Experiment 3.1

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1. **Aim:** Create an Android application using Fragments.
2. **Objective:** The objective of an Android application using Fragments can be to enhance the user interface and improve the overall user experience by leveraging the benefits of fragment-based design.
3. **Source Code:**

MainActivity.java

```java
package com.example.exp7;
import androidx.appcompat.app.AppCompatActivity;
import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;
import androidx.fragment.app.FragmentActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
public class MainActivity extends AppCompatActivity {
    Button home, about, updates;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        home = findViewById(R.id.home);
        about = findViewById(R.id.about);
        updates = findViewById(R.id.updates);
        loadFrag(new fragHome(), false);
        home.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                loadFrag(new fragHome(), true);
            }
        });
        updates.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                loadFrag(new fragUpdate(), true);
            }
        });
        about.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                loadFrag(new fragAbout(), true);
            }
```

```java
        });
    }
    void loadFrag(Fragment fragment, boolean flag){
        FragmentManager fm = getSupportFragmentManager();
        FragmentTransaction ft = fm.beginTransaction();
        if(flag) {
            ft.replace(R.id.dummy, fragment);}
        else{
            ft.add(R.id.dummy, fragment);}
        ft.commit();
    }
}
```

activity_main.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:orientation="vertical"
    tools:context=".MainActivity">
        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:paddingLeft="60dp"
            android:paddingRight="16dp"
            android:orientation="horizontal">
                <Button
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:text="Home"
                    android:id="@+id/home"/>
                <Button
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:text="Updates"
                    android:id="@+id/updates"/>
                <Button
                    android:layout_width="wrap_content"
                    android:layout_height="wrap_content"
                    android:text="About"
                    android:id="@+id/about"/>
        </LinearLayout>
        <androidx.fragment.app.FragmentContainerView
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:id="@+id/dummy"/>
</LinearLayout>
```

fragment_frag about.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"
    android:background="@color/purple"
    tools:context=".fragAbout">
    <TextView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginTop="600px"
        android:layout_marginLeft="200px"
        android:textSize="200px"
        android:text="ABOUT" />
</FrameLayout>
```

fragAbout.java

```java
package com.example.exp7;
import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
public class fragAbout extends Fragment {
    public fragAbout() {}
    @Override
    public View onCreateView(LayoutInflater inflater, ViewGroup
container,Bundle savedInstanceState) {
        View view  = inflater.inflate(R.layout.fragment_frag_about,
container, false);
        return view;
    }
}
```

OUTPUT: