**MainActivity.java :**

package com.example.sqlapplication;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

private EditText courseNameEdt, courseTracksEdt, courseDurationEdt, courseDescriptionEdt;

private DBHandler dbHandler;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

dbHandler = new DBHandler(MainActivity.this);

courseNameEdt = findViewById(R.id.idEdtCourseName);

courseTracksEdt = findViewById(R.id.idEdtCourseTracks);

courseDurationEdt = findViewById(R.id.idEdtCourseDuration);

courseDescriptionEdt = findViewById(R.id.idEdtCourseDescription);

}

public void addCourse(View view){

String courseName = courseNameEdt.getText().toString();

String courseTracks = courseTracksEdt.getText().toString();

String courseDuration = courseDurationEdt.getText().toString();

String courseDescription = courseDescriptionEdt.getText().toString();

if (courseName.isEmpty() && courseTracks.isEmpty() && courseDuration.isEmpty() && courseDescription.isEmpty()) {

Toast.makeText(MainActivity.this, "Please enter all the data..", Toast.LENGTH\_SHORT).show();

return;

}

Course course = new Course(courseName, courseDuration, courseDescription, courseTracks);

dbHandler.addNewCourse(course);

Toast.makeText(MainActivity.this, "com.example.sqlapplication.Course has been added.", Toast.LENGTH\_SHORT).show();

courseNameEdt.setText("");

courseDurationEdt.setText("");

courseTracksEdt.setText("");

courseDescriptionEdt.setText("");

}

public void openAllCourses(View view){

startActivity(new Intent(this, AllCoursesActivity.class));

}

}

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**activity\_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=".MainActivity">

<!--Edit text to enter course name-->

<EditText

android:id="@+id/idEdtCourseName"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_margin="10dp"

android:hint="Enter course Name" />

<!--edit text to enter course duration-->

<EditText

android:id="@+id/idEdtCourseDuration"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_margin="10dp"

android:hint="Enter Course Duration" />

<!--edit text to display course tracks-->

<EditText

android:id="@+id/idEdtCourseTracks"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_margin="10dp"

android:hint="Enter Course Tracks" />

<!--edit text for course description-->

<EditText

android:id="@+id/idEdtCourseDescription"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_margin="10dp"

android:hint="Enter Course Description" />

<!--button for adding new course-->

<Button

android:id="@+id/idBtnAddCourse"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginHorizontal="10dp"

android:layout\_marginTop="10dp"

android:onClick="addCourse"

android:text="Add Course"

android:textAllCaps="false" />

<Button

android:id="@+id/idBtnViewAllCourse"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginHorizontal="10dp"

android:layout\_marginTop="5dp"

android:onClick="openAllCourses"

android:text="Show Course"

android:textAllCaps="false" />

<TextView

android:id="@+id/textView"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Sumit Kumar \n20BCS8226"

android:textColor="@color/black"

android:textSize="40sp"

android:layout\_marginTop="70dp"

android:gravity="center"/>

</LinearLayout>

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**DBHandler.java :**

package com.example.sqlapplication;

import android.annotation.SuppressLint;

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteOpenHelper;

import java.util.ArrayList;

import java.util.List;

public class DBHandler extends SQLiteOpenHelper {

private static final String DB\_NAME = "course\_db";

private static final int DB\_VERSION = 1;

private static final String TABLE\_NAME = "my\_courses";

private static final String ID\_COL = "id";

private static final String NAME\_COL = "name";

private static final String DURATION\_COL = "duration";

private static final String DESCRIPTION\_COL = "description";

private static final String TRACKS\_COL = "tracks";

public DBHandler(Context context) {

super(context, DB\_NAME, null, DB\_VERSION);

}

@Override

public void onCreate(SQLiteDatabase db) {

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

+ ID\_COL + " INTEGER PRIMARY KEY AUTOINCREMENT, "

+ NAME\_COL + " TEXT,"

+ DURATION\_COL + " TEXT,"

+ DESCRIPTION\_COL + " TEXT,"

+ TRACKS\_COL + " TEXT)";

db.execSQL(query);

}

public void addNewCourse(Course course) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues values = new ContentValues();

values.put(NAME\_COL, course.getCourseName());

values.put(DURATION\_COL, course.getCourseDuration());

values.put(DESCRIPTION\_COL, course.getCourseDescription());

values.put(TRACKS\_COL, course.getCourseTracks());

db.insert(TABLE\_NAME, null, values);

db.close();

}

@SuppressLint("Range")

public List<Course> getAllCourses() {

List<Course> courseList = new ArrayList<>();

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

SQLiteDatabase db = this.getWritableDatabase();

Cursor cursor = db.rawQuery(selectQuery, null);

if (cursor.moveToFirst()) {

do {

Course course = new Course();

course.setCourseId(cursor.getInt(0));

course.setCourseName(cursor.getString(1));

course.setCourseDuration(cursor.getString(2));

course.setCourseDescription(cursor.getString(3));

course.setCourseTracks(cursor.getString(4));

courseList.add(course);

} while (cursor.moveToNext());

}

return courseList;

}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {

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

onCreate(db);

}

}

**OUTPUT :**











