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Assignment no : 3

Problem Statement :Android-database Connectivity: Create a SQLite Database for an Android Application and perform CRUD (Create, Read, Update and Delete) database operations.

CODE :

MainActivity.java

```
package com.example.app_1;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.graphics.Color;
import android.os.AsyncTask;
import android.os.Bundle;
import android.support.v7.app.AppCompatActivity;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;



public class MainActivity extends AppCompatActivity {
   private EditText username,password;
   private Button loginButton,signupButton;

   private static final String url =
"jdbc:mysql://192.168.0.28:3306/assignment_login?useUnicode=true&characterEn
coding=UTF-8&zeroDateTimeBehavior=CONVERT_TO_NULL&serverTimezone=GMT\";";
   private static final String user = "root";
   private static final String pass = "132456";
   private int loginAttempts = 3;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_main);

       username = findViewById(R.id.editText);
       password = findViewById(R.id.editText2);
       loginButton = findViewById(R.id.button);
       signupButton = findViewById(R.id.button2);
       DBhelper helper = new DBhelper(this);
       loginButton.setOnClickListener(new View.OnClickListener() {
```

```
            @Override
            public void onClick(View v) {
                if(loginAttempts == 0) {

                    return;
                }


                int count =
helper.checkExists(username.getText().toString(),password.getText().toString
());
                String s = helper.getData();
                System.out.println("Returned count : "+ s);
                if (count==1) {
                    loginAttempts = 3;
                    String toastMessage = "Login successful !";
                    Toast.makeText(getApplicationContext(), toastMessage,
Toast.LENGTH_SHORT).show();
                    startActivity(new Intent(MainActivity.this,
Second.class));
                } else {
                    loginAttempts--;
                    if(loginAttempts == 0) {
                        loginButton.setEnabled(false);
                        loginButton.setBackgroundColor(Color.WHITE);
                        Toast.makeText(MainActivity.this, "Your attempt reach
0, please try restarting the app.", Toast.LENGTH_SHORT).show();

                    }
                    String toastMessage = "Please try again ! Attempts
remaining : "+ loginAttempts;
                    Toast.makeText(getApplicationContext(), toastMessage,
Toast.LENGTH_SHORT).show();
                }
            }

        });

        signupButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                startActivity(new Intent(MainActivity.this,
MainActivity2.class));

            }

        });
    }

}
```

Activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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">

   <android.support.design.widget.AppBarLayout
       android:layout_width="match_parent"
       android:layout_height="wrap_content"
       android:theme="@style/AppTheme.AppBarOverlay">

       <android.support.v7.widget.Toolbar
           android:id="@+id/toolbar"
           android:layout_width="match_parent"
           android:layout_height="?attr/actionBarSize"
           android:background="?attr/colorPrimary"
           app:popupTheme="@style/AppTheme.PopupOverlay" />

   </android.support.design.widget.AppBarLayout>

   <include
       layout="@layout/content_main"
       tools:layout_editor_absoluteX="0dp"
       tools:layout_editor_absoluteY="0dp" />


</android.support.constraint.ConstraintLayout>
```

Second.java

```
package com.example.app_1;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.Menu;
import android.view.MenuInflater;
import android.view.MenuItem;
import android.view.View;
import android.widget.Toast;
```

```
public class Second extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);
        Toolbar toolbar = findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);


    }
    @SuppressLint("ResourceType")
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is
present.
        //getMenuInflater().inflate(R.menu.main, menu);
        MenuInflater menuInflater = getMenuInflater();
        menuInflater.inflate(R.layout.menu_main, menu);
        return true;
    }

    @Override
    public boolean onOptionsItemSelected(MenuItem item) {
        int id = item.getItemId();
        switch (id) {
            case R.id.view:
                startActivity(new Intent(Second.this, ViewActivity.class));
                return true;
            case R.id.delete:
                startActivity(new Intent(Second.this,
DeleteActivity3.class));
                return true;
            case R.id.logout:
                Toast.makeText(Second.this, "Good Bye !",
Toast.LENGTH_LONG).show();
                startActivity(new Intent(Second.this, MainActivity.class));
                return true;
            default:
                return super.onOptionsItemSelected(item);
        }
    }

}
```

Activity_second.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.design.widget.CoordinatorLayout
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=".Second">

    <android.support.design.widget.AppBarLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:theme="@style/AppTheme.AppBarOverlay">

        <android.support.v7.widget.Toolbar
            android:id="@+id/toolbar"
            android:layout_width="match_parent"
            android:layout_height="?attr/actionBarSize"
            android:background="?attr/colorPrimary"
            app:popupTheme="@style/AppTheme.PopupOverlay" />

    </android.support.design.widget.AppBarLayout>

    <include layout="@layout/content_second" />



</android.support.design.widget.CoordinatorLayout>
```

DBHelper.java

```
package com.example.app_1;
import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

public class DBhelper {

    myDbHelper myhelper;
    public DBhelper(Context context)
    {
        myhelper = new myDbHelper(context);
    }

    public long insertData(String name, String pass)
    {
        if(this.checkExists(name, pass)==0) {
            SQLiteDatabase dbb = myhelper.getWritableDatabase();
            ContentValues contentValues = new ContentValues();
            contentValues.put(myDbHelper.NAME, name);
            contentValues.put(myDbHelper.MyPASSWORD, pass);
            return dbb.insertOrThrow(myDbHelper.TABLE_NAME, null,
contentValues);
```

```
        }
        else
            return -1;
    }

    public String getData()
    {
        SQLiteDatabase db = myhelper.getWritableDatabase();
        String[] columns =
{myDbHelper.UID,myDbHelper.NAME,myDbHelper.MyPASSWORD};
        Cursor cursor
=db.query(myDbHelper.TABLE_NAME,columns,null,null,null,null,null);
        StringBuffer buffer= new StringBuffer();
        while (cursor.moveToNext())
        {
            int cid =cursor.getInt(cursor.getColumnIndex(myDbHelper.UID));
            String name
=cursor.getString(cursor.getColumnIndex(myDbHelper.NAME));
            String  password
=cursor.getString(cursor.getColumnIndex(myDbHelper.MyPASSWORD));
            buffer.append( name + "\t" + password +" \n");
        }
        return buffer.toString();
    }

    public  int delete(String uname)
    {
        SQLiteDatabase db = myhelper.getWritableDatabase();
        String[] whereArgs ={uname};

        return db.delete(myDbHelper.TABLE_NAME ,myDbHelper.NAME+" =
?",whereArgs);
    }

    public int updateName(String oldName , String newName)
    {
        SQLiteDatabase db = myhelper.getWritableDatabase();
        ContentValues contentValues = new ContentValues();
        contentValues.put(myDbHelper.NAME,newName);
        String[] whereArgs= {oldName};
        return db.update(myDbHelper.TABLE_NAME,contentValues,
myDbHelper.NAME+" = ?",whereArgs );
    }
    public int checkExists( String name, String pass) {
        SQLiteDatabase db = myhelper.getWritableDatabase();
        String[] columns = {myDbHelper.NAME,myDbHelper.MyPASSWORD};
        String whereClause = myDbHelper.NAME + " = ? AND " +
myDbHelper.MyPASSWORD + "= ?";
        String[] whereArgs = new String[] {name,pass};

        Cursor cursor
=db.query(myDbHelper.TABLE_NAME,columns,whereClause,whereArgs,null,null,null
);
//        Cursor resultSet = db.rawQuery("SELECT COUNT(*) FROM myTable WHERE
Name='" + name + "' and Password='" + pass + "';",null);
        return cursor.getCount();
```

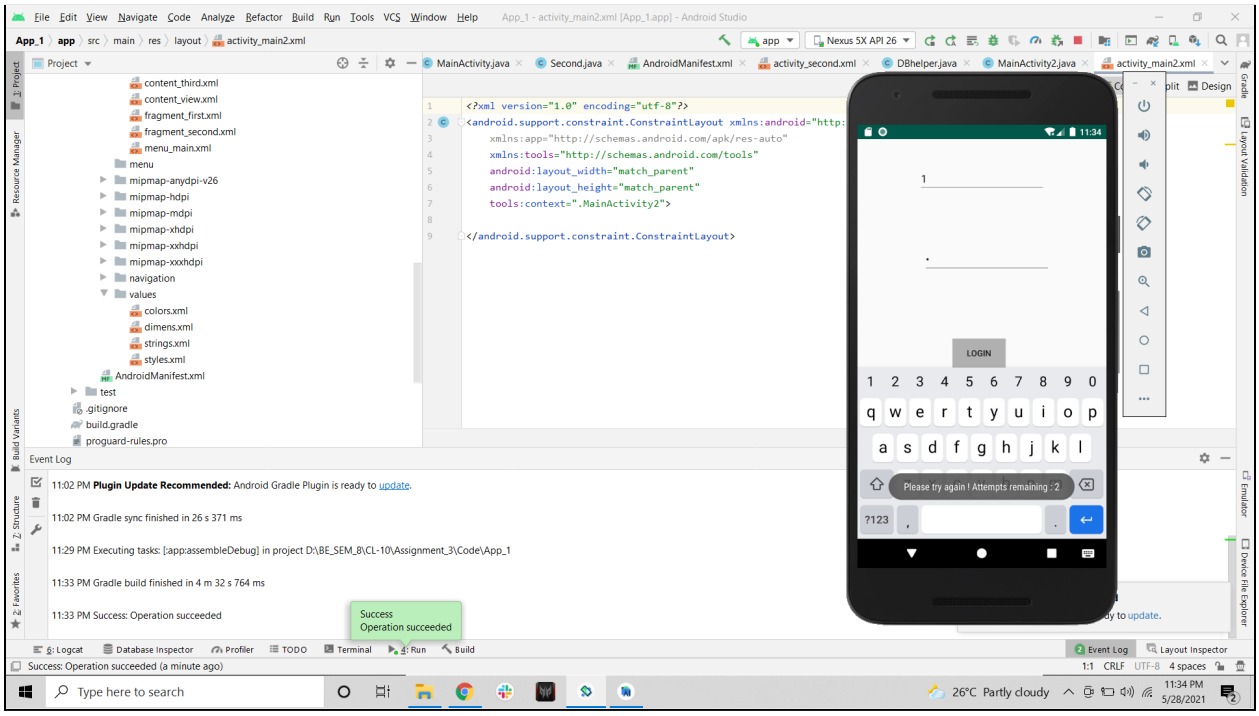
```
    }

    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 CHECK_EXISTS = "SELECT COUNT(*) FROM
myTable WHERE ";
        private static final String DROP_TABLE ="DROP TABLE IF EXISTS
"+TABLE_NAME;
        private 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);
            }
        }
    }
}
```

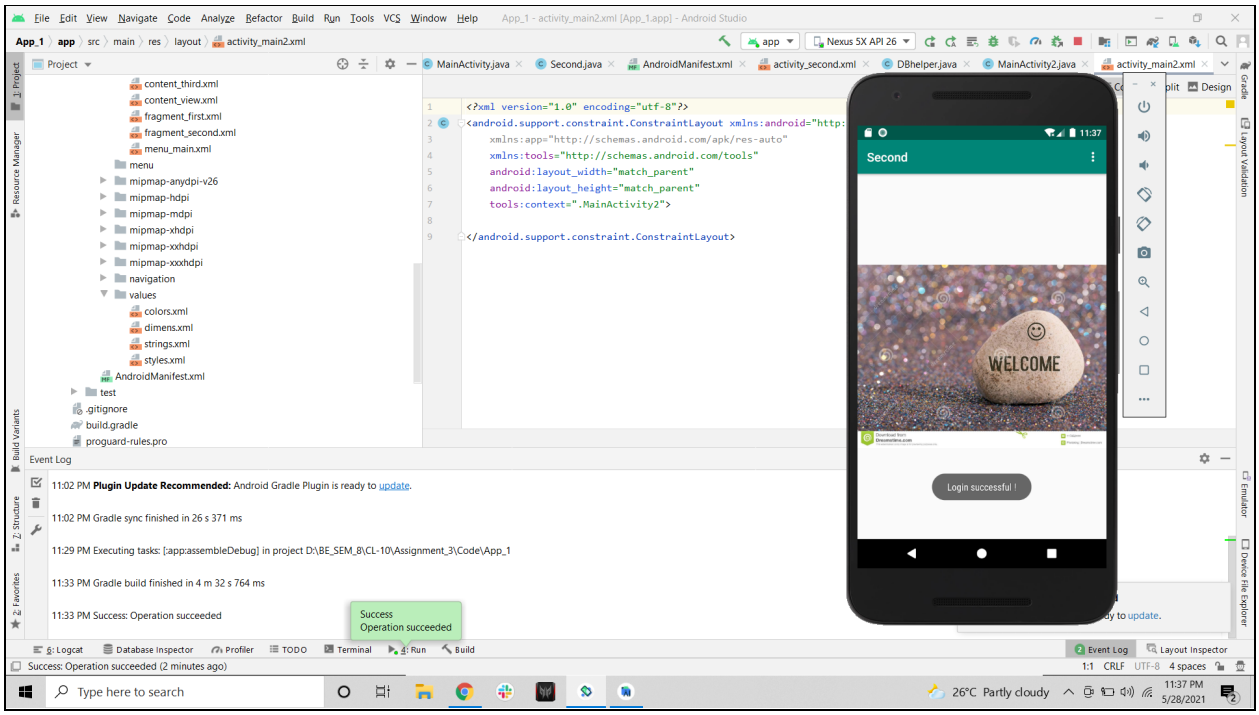
MainAcivity2.java

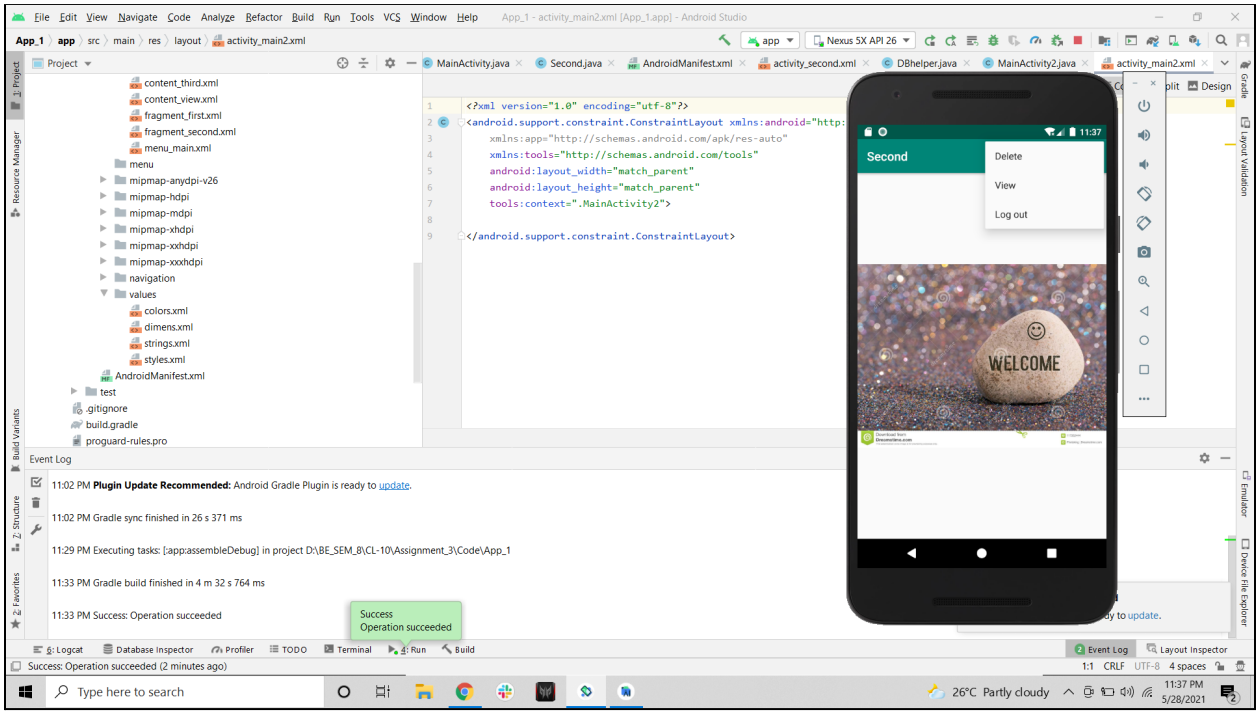
```
package com.example.app_1;

import android.content.Intent;
import android.os.Bundle;
import android.support.design.widget.FloatingActionButton;
import android.support.design.widget.Snackbar;
import android.support.v7.app.AppCompatActivity;
import android.support.v7.widget.Toolbar;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity2 extends AppCompatActivity {
   @Override
   protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_third);
        Toolbar toolbar = findViewById(R.id.toolbar);
        setSupportActionBar(toolbar);

        DBhelper helper = new DBhelper(this);
        Button addButton = findViewById(R.id.button);
        Button loginButton = findViewById(R.id.button2);;
        EditText username = findViewById(R.id.editText);
        EditText password = findViewById(R.id.editText2);
        addButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                long res =
helper.insertData(username.getText().toString(),password.getText().toString(
));
                System.out.println("aaaaaaaaaa" + res);
                if(res >= 0){
                    String toastMessage = "User successfully added !";
                    Toast.makeText(getApplicationContext(), toastMessage,
Toast.LENGTH_SHORT).show();
                    startActivity(new Intent(MainActivity2.this,
MainActivity.class));

                }
                else{
                    String toastMessage = "User already exists !";
                    Toast.makeText(getApplicationContext(), toastMessage,
Toast.LENGTH_SHORT).show();
                }
            }
        });

        loginButton.setOnClickListener(new View.OnClickListener() {
            @Override
```

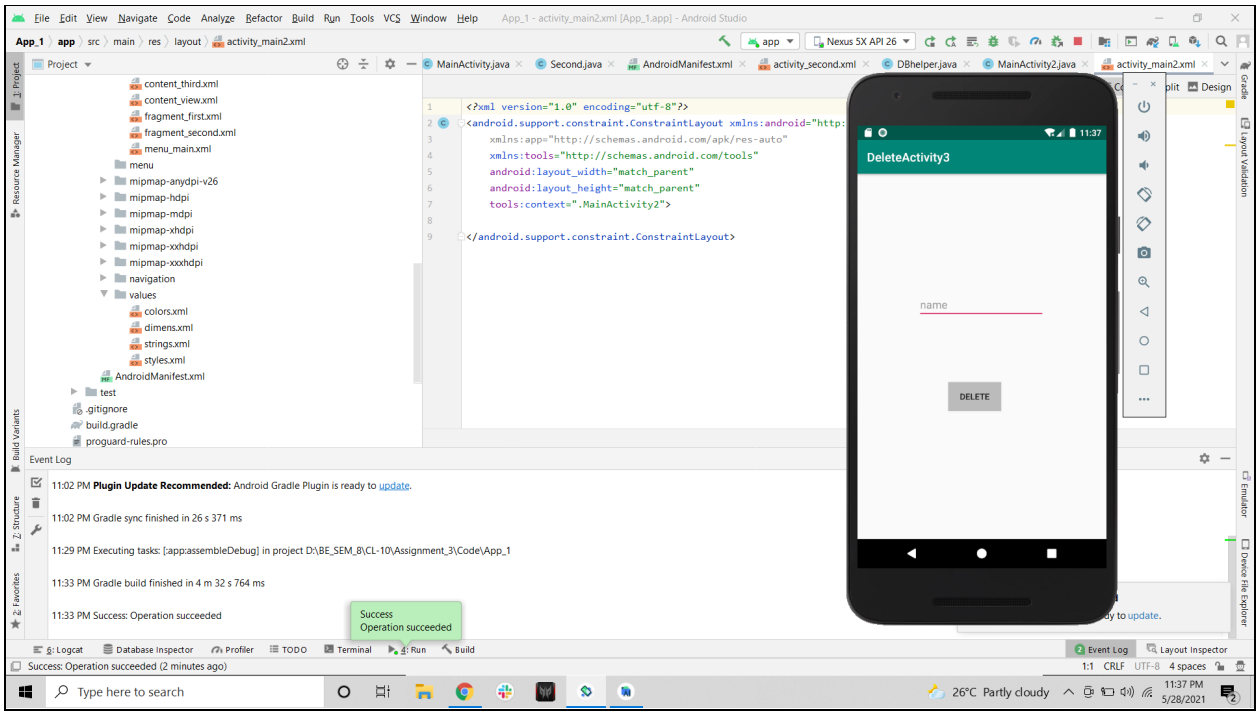
```
            public void onClick(View view) {

                    String toastMessage = "Going to sign in page ...!";
                    Toast.makeText(getApplicationContext(), toastMessage,
Toast.LENGTH_SHORT).show();
                    startActivity(new Intent(MainActivity2.this,
MainActivity.class));

            }
        });
    }

}
```

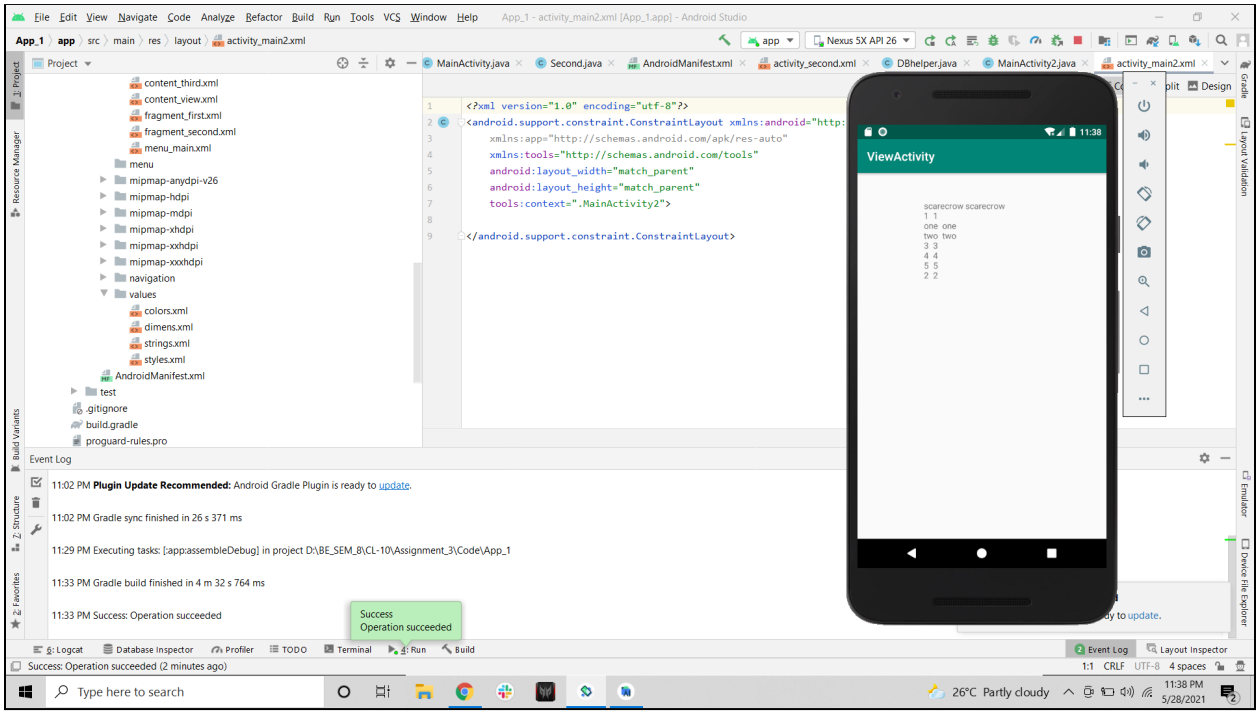
OUTPUT :




Second
WELCOME
Login successful !
Success
Operation succeeded


Second
Delete
View
Log out
WELCOME
Success
Operation succeeded


DeleteActivity3
name
DELETE
Success
Operation succeeded


ViewActivity
Success
Operation succeeded