to do action.

The LabeledIntent is the subclass of android.content.Intent class.</string>
</resources>
```