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**Class:** Final Year B. Tech CSE **Batch:** B2

**Title: Write a program to study and use of SQLite database.**

**DbHelper.java**

package com.example.registrationapp;  
  
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 extends SQLiteOpenHelper {  
 public static final String *DBNAME* = "Login.db";  
 public DbHelper(Context context) {  
  
 super(context, "Login.db", null, 1);  
 }  
  
 @Override  
 public void onCreate(SQLiteDatabase MyDB) {  
 MyDB.execSQL("create Table " + "users(" +  
 "userName TEXT primary key, " +  
 "password TEXT," +  
 "firstName TEXT," +  
 "lasttName TEXT," +  
 "contact TEXT)");  
 }  
  
 @Override  
 public void onUpgrade(SQLiteDatabase MyDB, int i, int i1) {  
 MyDB.execSQL("drop Table if exists users");  
 }  
  
 public Boolean insertUser(String firstName,String lasttName, String contact, String userName, String password){  
 SQLiteDatabase MyDB = this.getWritableDatabase();  
 ContentValues contentValues= new ContentValues();  
 contentValues.put("userName", userName);  
 contentValues.put("password", password);  
 contentValues.put("firstName", firstName);  
 contentValues.put("lasttName", lasttName);  
 contentValues.put("contact", contact);  
 long result = MyDB.insert("users", null, contentValues);  
 if(result==-1) return false;  
 else  
 return true;  
 }  
  
 public Boolean checkusername(String username) {  
 SQLiteDatabase MyDB = this.getWritableDatabase();  
 Cursor cursor = MyDB.rawQuery("Select \* from users where username = ?", new String[]{username});  
 if (cursor.getCount() > 0)  
 return true;  
 else  
 return false;  
 }  
  
 public Boolean checkusernamepassword(String username, String password){  
 SQLiteDatabase MyDB = this.getWritableDatabase();  
 Cursor cursor = MyDB.rawQuery("Select \* from users where username = ? and password = ?", new String[] {username,password});  
 if(cursor.getCount()>0)  
 return true;  
 else  
 return false;  
 }  
}

**LoginActivity.java**

package com.example.registrationapp;  
  
import androidx.appcompat.app.AlertDialog;  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.DialogInterface;  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
import android.widget.Toast;  
  
public class LoginActivity extends AppCompatActivity {  
 private static EditText *Uname*,*Pass*;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 }  
 public void openSignUpPage(View view){  
 Intent i = new Intent(LoginActivity.this,SignUpActivity.class);  
 startActivity(i);  
 }  
 public void login(View view){  
 *Uname* =(EditText) findViewById(R.id.*edt\_UserName*);  
 *Pass* =(EditText) findViewById(R.id.*edt\_Password*);  
  
 String userName = *Uname*.getText().toString();  
 String password = *Pass*.getText().toString();  
  
 DbHelper db = new DbHelper(this);  
  
  
 *//1. check if username exits* AlertDialog.Builder builder = new AlertDialog.Builder(LoginActivity.this);  
 builder.setTitle("Login Alert")  
 .setMessage("Entered Username or Password is wrong !")  
 .setCancelable(false)  
 .setPositiveButton("Ok", new DialogInterface.OnClickListener() {  
 @Override  
 public void onClick(DialogInterface dialog, int which) {  
 Toast.*makeText*(LoginActivity.this,"Selected Option: OK",Toast.*LENGTH\_SHORT*).show();  
 }  
 });  
  
 AlertDialog dialog = builder.create();  
  
 if(db.checkusernamepassword(userName,password)){  
 Toast.*makeText*(getApplicationContext(), "Login Successful", Toast.*LENGTH\_SHORT*).show();  
 Intent i = new Intent(LoginActivity.this,Home.class);  
 startActivity(i);  
  
  
 }else{  
 *//Toast.makeText(getApplicationContext(), "Username or Password Error!!!",Toast.LENGTH\_SHORT).show();* dialog.show();  
 }  
 }  
}

**activity\_main.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout 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=".LoginActivity"  
 android:orientation="vertical"  
 android:background="#ECECEC">  
  
 <EditText  
 android:id="@+id/edt\_UserName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Username"  
 tools:ignore="MissingConstraints"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginTop="230dp"  
 android:background="#fff"  
 android:padding="10dp"  
 />  
  
 <EditText  
 android:id="@+id/edt\_Password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Enter Password"  
 tools:ignore="MissingConstraints"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginLeft="40dp"  
 android:padding="10dp"  
 android:layout\_marginTop="10dp"  
 android:background="#fff"  
 android:inputType="textPassword"  
 />  
 <Button  
 android:id="@+id/btn\_Login"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginTop="10dp"  
 android:text="Login"  
 android:onClick="login"/>  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Not a member?"  
 android:textColor="#040404"  
 android:layout\_marginLeft="110dp"  
 android:textSize="15dp"  
 />  
 <TextView  
 android:id="@+id/txt\_SignUp"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text=" SignUp Now"  
 android:textColor="#F4447F"  
 android:layout\_marginRight="40dp"  
 android:textSize="15dp"  
 android:onClick="openSignUpPage"  
 />  
 </LinearLayout>  
  
  
</LinearLayout>

**SignUpActivity.java**

package com.example.registrationapp;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.content.Intent;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.EditText;  
import android.widget.TextView;  
import android.widget.Toast;  
  
import java.util.regex.Pattern;  
  
public class SignUpActivity extends AppCompatActivity {  
 private static EditText *Fname*,*Lname*,*Cont*,*Uname*,*Pass*;  
 private static TextView *Fname\_Err*,*Lname\_Err*,*Cont\_Err*,*Uname\_Err*,*Pass\_Err*;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_sign\_up*);  
 }  
  
 public void openLoginPage(View view){  
 Intent i = new Intent(SignUpActivity.this, LoginActivity.class);  
 startActivity(i);  
 }  
 public void signUp(View view){  
 *Fname*=(EditText) findViewById(R.id.*edt\_FirstName*);  
 *Lname*=(EditText) findViewById(R.id.*edt\_LastName*);  
 *Cont*=(EditText) findViewById(R.id.*edt\_Contact*);  
 *Uname*=(EditText) findViewById(R.id.*edt\_UserName*);  
 *Pass*=(EditText) findViewById(R.id.*edt\_Password*);  
  
 String firstName = *Fname*.getText().toString();  
 String lasttName = *Lname*.getText().toString();  
 String contact = *Cont*.getText().toString();  
 String userName = *Uname*.getText().toString();  
 String password = *Pass*.getText().toString();  
  
  
 *Fname\_Err*=(TextView) findViewById(R.id.*txt\_fnameError*);  
 *Lname\_Err*=(TextView) findViewById(R.id.*txt\_lnameError*);  
 *Cont\_Err*=(TextView) findViewById(R.id.*txt\_contactError*);  
 *Uname\_Err*=(TextView) findViewById(R.id.*txt\_unameError*);  
 *Pass\_Err*=(TextView) findViewById(R.id.*txt\_passwordError*);  
  
 *Fname\_Err*.setVisibility(View.*INVISIBLE*);  
 *Lname\_Err*.setVisibility(View.*INVISIBLE*);  
 *Cont\_Err*.setVisibility(View.*INVISIBLE*);  
 *Uname\_Err*.setVisibility(View.*INVISIBLE*);  
 *Pass\_Err*.setVisibility(View.*INVISIBLE*);  
  
 boolean validity = true;  
 *//Validate* if (!Pattern.*matches*("^[a-zA-Z]{1,20}$",firstName)) {  
 validity=false;  
 *Fname\_Err*.setVisibility(View.*VISIBLE*);  
 }  
  
 if (!Pattern.*matches*("^[a-zA-Z]{1,20}$",lasttName)) {  
 validity=false;  
 *Lname\_Err*.setVisibility(View.*VISIBLE*);  
 }  
  
 if (!Pattern.*matches*("^[0-9]{10}$",contact)) {  
 validity=false;  
 *Cont\_Err*.setVisibility(View.*VISIBLE*);  
 }  
  
  
 if (!Pattern.*matches*("^[a-zA-Z0-9]{1,30}$",userName)) {  
 validity=false;  
 *Uname\_Err*.setVisibility(View.*VISIBLE*);  
 }  
 *//passWord* if (password.isEmpty()) {  
 validity=false;  
 *Pass\_Err*.setVisibility(View.*VISIBLE*);  
 }  
  
  
 if(validity){  
 DbHelper db = new DbHelper(this);  
 *//1. check if username already exits* if(!db.checkusername(userName)){  
 db.insertUser(firstName, lasttName, contact, userName, password);  
 Toast.*makeText*(getApplicationContext(), "User added successfully!!!",Toast.*LENGTH\_SHORT*).show();  
 }else{  
 Toast.*makeText*(getApplicationContext(), "Username alread exists!!!",Toast.*LENGTH\_SHORT*).show();  
 }  
  
 }  
  
 }  
}

**Activity\_sign\_up.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout 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=".LoginActivity"  
 android:orientation="vertical"  
 android:background="#ECECEC">  
 <EditText  
 android:id="@+id/edt\_FirstName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="First Name"  
 tools:ignore="MissingConstraints"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginTop="90dp"  
 android:background="#fff"  
 android:padding="10dp"  
 />  
 <TextView  
 android:id="@+id/txt\_fnameError"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="1-20 characters long"  
 android:visibility="invisible"  
 android:layout\_marginLeft="40dp"  
 android:textColor="#EF0A0A"  
 />  
 <EditText  
 android:id="@+id/edt\_LastName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Last Name"  
 tools:ignore="MissingConstraints"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginTop="5dp"  
 android:background="#fff"  
 android:padding="10dp"  
 />  
 <TextView  
 android:id="@+id/txt\_lnameError"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="1-20 characters long"  
 android:visibility="invisible"  
 android:layout\_marginLeft="40dp"  
 android:textColor="#EF0A0A"/>  
  
 <EditText  
 android:id="@+id/edt\_Contact"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Contact number"  
 tools:ignore="MissingConstraints"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginTop="5dp"  
 android:background="#fff"  
 android:padding="10dp"  
 />  
 <TextView  
 android:id="@+id/txt\_contactError"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="10 digit number"  
 android:visibility="invisible"  
 android:layout\_marginLeft="40dp"  
 android:textColor="#EF0A0A"/>  
 <EditText  
 android:id="@+id/edt\_UserName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Username"  
 tools:ignore="MissingConstraints"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginTop="5dp"  
 android:background="#fff"  
 android:padding="10dp"  
 />  
 <TextView  
 android:id="@+id/txt\_unameError"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Can be Alphanumeric"  
 android:visibility="invisible"  
 android:layout\_marginLeft="40dp"  
 android:textColor="#EF0A0A"/>  
  
 <EditText  
 android:id="@+id/edt\_Password"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:hint="Password"  
 tools:ignore="MissingConstraints"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginLeft="40dp"  
 android:padding="10dp"  
 android:layout\_marginTop="5dp"  
 android:background="#fff"  
 android:inputType="textPassword"  
 />  
 <TextView  
 android:id="@+id/txt\_passwordError"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="can't be empty"  
 android:visibility="invisible"  
 android:layout\_marginLeft="40dp"  
 android:textColor="#EF0A0A"/>  
  
 <Button  
 android:id="@+id/btn\_SignUp"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="40dp"  
 android:layout\_marginRight="40dp"  
 android:layout\_marginTop="10dp"  
 android:text="SignUp"  
 android:onClick="signUp"/>  
  
 <LinearLayout  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal">  
  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Already a member?"  
 android:textColor="#040404"  
 android:layout\_marginLeft="110dp"  
 android:textSize="15dp"  
 />  
 <TextView  
 android:id="@+id/txt\_SignUp"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text=" SingIn"  
 android:textColor="#F4447F"  
 android:layout\_marginRight="40dp"  
 android:textSize="15dp"  
 android:onClick="openLoginPage"  
 />  
 </LinearLayout>  
  
  
</LinearLayout>

**HomeActivity.java**

package com.example.registrationapp;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
  
public class Home extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_home*);  
 }  
}

**activity\_home.xml**

*<?*xml version="1.0" encoding="utf-8"*?>*<RelativeLayout  
 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=".Home">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_centerHorizontal="true"  
 android:layout\_centerVertical="true"  
 android:text="This will be the home page"/>  
</RelativeLayout>

**Output:**

 

 

 





