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# App Name- Library App

## Group-

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## Introduction:

We made a Book Library app. We made this app specifically for book lovers. As they have many books with them and sometimes it's hard for them to remember the count and which books they have and how many books they have read. So this app will help them.

After opening the app we will have an add button to add books and its details. From there you can add and save it. Then on the main page the book will be displayed. There will be a count of books also. Then on clicking on that you will be able to edit it and also delete the book.

| Sr.No | XML | JAVA |
| --- | --- | --- |
| 1 | activity\_main.xml | MainActivity.java |
| 2 | activity\_splash.xml | splashactivity.java |
| 3 | activity\_add.xml | AddActivity.java |
| 4 | activity\_update.xml | updateActivity.java |
| 5 | N/A | CustomAdapter.java |
| 6 | N/A | MyDatabaseHelper.java |
| 7 | my\_row.xml | N/A |

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## Code-

////////// Main Activity.java ///////

package com.ApProject.LibraryApp;

import androidx.annotation.Nullable;

import androidx.appcompat.app.AlertDialog;

import androidx.appcompat.app.AppCompatActivity;

import androidx.recyclerview.widget.LinearLayoutManager;

import androidx.recyclerview.widget.RecyclerView;

import android.content.DialogInterface;

import android.content.Intent;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.os.Bundle;

import android.view.ContextMenu;

import android.view.Menu;

import android.view.MenuInflater;

import android.view.MenuItem;

import android.view.View;

import android.widget.ImageView;

import android.widget.TextView;

import android.widget.Toast;

import com.google.android.material.floatingactionbutton.FloatingActionButton;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

RecyclerView recyclerView;

FloatingActionButton add\_button;

ImageView empty\_imageview;

TextView no\_data;

MyDatabaseHelper myDB;

ArrayList<String> book\_id, book\_title, book\_author, book\_pages;

CustomAdapter customAdapter;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_main*);

recyclerView = findViewById(R.id.*recyclerView*);

add\_button = findViewById(R.id.*add\_button*);

empty\_imageview = findViewById(R.id.*empty\_imageview*);

no\_data = findViewById(R.id.*no\_data*);

add\_button.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Intent intent = new Intent(MainActivity.this, AddActivity.class);

startActivity(intent);

}

});

myDB = new MyDatabaseHelper(MainActivity.this);

book\_id = new ArrayList<>();

book\_title = new ArrayList<>();

book\_author = new ArrayList<>();

book\_pages = new ArrayList<>();

storeDataInArrays();

customAdapter = new CustomAdapter(MainActivity.this,this, book\_id, book\_title, book\_author,

book\_pages);

recyclerView.setAdapter(customAdapter);

recyclerView.setLayoutManager(new LinearLayoutManager(MainActivity.this));

}

@Override

protected void onActivityResult(int requestCode, int resultCode, @Nullable Intent data) {

super.onActivityResult(requestCode, resultCode, data);

if(requestCode == 1){

recreate();

}

}

void storeDataInArrays(){

Cursor cursor = myDB.readAllData();

if(cursor.getCount() == 0){

empty\_imageview.setVisibility(View.*VISIBLE*);

no\_data.setVisibility(View.*VISIBLE*);

}else{

while (cursor.moveToNext()){

book\_id.add(cursor.getString(0));

book\_title.add(cursor.getString(1));

book\_author.add(cursor.getString(2));

book\_pages.add(cursor.getString(3));

}

empty\_imageview.setVisibility(View.*GONE*);

no\_data.setVisibility(View.*GONE*);

}

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

MenuInflater inflater = getMenuInflater();

inflater.inflate(R.menu.*my\_menu*, menu);

return super.onCreateOptionsMenu(menu);

}

@Override

public boolean onOptionsItemSelected(MenuItem item) {

if(item.getItemId() == R.id.*delete\_all*){

confirmDialog();

}

return super.onOptionsItemSelected(item);

}

void confirmDialog(){

AlertDialog.Builder builder = new AlertDialog.Builder(this);

builder.setTitle("Delete All?");

builder.setMessage("Are you sure you want to delete all Data?");

builder.setPositiveButton("Yes", new DialogInterface.OnClickListener() {

@Override

public void onClick(DialogInterface dialogInterface, int i) {

MyDatabaseHelper myDB = new MyDatabaseHelper(MainActivity.this);

myDB.deleteAllData();

//Refresh Activity

Intent intent = new Intent(MainActivity.this, MainActivity.class);

startActivity(intent);

finish();

}

});

builder.setNegativeButton("No", new DialogInterface.OnClickListener() {

@Override

public void onClick(DialogInterface dialogInterface, int i) {

}

});

builder.create().show();

}

}

////////activityMain.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">

<com.google.android.material.floatingactionbutton.FloatingActionButton

android:id="@+id/add\_button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginEnd="28dp"

android:layout\_marginRight="28dp"

android:layout\_marginBottom="28dp"

android:clickable="true"

android:focusable="true"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:srcCompat="@drawable/ic\_add" />

<androidx.recyclerview.widget.RecyclerView

android:id="@+id/recyclerView"

android:paddingTop="?attr/actionBarSize"

android:layout\_width="409dp"

android:layout\_height="729dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

<ImageView

android:id="@+id/empty\_imageview"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="230dp"

android:alpha="0.1"

android:visibility="gone"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:srcCompat="@drawable/ic\_empty" />

<TextView

android:id="@+id/no\_data"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginTop="16dp"

android:text="No Data."

android:textSize="20sp"

android:alpha="0.4"

android:visibility="gone"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toBottomOf="@+id/empty\_imageview" />

</androidx.constraintlayout.widget.ConstraintLayout>

</RelativeLayout>

//////////Splash Activity.java ///////////

package com.ApProject.LibraryApp;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.os.Handler;

public class SplashActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.*activity\_splash*);

getSupportActionBar().hide();

final Intent i = new Intent(SplashActivity.this, MainActivity.class);

new Handler().postDelayed(new Runnable() {

@Override

public void run() {

startActivity(i);

finish();

}

}, 2000);

}

}

//////////activity\_splash.xml ///////////

<?xml version="1.0" encoding="utf-8"?>

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

xmlns:app="http://schemas.android.com/apk/res-auto"

android:layout\_height="match\_parent"

android:layout\_width="match\_parent"

android:background="@android:color/holo\_green\_dark">

<ImageView

android:layout\_width="200dp"

android:layout\_height="200dp"

android:layout\_centerInParent="true"

app:srcCompat="@drawable/ic\_library\_books"/>

</RelativeLayout>

Image view

Recycler View///////////// MyDatabaseHelper.java ////////////

package com.ApProject.LibraryApp;

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteOpenHelper;

import android.util.Log;

import android.widget.Toast;

import androidx.annotation.Nullable;

class MyDatabaseHelper extends SQLiteOpenHelper {

private Context context;

private static final String *DATABASE\_NAME* = "BookLibrary.db";

private static final int *DATABASE\_VERSION* = 1;

private static final String *TABLE\_NAME* = "my\_library";

private static final String *COLUMN\_ID* = "\_id";

private static final String *COLUMN\_TITLE* = "book\_title";

private static final String *COLUMN\_AUTHOR* = "book\_author";

private static final String *COLUMN\_PAGES* = "book\_pages";

MyDatabaseHelper(@Nullable Context context) {

super(context, *DATABASE\_NAME*, null, *DATABASE\_VERSION*);

this.context = context;

}

@Override

public void onCreate(SQLiteDatabase db) {

String query = "CREATE TABLE " + *TABLE\_NAME* +

" (" + *COLUMN\_ID* + " INTEGER PRIMARY KEY AUTOINCREMENT, " +

*COLUMN\_TITLE* + " TEXT, " +

*COLUMN\_AUTHOR* + " TEXT, " +

*COLUMN\_PAGES* + " INTEGER);";

db.execSQL(query);

}

@Override

public void onUpgrade(SQLiteDatabase db, int i, int i1) {

db.execSQL("DROP TABLE IF EXISTS " + *TABLE\_NAME*);

onCreate(db);

}

void addBook(String title, String author, int pages){

SQLiteDatabase db = this.getWritableDatabase();

ContentValues cv = new ContentValues();

cv.put(*COLUMN\_TITLE*, title);

cv.put(*COLUMN\_AUTHOR*, author);

cv.put(*COLUMN\_PAGES*, pages);

long result = db.insert(*TABLE\_NAME*,null, cv);

if(result == -1){

Toast.*makeText*(context, "Failed", Toast.*LENGTH\_SHORT*).show();

}else {

Toast.*makeText*(context, "Added Successfully!", Toast.*LENGTH\_SHORT*).show();

}

}

Cursor readAllData(){

String query = "SELECT \* FROM " + *TABLE\_NAME*;

SQLiteDatabase db = this.getReadableDatabase();

Cursor cursor = null;

if(db != null){

cursor = db.rawQuery(query, null);

}

return cursor;

}

void updateData(String row\_id, String title, String author, String pages){

SQLiteDatabase db = this.getWritableDatabase();

ContentValues cv = new ContentValues();

cv.put(*COLUMN\_TITLE*, title);

cv.put(*COLUMN\_AUTHOR*, author);

cv.put(*COLUMN\_PAGES*, pages);

long result = db.update(*TABLE\_NAME*, cv, "\_id=?", new String[]{row\_id});

if(result == -1){

Toast.*makeText*(context, "Failed", Toast.*LENGTH\_SHORT*).show();

}else {

Toast.*makeText*(context, "Updated Successfully!", Toast.*LENGTH\_SHORT*).show();

}

}

void deleteOneRow(String row\_id){

SQLiteDatabase db = this.getWritableDatabase();

long result = db.delete(*TABLE\_NAME*, "\_id=?", new String[]{row\_id});

if(result == -1){

Toast.*makeText*(context, "Failed to Delete.", Toast.*LENGTH\_SHORT*).show();

}else{

Toast.*makeText*(context, "Successfully Deleted.", Toast.*LENGTH\_SHORT*).show();

}

}

void deleteAllData(){

SQLiteDatabase db = this.getWritableDatabase();

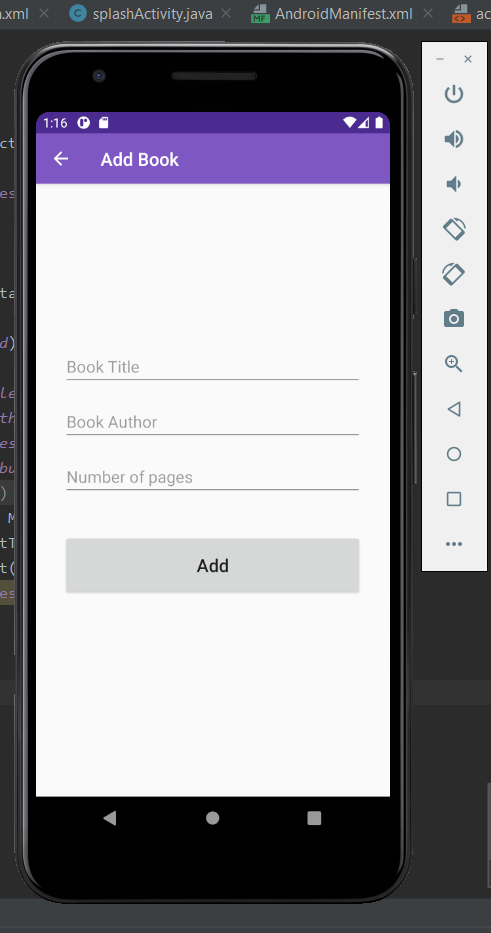
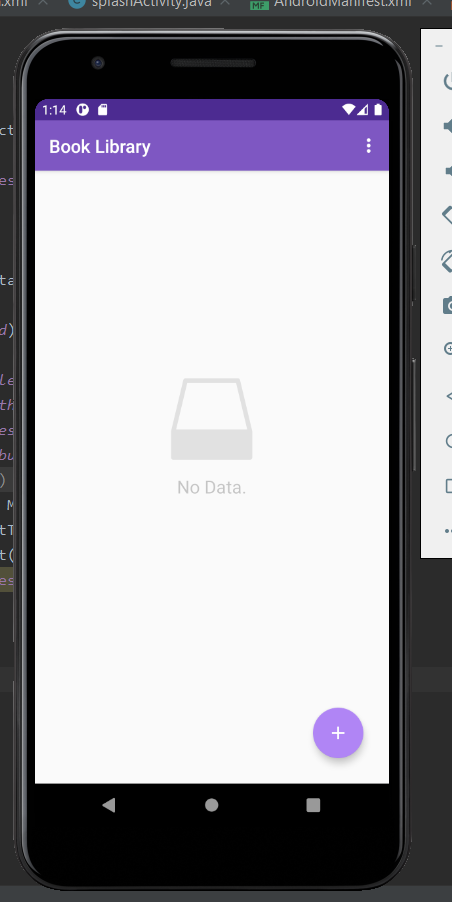
db.execSQL("DELETE FROM " + *TABLE\_NAME*);

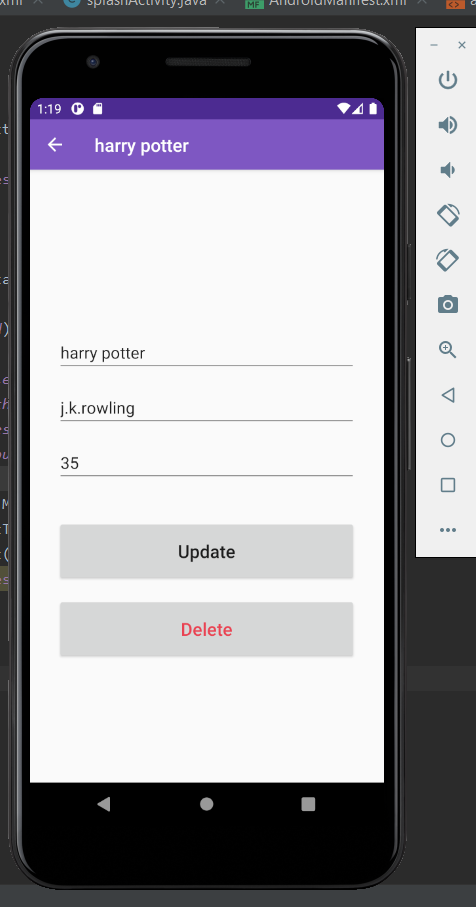
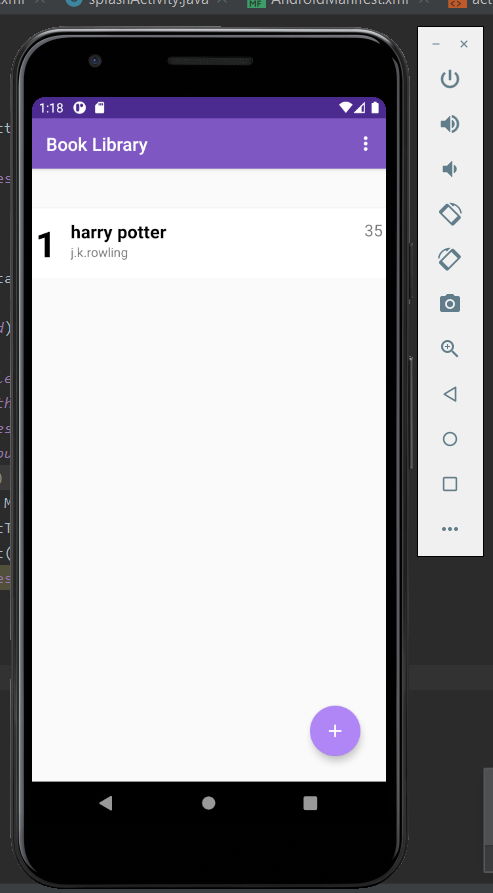
}

}

## 

## Output:





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