

```
<RelativeLayout 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:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin" tools:context=".MainActivity">
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceLarge"
    android:text="Name"
    android:id="@+id/textView"
    android:layout_alignParentTop="true"
    android:layout_alignParentLeft="true"
    android:layout_alignParentStart="true" />
```

```
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textAppearance="?android:attr/textAppearanceLarge"
    android:text="Surname"
    android:id="@+id/textView2"
    android:layout_below="@+id/editText_name"
    android:layout_alignParentLeft="true"
```

```
android:layout_alignParentStart="true" />
```

```
<TextView
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:textAppearance="?android:attr/textAppearanceLarge"
```

```
    android:text="Marks"
```

```
    android:id="@+id/textView3"
```

```
    android:layout_below="@+id/editText_surname"
```

```
    android:layout_alignParentLeft="true"
```

```
    android:layout_alignParentStart="true" />
```

```
<EditText
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:id="@+id/editText_name"
```

```
    android:layout_alignTop="@+id/textView"
```

```
    android:layout_toRightOf="@+id/textView"
```

```
    android:layout_toEndOf="@+id/textView" />
```

```
<EditText
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:id="@+id/editText_surname"
```

```
    android:layout_alignTop="@+id/textView2"
```

```
android:layout_toRightOf="@+id/textView2"  
android:layout_toEndOf="@+id/textView2" />
```

```
<EditText
```

```
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:id="@+id/editText_Marks"  
    android:layout_below="@+id/editText_surname"  
    android:layout_toRightOf="@+id/textView3"  
    android:layout_toEndOf="@+id/textView3" />
```

```
<Button
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="Add Data"  
    android:id="@+id/button_add"  
    android:layout_below="@+id/editText_Marks"  
    android:layout_alignParentLeft="true"  
    android:layout_alignParentStart="true"  
    android:layout_marginTop="76dp" />
```

```
<Button
```

```
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="View All"
```

```
android:id="@+id/button_viewAll"

android:layout_above="@+id/button_update"

android:layout_centerHorizontal="true" />
```

<Button

```
android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:text="Update"

android:id="@+id/button_update"

android:layout_below="@+id/button_add"

android:layout_alignParentLeft="true"

android:layout_alignParentStart="true" />
```

<Button

```
android:layout_width="wrap_content"

android:layout_height="wrap_content"

android:text="Delete"

android:id="@+id/button_delete"

android:layout_centerVertical="true"

android:layout_below="@+id/button_viewAll"

android:layout_alignLeft="@+id/button_viewAll"

android:layout_alignStart="@+id/button_viewAll" />
```

<TextView

```
    android:layout_width="wrap_content"

    android:layout_height="wrap_content"

    android:textAppearance="?android:attr/textAppearanceLarge"

    android:text="id"

    android:id="@+id/textView_id"

    android:layout_below="@+id/editText_Marks"

    android:layout_alignParentLeft="true"

    android:layout_alignParentStart="true" />
```

```
<EditText
```

```
    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:id="@+id/editText_id"

    android:layout_alignTop="@+id/textView_id"

    android:layout_toRightOf="@+id/textView3"

    android:layout_toEndOf="@+id/textView3" />
```

```
</RelativeLayout>
```

=====

Add the following code in this class to DatabaseHelper.java

```
package com.example.programmingknowledge.sqliteapp;

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteOpenHelper;

/**
 * Created by ProgrammingKnowledge on 4/3/2015.
 */

public class DatabaseHelper extends SQLiteOpenHelper {

    public static final String DATABASE_NAME = "Student.db";

    public static final String TABLE_NAME = "student_table";

    public static final String COL_1 = "ID";

    public static final String COL_2 = "NAME";

    public static final String COL_3 = "SURNAME";

    public static final String COL_4 = "MARKS";

    public DatabaseHelper(Context context) {

        super(context, DATABASE_NAME, null, 1);

    }

    @Override
```

```

public void onCreate(SQLiteDatabase db) {

    db.execSQL("create table " + TABLE_NAME + " (ID INTEGER PRIMARY KEY AUTOINCREMENT,NAME
TEXT,SURNAME TEXT,MARKS INTEGER)");

}

```

@Override

```

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

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

    onCreate(db);

}

```

```

public boolean insertData(String name,String surname,String marks) {

    SQLiteDatabase db = this.getWritableDatabase();

    ContentValues contentValues = new ContentValues();

    contentValues.put(COL_2,name);

    contentValues.put(COL_3,surname);

    contentValues.put(COL_4,marks);

    long result = db.insert(TABLE_NAME,null ,contentValues);

    if(result == -1)

        return false;

    else

        return true;

}

```

```

public Cursor getAllData() {

    SQLiteDatabase db = this.getWritableDatabase();

```

```
Cursor res = db.rawQuery("select * from "+TABLE_NAME,null);

return res;

}
```

```
public boolean updateData(String id,String name,String surname,String marks) {

    SQLiteDatabase db = this.getWritableDatabase();

    ContentValues contentValues = new ContentValues();

    contentValues.put(COL_1,id);

    contentValues.put(COL_2,name);

    contentValues.put(COL_3,surname);

    contentValues.put(COL_4,marks);

    db.update(TABLE_NAME, contentValues, "ID = ?",new String[] { id });

    return true;

}
```

```
public Integer deleteData (String id) {

    SQLiteDatabase db = this.getWritableDatabase();

    return db.delete(TABLE_NAME, "ID = ?",new String[] {id});

}

}
```

=====

MainActivity.java

```
package com.example.programmingknowledge.sqliteapp;
```

```
import android.app.AlertDialog;
```

```
import android.database.Cursor;
```

```
import android.support.v7.app.ActionBarActivity;
```

```
import android.os.Bundle;
```

```
import android.view.Menu;
```

```
import android.view.MenuItem;
```

```
import android.view.View;
```

```
import android.widget.Button;
```

```
import android.widget.EditText;
```

```
import android.widget.Toast;
```

```
public class MainActivity extends ActionBarActivity {
```

```
    DatabaseHelper myDb;
```

```
    EditText editName,editSurname,editMarks ,editTextId;
```

```
    Button btnAddData;
```

```
    Button btnviewAll;
```

```
    Button btnDelete;
```

```

Button btnviewUpdate;

@Override

protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_main);

    myDb = new DatabaseHelper(this);


    editName = (EditText)findViewById(R.id.editText_name);
    editSurname = (EditText)findViewById(R.id.editText_surname);
    editMarks = (EditText)findViewById(R.id.editText_Marks);
    editTextId = (EditText)findViewById(R.id.editText_id);
    btnAddData = (Button)findViewById(R.id.button_add);
    btnviewAll = (Button)findViewById(R.id.button_viewAll);
    btnviewUpdate= (Button)findViewById(R.id.button_update);
    btnDelete= (Button)findViewById(R.id.button_delete);

    AddData();

    viewAll();

    UpdateData();

    DeleteData();
}

public void DeleteData() {

    btnDelete.setOnClickListener(

        new View.OnClickListener() {

            @Override

            public void onClick(View v) {

```

```

Integer deletedRows = myDb.deleteData(editTextId.getText().toString());

if(deletedRows > 0)

    Toast.makeText(MainActivity.this,"Data Deleted",Toast.LENGTH_LONG).show();

else

    Toast.makeText(MainActivity.this,"Data not Deleted",Toast.LENGTH_LONG).show();

    }

    }

);

}

public void UpdateData() {

    btnviewUpdate.setOnClickListener(

        new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                boolean isUpdate = myDb.updateData(editTextId.getText().toString(),

                    editName.getText().toString(),

                    editSurname.getText().toString(),editMarks.getText().toString());

                if(isUpdate == true)

                    Toast.makeText(MainActivity.this,"Data Update",Toast.LENGTH_LONG).show();

                else

                    Toast.makeText(MainActivity.this,"Data not Updated",Toast.LENGTH_LONG).show();

            }

        }

    );

}

```

```

public void AddData() {

    btnAddData.setOnClickListener(

        new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                boolean isInserted = myDb.insertData(editName.getText().toString(),

                    editSurname.getText().toString(),

                    editMarks.getText().toString() );

                if(isInserted == true)

                    Toast.makeText(MainActivity.this,"Data Inserted",Toast.LENGTH_LONG).show();

                else

                    Toast.makeText(MainActivity.this,"Data not Inserted",Toast.LENGTH_LONG).show();

            }

        }

    );

}

```

```

public void viewAll() {

    btnviewAll.setOnClickListener(

        new View.OnClickListener() {

            @Override

            public void onClick(View v) {

                Cursor res = myDb.getAllData();

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

                    // show message

```

```

        showMessage("Error","Nothing found");

        return;
    }

    StringBuffer buffer = new StringBuffer();

    while (res.moveToNext()) {

        buffer.append("Id :"+ res.getString(0)+"\n");

        buffer.append("Name :"+ res.getString(1)+"\n");

        buffer.append("Surname :"+ res.getString(2)+"\n");

        buffer.append("Marks :"+ res.getString(3)+"\n\n");

    }

    // Show all data

    showMessage("Data",buffer.toString());

    }

}

);

}

```

```

public void showMessage(String title,String Message){

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

    builder.setCancelable(true);

    builder.setTitle(title);

    builder.setMessage(Message);

    builder.show();
}

```

```
}
```

```
@Override
```

```
public boolean onCreateOptionsMenu(Menu menu) {
```

```
    // Inflate the menu; this adds items to the action bar if it is present.
```

```
    getMenuInflater().inflate(R.menu.menu_main, menu);
```

```
    return true;
```

```
}
```

```
@Override
```

```
public boolean onOptionsItemSelected(MenuItem item) {
```

```
    // Handle action bar item clicks here. The action bar will
```

```
    // automatically handle clicks on the Home/Up button, so long
```

```
    // as you specify a parent activity in AndroidManifest.xml.
```

```
    int id = item.getItemId();
```

```
    //noinspection SimplifiableIfStatement
```

```
    if (id == R.id.action_settings) {
```

```
        return true;
```

```
    }
```

```
    return super.onOptionsItemSelected(item);
```

```
}
```

```
}
```

=====