Experiment - 7

Student Name: Sandeep Kumar   **UID: 20BCS4885**
Branch: BE - CSE   **Section/Group: 603/A**
Semester: 6th semester   **Subject: MAD LAB**

Aim:

Create an Android application using Fragments.

Objective:

Understanding of the interactions between user interface and underlying application infrastructure.

Code:

Activity_main.xml file:

```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=".MainActivity">


    <FrameLayout
        android:id="@+id/frameLayout"
        android:layout_width="match_parent"
        android:layout_height="600dp"/>

    <Button
        android:id="@+id/fragment1btn"
        android:layout_width="150dp"
        android:layout_height="60dp"
        android:backgroundTint="@color/black"
        android:text="Fragment 1"
        android:layout_alignParentBottom = "true"
        android:layout_marginBottom="50dp"
        android:layout_marginStart="30dp"
        />
    <Button
```

```
        android:id="@+id/fragment2btn"
        android:layout_width="150dp"
        android:layout_height="60dp"
        android:backgroundTint="@color/black"
        android:text="Fragment 2"
        android:layout_alignParentBottom = "true"
        android:layout_alignParentRight = "true"
        android:layout_marginBottom="50dp"
        android:layout_marginEnd="30dp"
        />


    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

</RelativeLayout>
```

fragment_fragment1.xml :

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/fragment1color"
    tools:context=".fragment1">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text= "Fragment 1"
        android:textSize="30sp"
        android:layout_centerInParent="true"
        android:textColor="@color/black"

        />

</RelativeLayout>
```

fragment_fragment2.xml:

```xml
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@color/fragment2color"
    tools:context=".fragment2">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text= "Fragment 2"
        android:textSize="30sp"
        android:layout_centerInParent="true"
        android:textColor="@color/black"

        />

</RelativeLayout>
```

MainActivity.java file:

```java
import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;

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

public class MainActivity extends AppCompatActivity {


    Button firstFragmentBtn, secondFragmentBtn;



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

        firstFragmentBtn = findViewById(R.id.fragment1btn);
        secondFragmentBtn = findViewById(R.id.fragment2btn);

        firstFragmentBtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                replaceFragment(new fragment1());
```

```
        }
      });

      secondFragmentBtn.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
          replaceFragment(new fragment2());
        }
      });
  }

  private void replaceFragment(Fragment fragment) {
    FragmentManager fragmentManager = getSupportFragmentManager();
    FragmentTransaction fragmentTransaction = fragmentManager.beginTransaction();
    fragmentTransaction.replace(R.id.frameLayout, fragment);
    fragmentTransaction.commit();

  }
}
```

fragment1.java:

```
import android.os.Bundle;

import androidx.fragment.app.Fragment;

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


public class fragment1 extends Fragment {

  View view;
  @Override
  public View onCreateView(LayoutInflater inflater, ViewGroup container,
                  Bundle savedInstanceState) {
    view = inflater.inflate(R.layout.fragment_fragment1, container, false);
    return view;
  }
}
```

fragment2.java:

```
import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
```

```java
import android.view.View;
import android.view.ViewGroup;


public class fragment2 extends Fragment {

    View view;

    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup container,
                             Bundle savedInstanceState) {
        // Inflate the layout for this fragment
        view = inflater.inflate(R.layout.fragment_fragment2, container, false);
        return view;
    }
}
```

Output: