Fragments (a) switching between 2 fragments, same screen

activity_main.xml

```
<FrameLayout
    android:id="@+id/frame_layout"
    android:layout_width="match_parent"
    android:layout_height="500dp"
    android:background="#FFFFF"/>
```

Main Activity

```
import android.app.Activity;
import android.app.FragmentManager;
import android.app.FragmentTransaction;
import android.app.Fragment;

import android.os.Bundle;
import android.widget.Button;

public class MainActivity extends Activity {

    Button frag1, frag2;

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        frag1 = (Button) findViewById(R.id.button1);
        frag2 = (Button) findViewById(R.id.button2);

        frag1.setOnClickListener((v -> loadFragment(new Fragment1())));
        frag2.setOnClickListener((v -> loadFragment(new Fragment2())));
    }

    private void loadFragment(Fragment fragment) {
        FragmentManager fm = getFragmentManager();
        FragmentTransaction ft = fm.beginTransaction();

        ft.replace(R.id.frame_layout, fragment);

        ft.commit();
    }

}
```

Fragment

```
import android.app.Fragment;
import android.view.LayoutInflater;

public class Fragment2 extends Fragment {
   View view;

   @Override
   public View onCreateView(LayoutInflater inflater, ViewGroup container,
Bundle savedInstanceState) {
       view = inflater.inflate(R.layout.fragment_2, container, false);

       TextView tv = view.findViewById(R.id.tv2);
       tv.setText("FRAGMENT 2");

       Toast.makeText(getActivity(), "Fragment 2 reached!!",
Toast.LENGTH_SHORT).show();

       return view;
   }
}
```

Fragments (b) displaying 2 fragments together

activity_main.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="horizontal">

    <fragment
        android:name="com.example.practice.Fragment1"
        android:id="@+id/fragment1"
        android:layout_weight="1"
        android:layout_width="0dp"
        android:layout_height="match_parent" />

    <fragment
        android:name="com.example.practice.Fragment2"
        android:id="@+id/fragment2"
        android:layout_weight="2"
        android:layout_width="0dp"
        android:layout_height="match_parent" />

</LinearLayout>
```

Fragment.java

```
import android.os.Bundle;

import android.app.Fragment;
import android.view.LayoutInflater;

import android.view.View;
import android.view.ViewGroup;

public class Fragment1 extends Fragment {
    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
Bundle savedInstanceState) {
        return inflater.inflate(R.layout.fragment_1, container, false);
    }
}
```

SHARED PREFERENCES

```
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;

import android.content.SharedPreferences;

import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Switch;
import android.widget.TextView;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
   private TextView textView;
   private EditText editText;
   private Button applyTextButton;
   private Button saveButton;
   private Switch switch;

   public static final String SHARED_PREFS = "sharedPrefs";
   public static final String TEXT = "text";
   public static final String SWITCH = "switch";

   private String text;
   private boolean switchOnOff;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
       super.onCreate(savedInstanceState);
       setContentView(R.layout.activity_main);

       textView = (TextView) findViewById(R.id.textview);
       editText = (EditText) findViewById(R.id.edittext);
       applyTextButton = (Button) findViewById(R.id.apply_text_button);
       saveButton = (Button) findViewById(R.id.save_button);
       switch = (Switch) findViewById(R.id.switch1);

       applyTextButton.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {

               textView.setText(editText.getText().toString());

           }
       });
```

```
        saveButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                saveData();
            }
        });

        loadData();

        updateViews();
    }

    public void saveData() {
        SharedPreferences sharedPreferences = getSharedPreferences(SHARED_PREFS,
MODE_PRIVATE);

        SharedPreferences.Editor editor = sharedPreferences.edit();

        editor.putString(TEXT, textView.getText().toString());
        editor.putBoolean(SWITCH, switch.isChecked());

        editor.apply();

        Toast.makeText(this, "Data saved", Toast.LENGTH_SHORT).show();
    }

    public void loadData() {
        SharedPreferences sharedPreferences = getSharedPreferences(SHARED_PREFS,
MODE_PRIVATE);

        text = sharedPreferences.getString(TEXT, "");

        switchOnOff = sharedPreferences.getBoolean(SWITCH, false);
    }

    public void updateViews() {
        textView.setText(text);

        switch.setChecked(switchOnOff);
    }
}
```

SQLite

DB HELPER

```
package com.example.practicee;

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 DBHelper(Context context) {
        super(context, "Userdata.db", null, 1);
    }

    @Override
    public void onCreate(SQLiteDatabase DB) {
        DB.execSQL("create Table Userdetails(name TEXT primary key, contact
TEXT, dob TEXT)");
    }

    @Override
    public void onUpgrade(SQLiteDatabase DB, int i, int ii) {
        DB.execSQL("drop Table if exists Userdetails");
    }

    public Boolean insertData(String name, String contact, String dob)
    {
        SQLiteDatabase DB = this.getWritableDatabase();

        ContentValues contentValues = new ContentValues();
        contentValues.put("name", name);
        contentValues.put("contact", contact);
        contentValues.put("dob", dob);

        long result = DB.insert("Userdetails", null, contentValues);

        if(result == -1) {
            return false;
        } else {
            return true;
        }
    }
```

```
    public Cursor getData ()
    {
        SQLiteDatabase DB = this.getWritableDatabase();

        Cursor cursor = DB.rawQuery("Select * from Userdetails", null);

        return cursor;
    }
}
```

MAIN ACTIVITY

```
package com.example.practicee;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;

import android.database.Cursor;
import androidx.appcompat.app.AlertDialog;

import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {
    EditText name, contact, dob;
    Button insert, view;
    DBHelper DB;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        name = findViewById(R.id.name);
        contact = findViewById(R.id.contact);
        dob = findViewById(R.id.dob);
        insert = findViewById(R.id.btnInsert);

        view = findViewById(R.id.btnView);
        DB = new DBHelper(this);

        insert.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String nameTXT = name.getText().toString();
                String contactTXT = contact.getText().toString();
```

```
                String dobTXT = dob.getText().toString();

                Boolean checkinsert = DB.insertData(nameTXT, contactTXT,
dobTXT);

                if(checkinsert == true)
                    Toast.makeText(MainActivity.this, "New Entry Inserted",
Toast.LENGTH_SHORT).show();
                else
                    Toast.makeText(MainActivity.this, "New Entry Not Inserted",
Toast.LENGTH_SHORT).show();
            }
        });

        view.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Cursor res = DB.getData();

                if(res.getCount() == 0) {
                    Toast.makeText(MainActivity.this, "No Entry Exists",
Toast.LENGTH_SHORT).show();
                    return;
                }

                StringBuffer buffer = new StringBuffer();

                while(res.moveToNext()) {
                    buffer.append("Name :" + res.getString(0) + "\n");
                    buffer.append("Contact :" + res.getString(1) + "\n");
                    buffer.append("Date of Birth :" + res.getString(2) +
"\n\n");
                }

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

                builder.setCancelable(true)
                        .setTitle("User Entries")
                        .setMessage(buffer.toString())
                        .show();
            }
        });
    }
}
```