Experiment - 5

Aim:- To develop an android application that stores student Details into the hosting server.

```java
Db Handler .java
package com.tutlane.sqliteexample;
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.HashMap;
public class DbHandler extends SQLiteOpenHelper
{
    private static final int DB_VERSION = 1;
    private static final String DB_NAME = "usersdb";
    private static final String TABLE_Users = "userdetails";
    private static final String KEY_ID = "id";
    private static final String KEY_NAME = "name";
    private static final String KEY_ROLL = "roll number";
    private static final String KEY_BRAN = "branch";
    public DbHandler (Context context)
    {
        super (context, DB_NAME, null, DB_VESION);
    }

    @Override
    public void onCreate (SQLiteDatabase db)
    {
        String CREATE_TABLE = "CREATE TABLE " +TABLE_Users +"("
```

```
        +KEY_ID+ "INTEGER PRIMARY KEY AUTOINCREMENT, " +
                                    KEY_NAME+ "TEXT,"
        +KEY_LOC + "TEXT,"
        +KEY_DESG + "TEXT" + ")";
        db.execSQL(CREATE_TABLE);
    }

@Override
public void onUpgrade(SQLiteDatabase db, int oldVersion,
                                        int newVersion)
    {
        db.execSQL("DROP TABLE IF EXISTS "+TABLE_Users);
        onCreate(db);
    }
Void  insertUserDetails(string name, string roll number, string branch)
    {
        SQLiteDatabase db =this.getWriteableDatabase();
        ContentValues cValues =new contentValues(); cValues.put
                                        (KEY_NAME, name);
        cValues.put(KEY_ROLL, roll number);
        cValues.put(KEY_BRAN, branch);
        long newRowId =db.insert(TABLE_Users, null, cValues);
        db.close();
    }
public ArrayList<HashMap<String, string>> GetUsers()
    {
        SQLiteDatabase db = this.getWriteableDatabase();
        ArrayList<HashMap<string, string>> UserList =new ArrayList<>();
        string query ="SELECT name, roll number, branch FROM "+TABLE_Users;
        cursor cusor =db.rawQuery(query, null);
        while (cusor.moveToNext())
```

```
            {
                HashMap<String, string> user = new HashMap<>();
                user.put("name", cursor.getstring(cursor.getColumnIndex
                                                        (KEY_NAME)));
                user.put("branch", cursor.getString(cursor.getColumnIndex
                                                        (KEY_BRAN)));
                user.put("roll number", cursor.getString(cursor.getColumnIndex
                                                        (KEY_ROLL)));
                userList.add(user);
            }
            return userList;
        }
public ArrayList<HashMap<String, string>> GetUser ByUserId (int userid)
        {
            SQLiteDatabase db = this.getWriteableDatabase();
            ArrayList<HashMap<String, string>> userList = new ArrayList<>();
            String query = " SELECT name, roll number, branch FROM " + TABLE_Users;
            cursor cursor = db.query(TABLE_Users, new String[]{KEY NAME, KEY_ROLL,
            KEY_BRAN}, KEY_ID + "= ?", new string[]{string.valueOf(userid)},
                                                        null, null, null, null);

            if (cursor.moveToNext())
            {
                HashMap<String, string> user = new HashMap<>();
                user.put("name", cursor.getstring(cursor.get ColumnIndex(KEY_NAME)));
                user.put("branch", cursor.getString(cursor.get ColumnIndex (KEY_BRAN)));
                user.put("roll number", cursor.getstring (cursor.getColumnIndex(KEY_ROLL)));
                userList.add(user);
            }
            return userList;
        }
```

```
public void DeleteUser (int userid)
{
    SQLiteDatabase db = this.getWriteableDatabase();
    db.delete(TABLE_Users, KEY_ID + " = ? ", new string[ ]
                                    {string.valueOf(userid)});
    db.close();
}
public int UpdateUserDetails (string roll number, string branch, int id)
{
    SQLiteDatabase db = this.getWriteableDatabase();
    ContentValues cVals = new ContentValues();
    cVals.put(KEY_ROLL, roll number);
    cVals.put(KEY_BRAN, branch);
    int count = db.update(TABLE_Users, cVals, KEY_ID + " = ? ", newstring[ ]
                                    {string.valueOf(id)});
    return count;
}
}
```

If you observe above code, we implemented all SQLite Database related activities to perform CRUD operations in android application.

Now open activity_main.xml file from \res\layout folder path and write the code like as shown below.

```
activity_main.xml
<?xml version = "1.0" encoding = "utf-8"?>
<LinearLayout xmlns: android = "http://schemas.android.com/apk/res/android"
    android:orientation = "vertical" android:layout_width = "match-parent"
    android:layout_height = "match-parent">
<TextView android:id = "@+id/fstTxt">
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:layout_marginLeft = "100dp"
    android:layout_marginTop = "150dp"
    android:text = "Name"/>
<EditText android:id = "@+id/txtName"
    android:layout_width = "wrap-content"
    android:layout_height = "wrap_content"
    android:layout_marginLeft = "100dp"
    android:ems = "10"/>
<TextView android:id = "@+id/secTxt"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:text = "roll number"
    android:layout_marginLeft = "100dp"/>
<EditText android:id/txtroll number"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:layout_marginLeft = "100dp"
    android:ems = "10"/>
<TextView android:id = "@+id/thirdTxt"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content" android:text = "branch"
    android:layout_marginLeft = "100dp"/>
```

```xml
<EditText android:id = "@+id/txtbranch"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:layout_marginLeft = "100dp"
    android:ems = "10"/>
<Button
    android:id = "@+id/btnsave"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:layout_marginLeft = "100dp"
    android:text = "Save"/>
</LinearLayout>
```

Now we will create another layout resource file details.xml in \res\layout) path to show the details in custom listview from SQLite Database for that right click on your layout folder a Go to New a select Layout Resource File and give name as details.xml.

Once we create a new layout resource file details.xml, open it and write the code like as shown below.

details.xml

```xml
<?xml version = "1.0" encoding = "utf-8"?>
<LinearLayout xmlns:android = "http://schemas.android.com/apk/res/android"
    android:layout_width = "fill_parent"
    android:layout_height = "fill_parent"
    android:orientation = "vertical">
```

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```xml
<ListView android:id = "@+id/user_list"
    android:layout_width = "fill_parent"
    android:layout_height = "wrap_content"
    android:dividerHeight = "1dp"/>
<Button android:id = "@+id/btnBack"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:layout_gravity = "center"
    android:layout_marginTop = "20dp"
    android:text = "Back"/>
</LinearLayout>
```

Create an another layout file (list_row.xml) in /res/layout folder to show the data in listview, for that right click on layout folder a add new Layout resource file a Give name as list_row.xml and write the code like as shown below.

list_row.xml

```xml
<?xml version = "1.0" encoding = "utf-8"?>
<RelativeLayout xmlns:android = "http://schemas.android.com/apk/res/android"
    android:layout_width = "fill_parent"
    android:layout_height = "wrap_content"
    android:orientation = "horizontal"
    android:padding = "5dip">
<TextView
    android:id = "@+id/name"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:textStyle = "bold"
    android:textSize = "17dp"/>
```

Date :

```xml
<Text View android:id = "@+id/branch"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:layout_below = "@id/name"
    android:layout_marginTop = "7dp"
    android:textColor = "#343434"
    android:textSize = "14dp"/>
<Text View android:id = "@+id/rollnumber"
    android:layout_width = "wrap_content"
    android:layout_height = "wrap_content"
    android:layout_alignBaseline = "@+id/branch"
    android:layout_alignParentRight = "true"
    android:textColor = "#343434"
    android:textColor = "14dp"/>
</Relative Layout>
```

Now open your main activity file MainActivity.java from \java\ com.tutlane.sqliteexample path and write the code like as shown below.

MainActivity.java

```java
package com.tutlane.sqliteexample;
import android.content.Intent;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
```

```java
public class MainActivity extends AppCompatActivity
{
    EditText name, roll, bran;
    Button saveBtn;
    Intent Intent;
    @Override
    protected void onCreate(Bundle savedInstancestate)
    {
        super.onCreate(savedInstancestate);
        setContentView(R.layout.activity_main);
        name = (EditText) findViewById(R.id.txtName);
        roll = (EditText) findViewById(R.id.btntxtrollnumber);
        bran = (EditText) findViewById(R.id.btnSave);
        saveBtn = (Button) findViewById(R.id.btnSave);
        saveBtn.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v)
            {
                string username = name.getText().toString + "\n";
                string rollnumber = loc.getText().toString();
                string branch = desig.getText().toString();
                DbHandler dbHandler = new DbHandler(MainActivity.this);
                dbHandler.InsertUserDetails(username, rollnumber, branch);
                Intent = new Intent(MainActivity.this, DetailsActivity.class);
                startActivity(Intent);
                Toast.makeText(getApplicationContext(), "Details inserted
                successfully", Toast.LENGTH_SHORT).show();
            }
        });
    }
}
```

Output :-

```
                              △  ▣  4:07
SQLite Example

Name

____K.Prakash_____

Roll Number

____202N1A0524_____

Branch

____CSE_____

[ SAVE ]



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```