Lab 4
Intent and Fragments

1. create two fragments as given below.

➕ **activity_main.xml**

```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="horizontal"
    tools:context=".MainActivity">

    <FrameLayout
        android:id="@+id/frFirstFragment"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:layout_weight="1" />
    <FrameLayout
        android:id="@+id/frSecondFragment"
        android:layout_width="wrap_content"
        android:layout_height="match_parent"
        android:layout_weight="1"
        />
</LinearLayout>
```

➕ **mainactivity.java**

```java
package com.example.prog_1;

import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import com.example.prog_1.Fragments.FirstFragment;
import com.example.prog_1.Fragments.SecondFragment;
public class MainActivity extends AppCompatActivity {

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

        getSupportFragmentManager().beginTransaction().replace(R.id.frFirstFragment, new
FirstFragment()).commit();
        getSupportFragmentManager().beginTransaction().replace(R.id.frSecondFragment, new
SecondFragment()).commit();
    }
}
```

➕ **fragment_first.xml**

```xml
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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"
    tools:context=".Fragments.FirstFragment">

    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="hello_blank_fragment 1"
        android:background="@color/black" />

</FrameLayout>
```

FirstFragment.java
```
package com.example.prog_1.Fragments;
import android.os.Bundle;
import androidx.fragment.app.Fragment;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import com.example.prog_1.R;
public class FirstFragment extends Fragment {

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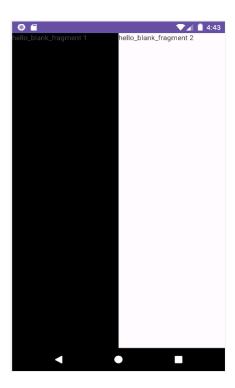
fragment_second.xml

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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"
    tools:context=".Fragments.SecondFragment">
    <!-- TODO: Update blank fragment layout -->
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:text="hello_blank_fragment 2" />
</FrameLayout>
```

Second_activity.java
```
package com.example.prog_1.Fragments;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

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

```
import com.example.prog_1.R;
public class SecondFragment extends Fragment {

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

🞣 OutPut:

2. Create an application which creates a two fragments one with list item, and another shows the details of item selected in first fragment.

🞣 activity_lab_second_prog.xml

```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="horizontal"
    tools:context=".LabSecondProgActivity">

    <androidx.fragment.app.FragmentContainerView
        android:id="@+id/frContainerNameList"
```

```xml
            android:layout_width="wrap_content"
            android:layout_height="match_parent"
            android:layout_weight="1"
            />
    <androidx.fragment.app.FragmentContainerView
            android:id="@+id/frContainerDetails"
            android:layout_width="wrap_content"
            android:layout_weight="1"
            android:layout_height="match_parent"
            />
</LinearLayout>
```

✚ LabSecondProgActivity.java

```java
package com.itcraftsolution.androidtest;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;

public class LabSecondProgActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_lab_second_prog);

        getSupportFragmentManager().beginTransaction()
            .replace(R.id.frContainerNameList, new ListFragment()).commit();
    }
}
```

✚ fragment_list.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:gravity="center"
    android:layout_margin="16dp"
    android:orientation="vertical"
    tools:context=".ListFragment">
    <Button
        android:id="@+id/tx1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="JAY"
        android:layout_marginTop="12dp"
        android:textSize="28sp"
        android:layout_gravity="center"
        android:gravity="center"
        />
    <Button
        android:id="@+id/tx2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Alyani"
        android:textSize="28sp"
        android:layout_marginTop="12dp"
        android:layout_gravity="center"
```

```xml
            android:gravity="center"
            />
        <Button
            android:id="@+id/tx3"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginTop="12dp"
            android:text="Akshay"
            android:textSize="28sp"
            android:layout_gravity="center"
            android:gravity="center"
            />
        <Button
            android:id="@+id/tx4"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Bharat"
            android:layout_marginTop="12dp"
            android:textSize="28sp"
            android:layout_gravity="center"
            android:gravity="center"
            />
        <Button
            android:id="@+id/tx5"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Rushit"
            android:layout_marginTop="12dp"
            android:textSize="28sp"
            android:layout_gravity="center"
            android:gravity="center"
            />
        <Button
            android:id="@+id/tx6"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="Savan"
            android:layout_marginTop="12dp"
            android:textSize="28sp"
            android:layout_gravity="center"
            android:gravity="center"
            />
    </LinearLayout>
```

➕ ListFragment.java

```java
package com.itcraftsolution.androidtest;
import android.content.Context;
import android.content.SharedPreferences;
import android.os.Bundle;
import androidx.fragment.app.Fragment;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.TextView;
import android.widget.Toast;
```

```java
public class ListFragment extends Fragment {

  Button button1, button2, button3, button4, button5, button6;
  @Override
  public View onCreateView(LayoutInflater inflater, ViewGroup container,
                Bundle savedInstanceState) {
    // Inflate the layout for this fragment
    View view =  inflater.inflate(R.layout.fragment_list, container, false);

    button1 = view.findViewById(R.id.tx1);
    button2 = view.findViewById(R.id.tx2);
    button3 = view.findViewById(R.id.tx3);
    button4 = view.findViewById(R.id.tx4);
    button5 = view.findViewById(R.id.tx5);
    button6 = view.findViewById(R.id.tx6);


    button1.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String str = button1.getText().toString();
        storeSpf(str);
      }
    });
    button2.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String str = button2.getText().toString();
        storeSpf(str);
      }
    });
    button3.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String str = button3.getText().toString();
        storeSpf(str);
      }
    });
    button4.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String str = button4.getText().toString();
        storeSpf(str);
      }
    });
    button5.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String str = button5.getText().toString();
        storeSpf(str);
      }
    });
    button6.setOnClickListener(new View.OnClickListener() {
      @Override
      public void onClick(View v) {
        String str = button6.getText().toString();
        storeSpf(str);
      }
```

```
            });

        return view;
    }
    private void storeSpf(String str){
        SharedPreferences spf = requireContext().getSharedPreferences("Storage", Context.MODE_PRIVATE);
        SharedPreferences.Editor edit = spf.edit();
        edit.putString("name", str);
        edit.apply();

        requireActivity().getSupportFragmentManager().beginTransaction()
            .replace(R.id.frContainerDetails, new DetailFragment()).commit();
    }
}
```

➕ fragment_details.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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:gravity="center"
    android:orientation="vertical"
    tools:context=".DetailFragment">

    <TextView
        android:id="@+id/txName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Name"
        android:textSize="22sp"/>

    <TextView
        android:id="@+id/txLocation"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Location"
        android:textSize="22sp"/>

</LinearLayout>
```

➕ DetailsFragment.java

```java
package com.itcraftsolution.androidtest;
import android.content.Context;
import android.content.SharedPreferences;
import android.os.Bundle;
import androidx.fragment.app.Fragment;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.TextView;
import android.widget.Toast;

public class DetailFragment extends Fragment {
```

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

    SharedPreferences spf = requireContext().getSharedPreferences("Storage", Context.MODE_PRIVATE);
    String name = spf.getString("name", null);
    if (name != null) {

        TextView nametxt = view.findViewById(R.id.txName);
        TextView locationtxt = view.findViewById(R.id.txLocation);
        nametxt.setText(name);
        if(name.equals("Jay")){

            locationtxt.setText("Vapi");
        }else if(name.equals("Alyani")){

            locationtxt.setText("Dungar");
        }if(name.equals("Akshay")){

            locationtxt.setText("Dhasa");
        }if(name.equals("Bharat")){

            locationtxt.setText("Kumbhan");
        }if(name.equals("Rushit")){

            locationtxt.setText("Vidhyanagar");
        }if(name.equals("Savan")){

            locationtxt.setText("Dhandhuka");
        }

    }
    return view;
    }
}
```

Output:

3. Create an android application with four buttons like web browser, make calls, show map and choose contact Operations are
   1. By clicking on browser button , it should open "www.google.com" in android built in browser application
   2. By Clicking on make call button, it should open the phone dialer with a predefined number.
   3. By Clicking on show map button, it should plot a specified location coordinates in the built in google map application.

✚ NextActivity.java

```
package com.itcraftsolution.androidtest;
import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.view.View;

import androidx.appcompat.app.AppCompatActivity;

public class NextActivity extends AppCompatActivity {

    @Override
```

```java
protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);

    setContentView(R.layout.activity_next);

    findViewById(R.id.btnDialNumber).setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            String phoneNumber = "tel:1234567890";

            Intent callIntent = new Intent(Intent.ACTION_DIAL);

            callIntent.setData(Uri.parse(phoneNumber));

            startActivity(callIntent);

        }

    });

    findViewById(R.id.btnWelcome).setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            startActivity(new Intent(NextActivity.this, SecondActivity.class));

        }

    });

    findViewById(R.id.btnOpenBrowser).setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            Intent browserIntent = new Intent(Intent.ACTION_VIEW, Uri.parse("http://www.google.com"));

            startActivity(browserIntent);

        }

    });

    findViewById(R.id.btnMap).setOnClickListener(new View.OnClickListener() {

        @Override

        public void onClick(View v) {

            double LATITUDE = 37.7749;

            double LONGITUDE = -122.4194;

            String uri = "geo:" + LATITUDE + "," + LONGITUDE + "?q=" + LATITUDE + "," + LONGITUDE;

            Intent intent = new Intent(Intent.ACTION_VIEW, Uri.parse(uri));

            intent.setPackage("com.google.android.apps.maps");

            startActivity(intent);

        }
```

```
        });
    }
}
```

activity_next.xml

```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:layout_gravity="center"
    android:gravity="center"
    android:orientation="vertical"
    android:padding="16dp"
    tools:context=".NextActivity">
    <Button
        android:id="@+id/btnDialNumber"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Dial Number"
        android:layout_gravity="center"
        />
    <Button
        android:id="@+id/btnOpenBrowser"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Open Browser"
        android:layout_gravity="center"
        />
    <Button
        android:id="@+id/btnMap"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Map"
```

```
        android:layout_gravity="center"

        />

    <Button

        android:id="@+id/btnWelcome"

        android:layout_width="match_parent"

        android:layout_height="wrap_content"

        android:text="Welcome"

        android:layout_gravity="center"

        />

</LinearLayout>
```

📥 activity_second.xml

```
<?xml version="1.0" encoding="utf-8"?>

<androidx.constraintlayout.widget.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=".SecondActivity">

    <TextView

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:text="Welcome to Second Activity"

        android:textSize="22sp"

        app:layout_constraintBottom_toBottomOf="parent"

        app:layout_constraintEnd_toEndOf="parent"

        app:layout_constraintHorizontal_bias="0.5"

        app:layout_constraintStart_toStartOf="parent"

        app:layout_constraintTop_toTopOf="parent"

        app:layout_constraintVertical_bias="0.5" />

</androidx.constraintlayout.widget.ConstraintLayout>
```
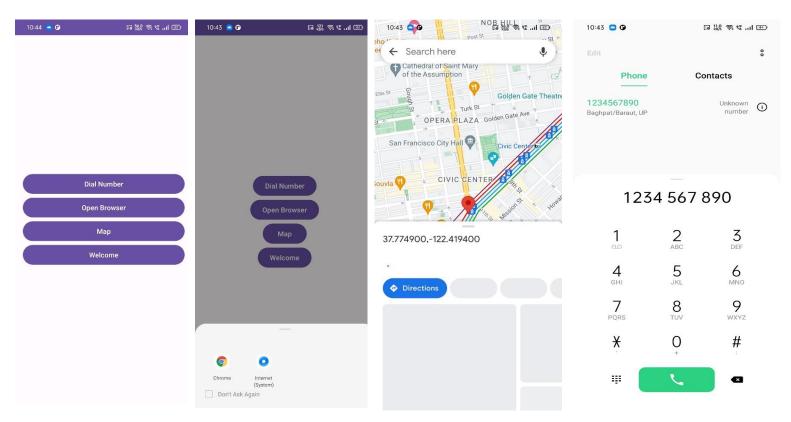
📥 Output:

4. create an android application with two activities. First activity with a "ENTER" button and second screen with a welcome message. By clicking "ENTER" it should bring the use to the second screen.

✚ acivity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.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">

    <Button
        android:id="@+id/btnEnter"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Enter"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.5" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

✚ MainAcivity.java

```
package com.example.prog_4;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;

public class MainActivity extends AppCompatActivity {


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

        findViewById(R.id.btnEnter).setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                startActivity(new Intent(MainActivity.this, NextActivity.class));
            }
        });
    }
}
```

✚ activity_next.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.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=".NextActivity">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Welcome to Second Activity"
        android:gravity="center"
        android:textSize="22sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.5" />

</androidx.constraintlayout.widget.ConstraintLayout>
```

✚ NextActivity.java

```
package com.example.prog_4;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class NextActivity extends AppCompatActivity {

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

➕ OutPut: