**SQLite Operations (CURD –Create, Update, Read, Delete) Operations**

**MainActivity.java**

package com.example.sqliteoperations;  
  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
  
public class MainActivity extends AppCompatActivity {  
 EditText Name, Pass , updateold, updatenew, delete;  
 myDbAdapter helper;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 Name= (EditText) findViewById(R.id.*editName*);  
 Pass= (EditText) findViewById(R.id.*editPass*);  
 updateold= (EditText) findViewById(R.id.*editText3*);  
 updatenew= (EditText) findViewById(R.id.*editText5*);  
 delete = (EditText) findViewById(R.id.*editText6*);  
  
 helper = new myDbAdapter(this);  
 }  
 public void addUser(View view)  
 {  
 String t1 = Name.getText().toString();  
 String t2 = Pass.getText().toString();  
 if(t1.isEmpty() || t2.isEmpty())  
 {  
 Message.*message*(getApplicationContext(),"Enter Both Name and Password");  
 }  
 else  
 {  
 long id = helper.insertData(t1,t2);  
 if(id<=0)  
 {  
 Message.*message*(getApplicationContext(),"Insertion Unsuccessful");  
 Name.setText("");  
 Pass.setText("");  
 } else  
 {  
 Message.*message*(getApplicationContext(),"Insertion Successful");  
 Name.setText("");  
 Pass.setText("");  
 }  
 }  
 }  
  
 public void viewdata(View view)  
 {  
 String data = helper.getData();  
 Message.*message*(this,data);  
 }  
  
 public void update( View view)  
 {  
 String u1 = updateold.getText().toString();  
 String u2 = updatenew.getText().toString();  
 if(u1.isEmpty() || u2.isEmpty())  
 {  
 Message.*message*(getApplicationContext(),"Enter Data");  
 }  
 else  
 {  
 int a= helper.updateName( u1, u2);  
 if(a<=0)  
 {  
 Message.*message*(getApplicationContext(),"Unsuccessful");  
 updateold.setText("");  
 updatenew.setText("");  
 } else {  
 Message.*message*(getApplicationContext(),"Updated");  
 updateold.setText("");  
 updatenew.setText("");  
 }  
 }  
  
 }  
 public void delete( View view)  
 {  
 String uname = delete.getText().toString();  
 if(uname.isEmpty())  
 {  
 Message.*message*(getApplicationContext(),"Enter Data");  
 }  
 else{  
 int a= helper.delete(uname);  
 if(a<=0)  
 {  
 Message.*message*(getApplicationContext(),"Unsuccessful");  
 delete.setText("");  
 }  
 else  
 {  
 Message.*message*(this, "DELETED");  
 delete.setText("");  
 }  
 }  
 }  
}

**myDbAdapter.java**

package com.example.sqliteoperations;  
  
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;  
  
public class myDbAdapter {  
 myDbHelper myhelper;  
 public myDbAdapter(Context context)  
 {  
 myhelper = new myDbHelper(context);  
 }  
  
 public long insertData(String name, String pass)  
 {  
 SQLiteDatabase dbb = myhelper.getWritableDatabase();  
 ContentValues contentValues = new ContentValues();  
 contentValues.put(myDbHelper.*NAME*, name);  
 contentValues.put(myDbHelper.*MyPASSWORD*, pass);  
 long id;  
 id = dbb.insert(myDbHelper.*TABLE\_NAME*, null , contentValues);  
 return id;  
 }  
  
 public String getData()  
 {  
 SQLiteDatabase db = myhelper.getWritableDatabase();  
 String[] columns = {myDbHelper.*UID*,myDbHelper.*NAME*,myDbHelper.*MyPASSWORD*};  
 @SuppressLint("Recycle") Cursor cursor =db.query(myDbHelper.*TABLE\_NAME*,columns,null,null,null,null,null);  
 StringBuffer buffer;  
 buffer = new StringBuffer();  
 while (cursor.moveToNext())  
 {  
 @SuppressLint("Range") int cid =cursor.getInt(cursor.getColumnIndex(myDbHelper.*UID*));  
 @SuppressLint("Range") String name =cursor.getString(cursor.getColumnIndex(myDbHelper.*NAME*));  
 @SuppressLint("Range") String password =cursor.getString(cursor.getColumnIndex(myDbHelper.*MyPASSWORD*));  
 buffer.append(cid).append(" ").append(name).append(" ").append(password).append(" \n");  
 }  
 return buffer.toString();  
 }  
  
 public int delete(String uname)  
 {  
 SQLiteDatabase db = myhelper.getWritableDatabase();  
 String[] whereArgs ={uname};  
  
 int count;  
 count = db.delete(myDbHelper.*TABLE\_NAME* ,myDbHelper.*NAME*+" = ?",whereArgs);  
 return count;  
 }  
  
 public int updateName(String oldName , String newName)  
 {  
 SQLiteDatabase db = myhelper.getWritableDatabase();  
 ContentValues contentValues = new ContentValues();  
 contentValues.put(myDbHelper.*NAME*,newName);  
 String[] whereArgs= {oldName};  
 int count;  
 count = db.update(myDbHelper.*TABLE\_NAME*,contentValues, myDbHelper.*NAME*+" = ?",whereArgs );  
 return count;  
 }  
  
 static class myDbHelper extends SQLiteOpenHelper  
 {  
 private static final String *DATABASE\_NAME* = "myDatabase"; // Database Name  
 private static final String *TABLE\_NAME* = "myTable"; // Table Name  
 private static final int *DATABASE\_Version* = 1; // Database Version  
 private static final String *UID*="\_id"; // Column I (Primary Key)  
 private static final String *NAME* = "Name"; //Column II  
 private static final String *MyPASSWORD*= "Password"; // Column III  
 private static final String *CREATE\_TABLE* = "CREATE TABLE "+*TABLE\_NAME*+  
 " ("+*UID*+" INTEGER PRIMARY KEY AUTOINCREMENT, "+*NAME*+" VARCHAR(255) ,"+ *MyPASSWORD*+" VARCHAR(225));";  
 private static final String *DROP\_TABLE* ="DROP TABLE IF EXISTS "+*TABLE\_NAME*;  
 private final Context context;  
  
 public myDbHelper(Context context) {  
 super(context, *DATABASE\_NAME*, null, *DATABASE\_Version*);  
 this.context=context;  
 }  
  
 public void onCreate(SQLiteDatabase db) {  
  
 try {  
 db.execSQL(*CREATE\_TABLE*);  
 } catch (Exception e) {  
 Message.*message*(context,""+e);  
 }  
 }  
  
 @Override  
 public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {  
 try {  
 Message.*message*(context,"OnUpgrade");  
 db.execSQL(*DROP\_TABLE*);  
 onCreate(db);  
 }catch (Exception e) {  
 Message.*message*(context,""+e);  
 }  
 }  
 }  
}

**Message.java**

package com.example.sqliteoperations;  
import android.content.Context;  
import android.widget.Toast;  
  
public class Message {  
 public static void message(Context context, String message) {  
 Toast.*makeText*(context, message, Toast.*LENGTH\_LONG*).show();  
 }  
}

**activity\_main.xml**

<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
xmlns:tools="http://schemas.android.com/tools"  
android:id="@+id/activity\_main"  
android:layout\_width="match\_parent"  
android:layout\_height="match\_parent"  
tools:context="com.example.sqliteoperations.MainActivity"  
android:background="@android:color/holo\_blue\_dark">  
  
<TextView  
 android:text="@string/username"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentTop="true"  
 android:layout\_marginTop="12dp"  
 android:id="@+id/textView"  
 android:textSize="18sp"  
 android:textStyle="bold|italic"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:gravity="center" />  
  
<EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:inputType="textPersonName"  
 android:ems="10"  
 android:id="@+id/editName"  
 android:textStyle="bold|italic"  
 android:layout\_below="@+id/textView"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentEnd="true"  
 android:hint="Enter Name"  
 android:gravity="center\_vertical|center" />  
  
<TextView  
 android:text="@string/password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="13dp"  
 android:id="@+id/textView2"  
 android:textStyle="bold|italic"  
 android:textSize="18sp"  
 android:layout\_below="@+id/editName"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentEnd="true"  
 android:gravity="center"  
 android:hint="Enter Password" />  
  
<Button  
 android:text="@string/view\_data"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/button2"  
 android:textSize="18sp"  
 android:onClick="viewdata"  
 android:textStyle="bold|italic"  
 android:layout\_alignBaseline="@+id/button"  
 android:layout\_alignBottom="@+id/button"  
 android:layout\_alignRight="@+id/button4"  
 android:layout\_alignEnd="@+id/button4" />  
  
<Button  
 android:text="@string/add\_user"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/button"  
 android:textStyle="bold|italic"  
 android:textSize="18sp"  
 android:onClick="addUser"  
 android:layout\_marginLeft="28dp"  
 android:layout\_marginStart="28dp"  
 android:layout\_below="@+id/editPass"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:layout\_marginTop="23dp" />  
  
<Button  
 android:text="@string/update"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/button3"  
 android:onClick="update"  
 android:textStyle="normal|bold"  
 android:layout\_below="@+id/editText3"  
 android:layout\_alignLeft="@+id/button4"  
 android:layout\_alignStart="@+id/button4"  
 android:layout\_marginTop="13dp" />  
  
<EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:inputType="textPersonName"  
 android:ems="10"  
 android:id="@+id/editText6"  
 android:layout\_alignTop="@+id/button4"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:freezesText="false"  
 android:hint="Enter Name to Delete Data"  
 android:layout\_toLeftOf="@+id/button2"  
 android:layout\_toStartOf="@+id/button2" />  
  
<Button  
 android:text="@string/delete"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginRight="21dp"  
 android:layout\_marginEnd="21dp"  
 android:id="@+id/button4"  
 android:onClick="delete"  
 android:textStyle="normal|bold"  
 tools:ignore="RelativeOverlap"  
 android:layout\_marginBottom="41dp"  
 android:layout\_alignParentBottom="true"  
 android:layout\_alignParentRight="true"  
 android:layout\_alignParentEnd="true" />  
  
<EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:inputType="textPersonName"  
 android:ems="10"  
 android:layout\_marginTop="47dp"  
 android:id="@+id/editText3"  
 android:textStyle="bold|italic"  
 android:textSize="14sp"  
 android:layout\_below="@+id/button"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:layout\_marginLeft="7dp"  
 android:layout\_marginStart="7dp"  
 android:hint="Current Name" />  
  
<EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:inputType="textPassword"  
 android:ems="10"  
 android:layout\_marginTop="11dp"  
 android:id="@+id/editPass"  
 android:hint="Enter Password"  
 android:gravity="center\_vertical|center"  
 android:textSize="18sp"  
 android:layout\_below="@+id/textView2"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentStart="true"  
 android:textAllCaps="false"  
 android:textStyle="normal|bold" />  
  
<EditText  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:inputType="textPersonName"  
 android:ems="10"  
 android:id="@+id/editText5"  
 android:textStyle="bold|italic"  
 android:textSize="14sp"  
 android:hint="New Name"  
 android:layout\_alignTop="@+id/button3"  
 android:layout\_alignLeft="@+id/editText3"  
 android:layout\_alignStart="@+id/editText3"  
 android:layout\_marginTop="32dp" />  
</RelativeLayout>

**Strings.xml**

<resources>  
 <string name="app\_name">SQLiteOperations</string>  
 <string name="username">username</string>  
 <string name="password">password</string>  
 <string name="view\_data">view\_data</string>  
 <string name="add\_user">add\_user</string>  
 <string name="update">update</string>  
 <string name="delete">delete</string>  
</resources>

**SuppressLint**

@SuppressLint("NewApi") is **an annotation used by the Android Lint tool**. Lint will tell you whenever something in your code isn't optimal or may crash. By passing NewApi there, you're suppressing all warnings that would tell you if you're using any API introduced after your minSdkVersion.

**What is SuppressLint range?**

Android Studio uses Lint to check your code for common errors. These are not things that would result in a build error, but violations of best practices or indications of other things that are done incorrectly. **The @SuppressLint command suppresses these warnings**.