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Class : TY CS Div A

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Aim : With reference to assignment number 5, instead of storing data in shared preferences, store registration data in sqlite.

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"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <EditText
        android:id="@+id/txt_name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Name"
        android:inputType="textPersonName"
        android:textSize="28dp"
        android:text="" />

    <EditText
        android:id="@+id/txt_phone"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="Phone no"
        android:inputType="phone"
        android:textSize="28dp" />

    <EditText
        android:id="@+id/txt_email"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:hint="E-Mail"
        android:inputType="textEmailAddress"
        android:textSize="28dp" />

    <RadioGroup
        android:id="@+id/rg_gender"
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <RadioButton
            android:id="@+id/rb_male"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Male" />
```

```

<RadioButton
    android:id="@+id/rb_female"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Female" />
</RadioGroup>

<CheckBox
    android:id="@+id/chk_php"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="PHP" />

<CheckBox
    android:id="@+id/chk_java"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="JAVA" />

<CheckBox
    android:id="@+id/chk_python"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:text="Python" />

<Spinner
    android:id="@+id/spinner1"
    android:layout_width="match_parent"
    android:layout_height="wrap_content" />

<Button
    android:id="@+id/login"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:onClick="insertdata"
    android:text="Login"
    android:textSize="28dp" />

<ListView
    android:id="@+id/list_student"
    android:layout_width="match_parent"
    android:layout_height="match_parent" />
</LinearLayout>

```

MainActivity.java

```

package com.example.test_sqlite;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.ListView;

```

```
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Spinner;
import android.widget.Toast;

import java.util.ArrayList;
import java.util.List;

public class MainActivity extends AppCompatActivity {

    EditText ed1,ed2,ed3;
    RadioGroup rg1;
    RadioButton rb;
    CheckBox chk1,chk2,chk3;
    Button login;
    Spinner sp;
    ListView lv;
    ArrayList<String> mylist = new ArrayList<>();

    db_handler handlerobj;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        handlerobj = new db_handler(this,"db_student",null,1);

        ed1 = findViewById(R.id.txt_name);
        ed2 = findViewById(R.id.txt_phone);
        ed3 = findViewById(R.id.txt_email);
        rg1 = findViewById(R.id.rg_gender);
        chk1 = findViewById(R.id.chk_php);
        chk2 = findViewById(R.id.chk_java);
        chk3 = findViewById(R.id.chk_python);

        sp = findViewById(R.id.spinner1);
        lv = findViewById(R.id.list_student);

        mylist.add("Admin");
        mylist.add("Guest");
        mylist.add("User");

        ArrayAdapter<String> adp = new ArrayAdapter<>(this,
        android.R.layout.simple_spinner_dropdown_item,mylist);
        sp.setAdapter(adp);
    }

    public void insertdata(View view) {
        student sobj = new student();

        int x = rg1.getCheckedRadioButtonId();
        rb = findViewById(x);

        String checked_text = "";
        if(chk1.isChecked())
        {
            checked_text += " "+ chk1.getText().toString();
        }
        if(chk2.isChecked())
        {
            checked_text += " "+ chk2.getText().toString();
        }
        if(chk3.isChecked())
        {
            checked_text += " "+ chk3.getText().toString();
        }
        sobj.setName(ed1.getText().toString());
        sobj.setPhone(ed2.getText().toString());
        sobj.setEmail(ed3.getText().toString());
        sobj.setGender(rb.getText().toString());
        sobj.setLang(checked_text);
        sobj.setAdmin("Admin");
        sobj.setGuest("Guest");
        sobj.setUser("User");
        db_handler obj = new db_handler(this,"db_student",null,1);
        obj.insertData(sobj);
    }
}
```

```

    {
        checked_text += " "+ chk2.getText().toString();
    }
    if(chk3.isChecked())
    {
        checked_text += " "+ chk3.getText().toString();
    }

    sobj.setSname(ed1.getText().toString());
    sobj.setSphone(ed2.getText().toString());
    sobj.setSemail(ed3.getText().toString());
    sobj.setSgender(rb.getText().toString());
    sobj.setStech(checked_text);
    sobj.setStype(sp.getSelectedItem().toString());

    handlerobj.add_records(sobj);
    Toast.makeText(this, "Inserted", Toast.LENGTH_SHORT).show();

    List<String> studList = handlerobj.get_data();
    ArrayAdapter<String> adp = new ArrayAdapter<>(this,
    android.R.layout.simple_list_item_1,studList);
    lv.setAdapter(adp);
}
}

```

student.java // Constructor and getter-setter method

```

package com.example.test_sqlite;

public class student {

    String sname,sphone,semail,sgender,stech,stype;

    public student()
    {
    }

    public student(String sname, String sphone)
    {
        this.sname = sname;
        this.sphone = sphone;
    }

    public String getName() {
        return sname;
    }

    public void setName(String sname) {
        this.sname = sname;
    }

    public String getPhone() {
        return sphone;
    }

    public void setPhone(String sphone) {
        this.sphone = sphone;
    }
}

```

```
public String getEmail() {
    return semail;
}

public void setEmail(String semail) {
    this.semail = semail;
}

public String getGender() {
    return sgender;
}

public void setGender(String sgender) {
    this.sgender = sgender;
}

public String getStech() {
    return stech;
}

public void setStech(String stech) {
    this.stech = stech;
}

public String getType() {
    return stype;
}

public void setType(String stype) {
    this.stype = stype;
}
}
```

db_handler.java

```
package com.example.test_sqlite;

import android.content.ContentValues;
import android.content.Context;
import android.database.Cursor;
import android.database.sqlite.SQLiteDatabase;
import android.database.sqlite.SQLiteOpenHelper;

import androidx.annotation.Nullable;

import java.util.ArrayList;
import java.util.List;

public class db_handler extends SQLiteOpenHelper {

    public db_handler(@Nullable Context context, @Nullable String name, @Nullable
SQLiteDatabase.CursorFactory factory, int version) {
        super(context, name, factory, version);
    }

    @Override
    public void onCreate(SQLiteDatabase db) {
```

```

        String query;
        query = "Create table tblstudent(s_name Text, s_phone Text, s_email Text,
s_gender Text, s_tech Text, s_type Text)";
        db.execSQL(query);
    }

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

    public void add_records(student obj)
    {
        String v_name , v_phone, v_mail, v_gen, v_tech, v_type;
        v_name = obj.getSname();
        v_phone = obj.getSphone();
        v_mail = obj.getSemail();
        v_gen = obj.getSGender();
        v_tech = obj.getStech();
        v_type = obj.getType();

        ContentValues cv = new ContentValues();
        cv.put("s_name",v_name);
        cv.put("s_phone",v_phone);
        cv.put("s_email",v_mail);
        cv.put("s_gender",v_gen);
        cv.put("s_tech",v_tech);
        cv.put("s_type",v_type);

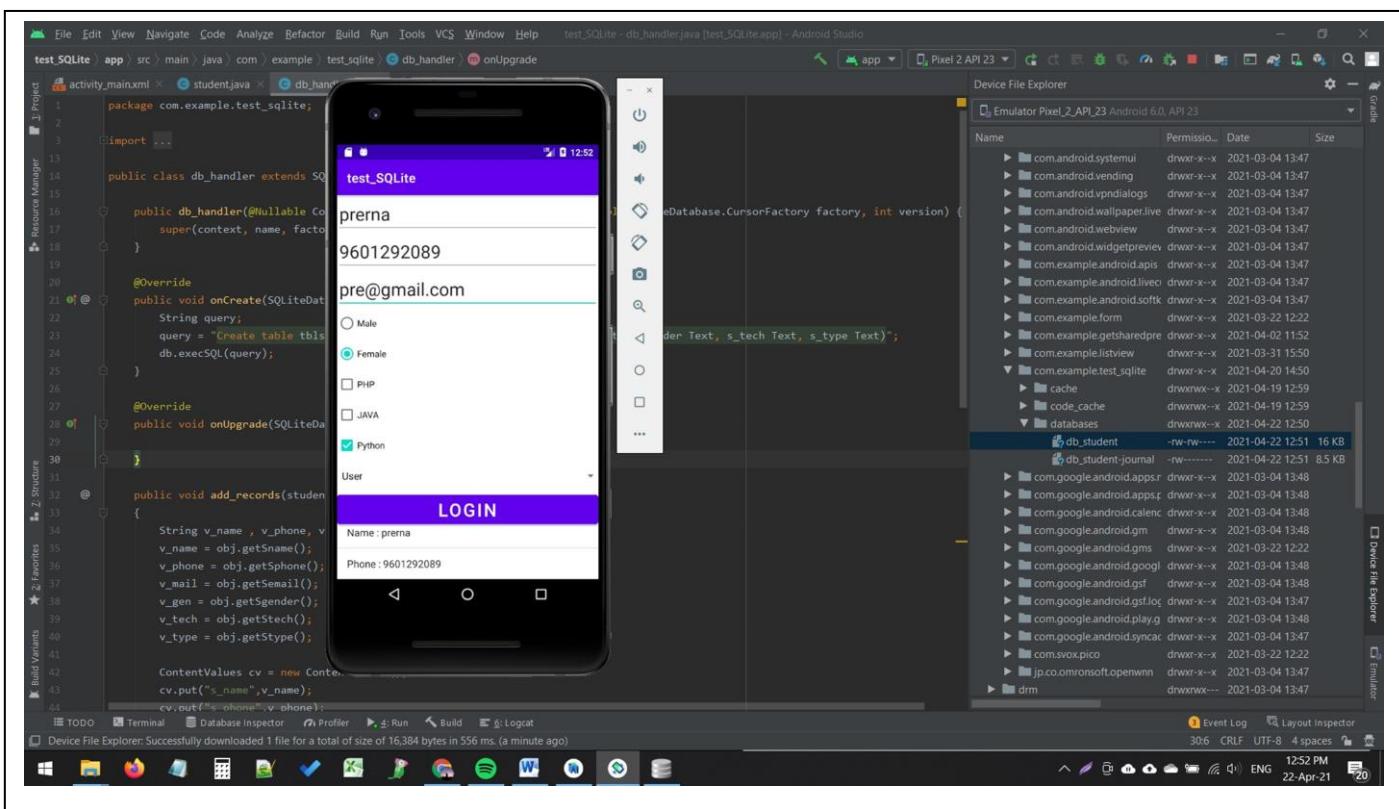
        SQLiteDatabase sdb = this.getWritableDatabase();
        sdb.insert("tblstudent",null,cv);
        sdb.close();
    }

    public List<String> get_data()
    {
        List<String> mylist = new ArrayList<>();
        SQLiteDatabase sdb = this.getReadableDatabase();
        String squry = "select * from tblstudent";
        Cursor c = sdb.rawQuery(squery,null);

        if(c.moveToFirst())
        {
            do{
                mylist.add("Name : "+c.getString(0));
                mylist.add("Phone : "+c.getString(1));
            } while(c.moveToNext());
        }

        return mylist;
    }
}

```



The screenshot shows the DB Browser for SQLite interface with the following details:

- Table Data:** The 'tbstudent' table contains the following data:

	s_name	s_phone	s_email	s_gender	s_tech	s_type
1	Janvi	6358044035	janvi@gmail.com	Female	PHP	Admin
2	gatha	6395859665	tha@gmail.com	Female	JAVA	Guest
3	prerna	9601292089	pre@gmail.com	Female	Python	User

- Database Editor:** An 'Edit Database Cell' window is open for the first row, cell (1, 1), showing the value '1'.
- Toolbar:** Includes options like New Database, Open Database, Write Changes, Revert Changes, Open Project, Save Project, Attach Database, Close Database, and a Filter input field.
- Bottom Taskbar:** Shows the date/time (22-Apr-21, 12:53 PM) and other system icons.