**Ex. No. : 04 Date: 28/04/2025**

**Register No.: 221701050 Name: D Sathiya Sri**



**Android Fragments**

**Aim**

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

***Procedure:***

1. Create a New Android Project

* Open Android Studio and create a New Project with Empty Activity.
* Choose Kotlin as the programming language.

1. Design the Layout (activity\_main.xml)

* Use FrameLayout to contain the two fragments (StudentBasicDetailsFragment and StudentMarksFragment).

1. Create Fragments

* StudentBasicDetailsFragment: Create a fragment to capture student's name, age, and address.
* StudentMarksFragment: Create a fragment to capture marks, total marks, grade, and status.

1. Create Layouts for Each Fragment

* Create XML layout files for each fragment (fragment\_student\_basic\_details.xml and fragment\_student\_marks.xml).

1. Add Fragments to MainActivity

* In MainActivity.kt, use FragmentTransaction to add both fragments to the FrameLayout containers.

1. Handle Data Passing (Optional)

* Use Bundle or ViewModel to pass data between fragments if necessary (e.g., from basic details to marks).

1. Run and Test the Application

* Build and run the app to verify that both fragments are displayed on the same screen with the required fields.

***AndroidManifest.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.Exp4"

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 version="1.0" encoding="utf-8"?>

<ScrollView

xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<LinearLayout

android:orientation="vertical"

android:padding="20dp"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content">

<TextView

android:text="Student Basic Details"

android:textSize="22sp"

android:textStyle="bold"

android:layout\_marginBottom="10dp"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" />

<EditText

android:id="@+id/editTextName"

android:hint="Name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<EditText

android:id="@+id/editTextAge"

android:hint="Age"

android:inputType="number"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<EditText

android:id="@+id/editTextAddress"

android:hint="Address"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<View

android:layout\_width="match\_parent"

android:layout\_height="2dp"

android:background="#CCCCCC"

android:layout\_marginTop="20dp"

android:layout\_marginBottom="20dp"/>

<TextView

android:text="Student Marks Details"

android:textSize="22sp"

android:textStyle="bold"

android:layout\_marginBottom="10dp"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content" />

<EditText

android:id="@+id/editTextMarks"

android:hint="Marks"

android:inputType="number"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<EditText

android:id="@+id/editTextTotal"

android:hint="Total"

android:inputType="number"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<EditText

android:id="@+id/editTextGrade"

android:hint="Grade"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<EditText

android:id="@+id/editTextStatus"

android:hint="Status"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"/>

<Button

android:id="@+id/buttonSubmit"

android:text="Submit"

android:layout\_marginTop="20dp"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_gravity="center"/>

</LinearLayout>

</ScrollView>

***MainActivity.kt***

package com.example.exp\_4

import android.os.Bundle

import android.widget.\*

import androidx.appcompat.app.AppCompatActivity

class MainActivity : AppCompatActivity() {

private lateinit var editTextName: EditText

private lateinit var editTextAge: EditText

private lateinit var editTextAddress: EditText

private lateinit var editTextMarks: EditText

private lateinit var editTextTotal: EditText

private lateinit var editTextGrade: EditText

private lateinit var editTextStatus: EditText

private lateinit var buttonSubmit: Button

override fun onCreate(savedInstanceState: Bundle?) {

super.onCreate(savedInstanceState)

setContentView(R.layout.activity\_main)

editTextName = findViewById(R.id.editTextName)

editTextAge = findViewById(R.id.editTextAge)

editTextAddress = findViewById(R.id.editTextAddress)

editTextMarks = findViewById(R.id.editTextMarks)

editTextTotal = findViewById(R.id.editTextTotal)

editTextGrade = findViewById(R.id.editTextGrade)

editTextStatus = findViewById(R.id.editTextStatus)

buttonSubmit = findViewById(R.id.buttonSubmit)

buttonSubmit.setOnClickListener {

val name = editTextName.text.toString()

val age = editTextAge.text.toString()

val address = editTextAddress.text.toString()

val marks = editTextMarks.text.toString()

val total = editTextTotal.text.toString()

val grade = editTextGrade.text.toString()

val status = editTextStatus.text.toString()

val message = """

Name: $name

Age: $age

Address: $address

Marks: $marks

Total: $total

Grade: $grade

Status: $status

""".trimIndent()

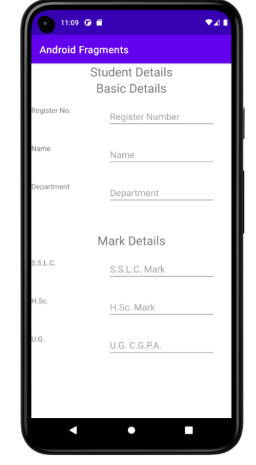
Toast.makeText(this, message, Toast.LENGTH\_LONG).show()

}

}

}

***Output***

******

**Result:**

| The app is successfully created, displaying Student Basic Details and Student Marks in two fragments on a single screen, allowing users to input and view the information seamlessly. |
| --- |