Android Fragments

Aim

Develop an android application to create Two activities named Student Basic Details (name, age, address) and Student Mark (Marks, Total, Grade, Status). Write an android code to combine these two activities in a single screen using an android fragment.

Procedure:

1. Create a new Android project in Android Studio.

2. Create two layout files for Student Basic Details and Student Mark.

3. Create two separate Fragment classes for each layout.

4. Design the Basic Details fragment with fields for name, age, and address.

5. Design the Mark fragment with fields for marks, total, grade, and status.

6. Create a main activity layout to display both fragments side by side or one below the other.

7. Use FragmentManager to add both fragments to the main screen.

AndroidManifest.xml

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

<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Ex4"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
    </application>

</manifest>
```

Activity_main.xml

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <FrameLayout
        android:id="@+id/basicDetailsContainer"
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:layout_weight="1" />

    <FrameLayout
        android:id="@+id/markDetailsContainer"
        android:layout_width="match_parent"
        android:layout_height="0dp"
        android:layout_weight="1" />

</LinearLayout>
```

MainActivity.kt

```kotlin
package com.example.ex4

import android.os.Bundle
import androidx.appcompat.app.AppCompatActivity
import androidx.fragment.app.FragmentManager
import androidx.fragment.app.FragmentTransaction

class MainActivity : AppCompatActivity() {
  override fun onCreate(savedInstanceState: Bundle?) {
    super.onCreate(savedInstanceState)
    setContentView(R.layout.activity_main)

    val fragmentManager: FragmentManager = supportFragmentManager
    val fragmentTransaction: FragmentTransaction = fragmentManager.beginTransaction()

    fragmentTransaction.replace(R.id.basicDetailsContainer, StudentBasicDetailsFragment())
    fragmentTransaction.replace(R.id.markDetailsContainer, StudentMarkFragment())

    fragmentTransaction.commit()
  }
}
```

Output

Enter Name	Keerthana
Enter Age	20
Enter Address	Chennau
Enter Marks	88
Enter Total	100
Enter Grade	B
Enter Status	Pass

Result:

The application successfully combines Student Basic Details and Student Mark activities into a single screen using Android fragments.