Practical No. 3

Title: Android program based on Intents

Aim: Create an application to demonstrate use of Intent

Introduction

Intents, in general, are used for navigation among various activities within the same application, but note, it is not limited to one single application, i.e., they can be utilized from moving from one application to another as well.

Although intents facilitate communication between components in several ways, there are three fundamental use cases:

- o   Starting an activity – An activity represents a single screen in an application.

- o   Starting a service – A service is a component that performs operations in the background without a user interface.

- o   Delivering a broadcast – A broadcast is a message that any application can receive.

Types of Android Intents

There are two types of intents in android: implicit and explicit.

1) Implicit Intent

Do not name a specific component, but instead declare a general action to perform, which allows a component from another application to handle it.

For example, you may write the following code to view the webpage.

Intent intent=new Intent(Intent.ACTION_VIEW);

intent.setData(Uri.parse("http://www.javatpoint.com"));

 startActivity(intent);

2) Explicit Intent

You'll typically use an explicit intent to start a component in your own application, because you know the class name of the activity or service you want to start.

For example, you may write the following code.

Intent i = new Intent(getApplicationContext(), ActivityTwo.class);

startActivity(i);

Exercise - **Create an application to demonstrate use of intents – both implicit and explicit intents**

Implementation:

Program:

 Explicit Intent

 Activity_main.xml
```
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
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:fitsSystemWindows="true"
  tools:context=".MainActivity">

  <com.google.android.material.appbar.AppBarLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:fitsSystemWindows="true"
    android:theme="@style/AppTheme.AppBarOverlay"
    >
```

```xml
      <com.google.android.material.appbar.MaterialToolbar
        android:id="@+id/toolbar"
        android:layout_width="match_parent"
        android:layout_height="?attr/actionBarSize"
        android:background="#CA0D0D"
        app:popupTheme="@style/AppTheme.PopupOverlay"/>

  </com.google.android.material.appbar.AppBarLayout>

  <include layout="@layout/content_main" />

</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

Content_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:showIn="@layout/activity_main">

  <ScrollView
    android:layout_width="0dp"
    android:layout_height="0dp"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent">

    <RelativeLayout
      android:layout_width="match_parent"
      android:layout_height="wrap_content">

    <LinearLayout
      android:id="@+id/r1"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:orientation="horizontal"
      android:layout_marginTop="100dp"
      android:layout_marginBottom="20dp">
```

```xml
    <TextView
       android:id="@+id/name_txt"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="10dp"
       android:layout_marginRight="10dp"
       android:textColor="@color/black"
       android:textStyle="bold"
       android:textSize="20sp"
       android:text="Name" />

     <EditText
       android:id="@+id/et_name"
       android:layout_width="0dp"
       android:layout_height="wrap_content"
       android:layout_weight="1"
       android:hint="eg. Dhruv Patel"
       android:textColorHint="@color/colorAccent"
       android:inputType="text"
       android:textColor="@color/black"
       tools:ignore="TouchTargetSizeCheck" />
  </LinearLayout>

  <LinearLayout
     android:id="@+id/r2"
     android:layout_width="match_parent"
     android:layout_height="wrap_content"
     android:layout_below="@id/r1"
     android:layout_marginBottom="20dp"
     android:orientation="horizontal">

     <TextView
       android:id="@+id/email_tx"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginLeft="10dp"
       android:layout_marginRight="10dp"
       android:textSize="20sp"
       android:text="Email"
       android:textColor="@color/black"
       android:textStyle="bold" />
```

```xml
    <EditText
        android:id="@+id/et_email"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:hint="eg. dhruvpatel.com"
        android:inputType="textEmailAddress"
        tools:ignore="TouchTargetSizeCheck"
        android:textColorHint="@color/colorAccent"
        android:textColor="@color/black"/>
</LinearLayout>

<LinearLayout
    android:id="@+id/r3"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/r2"
    android:layout_marginBottom="20dp"
    android:orientation="horizontal">

    <TextView
        android:id="@+id/gender_tx"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="10dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="5dp"
        android:text="Gender"
        android:textColor="@color/black"
        android:textSize="20sp"
        android:textStyle="bold" />

    <RadioGroup
        android:id="@+id/rg_gender"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:orientation="horizontal">

        <RadioButton
            android:id="@+id/rb_male"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
```

```xml
        android:textColorHint="@color/colorAccent"
        android:text="Male" />

    <RadioButton
        android:id="@+id/rb_female"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textColorHint="@color/colorAccent"
        android:text="Female" />
    </RadioGroup>
</LinearLayout>

<LinearLayout
    android:id="@+id/r4"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/r3"
    android:layout_marginBottom="20dp"
    android:orientation="horizontal">

    <TextView
        android:id="@+id/Tech_tx"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="10dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="5dp"
        android:text="Tech"
        android:textColor="@color/black"
        android:textSize="20sp"
        android:textStyle="bold" />

    <CheckBox
        android:id="@+id/ck1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="PHP" />

    <CheckBox
        android:id="@+id/ck2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Android" />
```

```xml
    <CheckBox
        android:id="@+id/ck3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="IOS" />
</LinearLayout>

<LinearLayout
    android:id="@+id/r5"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_below="@id/r4"
    android:layout_marginBottom="20dp"
    android:orientation="horizontal">

    <TextView
        android:id="@+id/dob1_tx"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="10dp"
        android:layout_marginTop="10dp"
        android:layout_marginEnd="5dp"
        android:text="DOB"
        android:textColor="@color/black"
        android:textSize="20sp"
        android:textStyle="bold" />

    <EditText
        android:id="@+id/et_dob"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:hint="Date of Birth"
        android:focusable="false"
        tools:ignore="TouchTargetSizeCheck"
        android:inputType="date"
        android:textColorHint="@color/colorAccent" />
</LinearLayout>

<Button
    android:id="@+id/submit_bt"
    android:layout_width="wrap_content"
```

```
        android:layout_height="wrap_content"
        android:layout_below="@id/r5"
        android:layout_centerHorizontal="true"
        android:textColor="@color/white"
        android:text="Submit"

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

Results.xml:

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

<androidx.coordinatorlayout.widget.CoordinatorLayout
xmlns:android="http://schemas.android.com/apk/res/android"

  android:layout_width="match_parent"

  android:layout_height="match_parent"

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

  xmlns:tools="http://schemas.android.com/tools"

  tools:context=".MainActivity">


  <com.google.android.material.appbar.AppBarLayout

    android:layout_width="match_parent"

    android:layout_height="wrap_content"

    android:fitsSystemWindows="true"

    android:theme="@style/AppTheme.AppBarOverlay"

    >


    <com.google.android.material.appbar.MaterialToolbar

      android:id="@+id/toolbar"

      android:layout_width="match_parent"

      android:layout_height="?attr/actionBarSize"
```

```xml
        android:background="#CA0D0D"
        app:popupTheme="@style/AppTheme.PopupOverlay"/>


 </com.google.android.material.appbar.AppBarLayout>


<RelativeLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="100dp"

    >

    <TextView
        android:id="@+id/tv_name"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:text="Name"
        android:textColor="@color/colorAccent"
        android:textSize="20sp"
        android:textStyle="bold" />

  <TextView
        android:id="@+id/tv_email"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/tv_name"
```

```
        android:layout_centerHorizontal="true"

        android:layout_marginTop="20dp"

        android:text="email"

        android:textColor="@color/colorAccent"

        android:textSize="20sp"

        android:textStyle="bold" />


    <TextView

        android:id="@+id/tv_gender"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@id/tv_email"

        android:layout_centerHorizontal="true"

        android:layout_marginTop="20dp"

        android:text="gender"

        android:textColor="@color/colorAccent"

        android:textSize="20sp"

        android:textStyle="bold" />


    <TextView

        android:id="@+id/tv_tech"

        android:layout_width="wrap_content"

        android:layout_height="wrap_content"

        android:layout_below="@id/tv_gender"

        android:layout_centerHorizontal="true"

        android:layout_marginTop="20dp"

        android:text="tech"

        android:textColor="@color/colorAccent"
```

```xml
        android:textSize="20sp"
        android:textStyle="bold" />


    <TextView
        android:id="@+id/tv_dob"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@id/tv_tech"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="20dp"
        android:text="dob"
        android:textColor="@color/colorAccent"
        android:textSize="20sp"
        android:textStyle="bold" />


    <ImageView
        android:id="@+id/image"
        android:layout_width="200dp"
        android:layout_height="200dp"
        android:layout_below="@id/tv_dob"
        android:layout_marginTop="49dp"
        android:layout_centerHorizontal="true"
        android:contentDescription="image"
        android:src="@drawable/baseline_info_24" />



</RelativeLayout>
```

```
</androidx.coordinatorlayout.widget.CoordinatorLayout>
```

MainActivity.java

```java
package com.example.practicalthree;


import android.app.DatePickerDialog;
import android.content.Intent;
import android.os.Bundle;


import androidx.appcompat.app.AppCompatActivity;


import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import android.widget.Toast;


import com.example.practicalthree.databinding.ActivityMainBinding;


import java.util.Calendar;
import java.util.TimeZone;


public class MainActivity extends AppCompatActivity implements View.OnClickListener {
```

```java
private EditText et_name, et_email, et_dob;

private RadioGroup rg_gender;

private RadioButton radioGenderButton;

private CheckBox ck1, ck2, ck3;

private Button submit_bt;

private String nameStr, emailStr, genderStr, dobStr, techStr = "";

private ActivityMainBinding binding;

@Override

protected void onCreate(Bundle savedInstanceState) {

    super.onCreate(savedInstanceState);


    binding = ActivityMainBinding.inflate(getLayoutInflater());

    setContentView(binding.getRoot());

    setSupportActionBar(binding.toolbar);

    getSupportActionBar().setDisplayHomeAsUpEnabled(true);


    et_name = findViewById(R.id.et_name);

    et_email = findViewById(R.id.et_email);

    et_dob = findViewById(R.id.et_dob);

    rg_gender = findViewById(R.id.rg_gender);

    ck1 = findViewById(R.id.ck1);

    ck2 = findViewById(R.id.ck2);

    ck3 = findViewById(R.id.ck3);

    submit_bt = findViewById(R.id.submit_bt);


    submit_bt.setOnClickListener(this);

    ck1.setOnClickListener(this);
```

```java
    ck2.setOnClickListener(this);

    ck3.setOnClickListener(this);

    et_dob.setOnClickListener(this);

}



@Override

public boolean onCreateOptionsMenu(Menu menu) {

    // Inflate the menu; this adds items to the action bar if it is present.

    getMenuInflater().inflate(R.menu.menu_main, menu);

    return true;

}

@Override

public void onBackPressed()

{

    super.onBackPressed();

    finish();

}

@Override

public boolean onOptionsItemSelected(MenuItem item) {

    // Handle action bar item clicks here. The action bar will

    // automatically handle clicks on the Home/Up button, so long

    // as you specify a parent activity in AndroidManifest.xml.

    int id = item.getItemId();

    if(id == android.R.id.home)

    {

        Toast.makeText(getApplicationContext(),"Back",Toast.LENGTH_SHORT).show();

        finish();
```

```java
        }
        //noinspection SimplifiableIfStatement
        else if (id == R.id.action_settings) {
            Toast.makeText(getApplicationContext(),"Setting
Selected",Toast.LENGTH_SHORT).show();
            return true;
        }
        else if(id == R.id.home)
        {
            Toast.makeText(getApplicationContext(),"Home
Selected",Toast.LENGTH_SHORT).show();
            finish();
            return true;
        }


        return super.onOptionsItemSelected(item);
    }
    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data)
    {
        super.onActivityResult(requestCode,resultCode,data);
    }

    @Override
    public void onClick(View view) {
        int id = view.getId();

        if (id == R.id.submit_bt) {
```

```java
try {
    // Validate name
    nameStr = et_name.getText().toString().trim();
    if (nameStr.isEmpty()) {
        throw new Exception("Name is required");
    }

    // Validate email
    emailStr = et_email.getText().toString().trim();
    if (emailStr.isEmpty()) {
        throw new Exception("Email is required");
    }

    // Validate gender
    int selectedId = rg_gender.getCheckedRadioButtonId();
    if (selectedId == -1) {
        throw new Exception("Gender is required");
    }
    radioGenderButton = findViewById(selectedId);
    genderStr = radioGenderButton.getText().toString();

    // Validate Date of Birth
    dobStr = et_dob.getText().toString().trim();
    if (dobStr.isEmpty()) {
        throw new Exception("Date of Birth is required");
    }

    // Validate technology selection
```

```java
        if (!ck1.isChecked() && !ck2.isChecked() && !ck3.isChecked()) {

            throw new Exception("At least one technology must be selected");

        }


        // Show confirmation

        Toast.makeText(this, "Name: " + nameStr + " Email: " + emailStr + " Gender: " +
genderStr + " Tech:" + techStr + " Date of Birth: " + dobStr, Toast.LENGTH_LONG).show();


        // Pass data to next activity

        Intent i = new Intent(this, OurResult.class);

        i.putExtra("name", nameStr);

        i.putExtra("email", emailStr);

        i.putExtra("gender", genderStr);

        i.putExtra("tech", techStr);

        i.putExtra("dob", dobStr);

        startActivity(i);


    } catch (Exception e) {

        Toast.makeText(this, e.getMessage(), Toast.LENGTH_SHORT).show();

    }

} else if (id == R.id.ck1) {

    if (ck1.isChecked()) {

        techStr += "PHP ";

    } else {

        techStr = techStr.replace("PHP ", "");

    }

} else if (id == R.id.ck2) {

    if (ck2.isChecked()) {

        techStr += "Android ";
```

```
    } else {

        techStr = techStr.replace("Android ", "");

    }

} else if (id == R.id.ck3) {

    if (ck3.isChecked()) {

        techStr += "iOS ";

    } else {

        techStr = techStr.replace("iOS ", "");

    }

} else if (id == R.id.et_dob) {

    Calendar calendar = Calendar.getInstance(TimeZone.getDefault());

    int mYear = calendar.get(Calendar.YEAR);

    int mMonth = calendar.get(Calendar.MONTH);

    int mDay = calendar.get(Calendar.DAY_OF_MONTH);


    DatePickerDialog datePickerDialog = new DatePickerDialog(this, (datePicker, year,
month, day) -> {

        dobStr = day + "-" + (month + 1) + "-" + year; // Set the selected date to dobStr

        et_dob.setText(dobStr); // Display the selected date in the EditText

    }, mYear, mMonth, mDay);

    datePickerDialog.show();

    }

  }
}
```

OurResult.java

package com.example.practicalthree;

```java
import android.os.Bundle;

import android.view.Menu;

import android.view.MenuItem;

import android.widget.TextView;

import android.widget.Toast;


import androidx.appcompat.widget.Toolbar;

import androidx.appcompat.app.AppCompatActivity;


public class OurResult extends AppCompatActivity {

    TextView tv_name, tv_email, tv_gender, tv_tech, tv_dob;


    @Override
    protected void onCreate(Bundle savedInstanceState){
        super.onCreate(savedInstanceState);
        setContentView(R.layout.results);
        Toolbar tb = findViewById(R.id.toolbar);
        setSupportActionBar(tb);
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);


        tv_name = findViewById(R.id.tv_name);
        tv_email = findViewById(R.id.tv_email);
        tv_gender = findViewById(R.id.tv_gender);
        tv_tech = findViewById(R.id.tv_tech);
        tv_dob = findViewById(R.id.tv_dob);


        tv_name.setText(getIntent().getStringExtra("name"));
        tv_email.setText(getIntent().getStringExtra("email"));
```

```java
    tv_gender.setText(getIntent().getStringExtra("gender"));

    tv_tech.setText(getIntent().getStringExtra("tech"));

    tv_dob.setText(getIntent().getStringExtra("dob"));


}
@Override
public boolean onCreateOptionsMenu(Menu menu) {
    // Inflate the menu; this adds items to the action bar if it is present.
    getMenuInflater().inflate(R.menu.menu_main, menu);
    return true;
}
@Override
public void onBackPressed()
{
    super.onBackPressed();
    finish();
}
@Override
public boolean onOptionsItemSelected(MenuItem item) {
    // Handle action bar item clicks here. The action bar will
    // automatically handle clicks on the Home/Up button, so long
    // as you specify a parent activity in AndroidManifest.xml.
    int id = item.getItemId();
    if(id == android.R.id.home)
    {
        Toast.makeText(getApplicationContext(),"Back",Toast.LENGTH_SHORT).show();
        finish();
    }
```

//noinspection SimplifiableIfStatement

else if (id == R.id.action_settings) {

Toast.makeText(getApplicationContext(),"Setting Selected",Toast.LENGTH_SHORT).show();

return true;

}

else if(id == R.id.home)

{

Toast.makeText(getApplicationContext(),"Home Selected",Toast.LENGTH_SHORT).show();

finish();

return true;

}

return super.onOptionsItemSelected(item);

  }

}

Output:

Implicit Intent:
Program:
Activity_main.xml:
```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.coordinatorlayout.widget.CoordinatorLayout
    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:fitsSystemWindows="true"
    tools:context=".MainActivity">

    <com.google.android.material.appbar.AppBarLayout
        android:layout_height="wrap_content"
        android:layout_width="match_parent"
        android:fitsSystemWindows="true"
        >

        <com.google.android.material.appbar.MaterialToolbar
```

```xml
        android:id="@+id/toolbar"
        android:layout_width = "match_parent"
        android:layout_height = "?attr/actionBarSize" />

  </com.google.android.material.appbar.AppBarLayout>

  <include layout="@layout/content_main"/>


  </androidx.coordinatorlayout.widget.CoordinatorLayout>
```

Content_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"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    app:layout_behavior="@string/appbar_scrolling_view_behavior">

    <fragment
        android:id="@+id/nav_host_fragment_content_main"
        android:name="androidx.navigation.fragment.NavHostFragment"
        android:layout_width="0dp"
        android:layout_height="0dp"
        app:defaultNavHost="true"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintHorizontal_bias="0.0"
        app:layout_constraintLeft_toLeftOf="parent"
        app:layout_constraintLeft_toRightOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.0"
        app:navGraph="@navigation/nav_graph" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

Fragment_First.xml:

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

```xml
<androidx.core.widget.NestedScrollView
    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=".FirstFragment">
    <androidx.constraintlayout.widget.ConstraintLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:padding="16dp">
    <EditText
        android:id="@+id/url"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="208dp"
        android:ems="10"
        android:hint="textURl"
        android:minHeight="48dp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.497"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        android:importantForAutofill="no"
        />

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Open URl"
        app:layout_constraintBottom_toTopOf="@+id/open"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.5"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/url"

        />
```

```xml
    <Button
      android:id="@+id/open"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:layout_marginBottom="128dp"
      android:text="NEXT"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintBottom_toBottomOf="parent"
      app:layout_constraintHorizontal_bias="0.498"
      app:layout_constraintStart_toStartOf="parent"

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

Fragment_Second.xml:

```xml
<?xml version="1.0" encoding="utf-8"?>
<androidx.core.widget.NestedScrollView
  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=".SecondFragment">
  <androidx.constraintlayout.widget.ConstraintLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp">
    <TextView
      android:id="@+id/textview_second"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      app:layout_constraintBottom_toTopOf="@id/button_second"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintStart_toStartOf="parent"
      app:layout_constraintTop_toTopOf="parent"
      android:text="This is second activity. It is explicit type of intent"
      app:layout_constraintVertical_chainStyle="packed"/>
```

```xml
    <Button
      android:id="@+id/button_second"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="@string/previous"
      app:layout_constraintTop_toBottomOf="@id/textview_second"
      app:layout_constraintBottom_toBottomOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintStart_toStartOf="parent"/>

    <Button
      android:id="@+id/button_third"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Next"
      app:layout_constraintTop_toBottomOf="@id/button_second"
      app:layout_constraintBottom_toBottomOf="parent"
      app:layout_constraintEnd_toEndOf="parent"
      app:layout_constraintStart_toStartOf="parent"/>

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

Fragment_Third.xml:
```xml
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout 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=".ThirdFragment">

  <!-- TODO: Update blank fragment layout -->
  <androidx.constraintlayout.widget.ConstraintLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:padding="16dp">
    <TextView
      android:id="@+id/textview_second"
```

```
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            app:layout_constraintBottom_toTopOf="@id/button_second"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"
            app:layout_constraintTop_toTopOf="parent"
            android:text="This is Third activity. It is explicit type of intent"
            app:layout_constraintVertical_chainStyle="packed"/>

        <Button
            android:id="@+id/button_second"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="@string/previous"
            app:layout_constraintTop_toBottomOf="@id/textview_second"
            app:layout_constraintBottom_toBottomOf="parent"
            app:layout_constraintEnd_toEndOf="parent"
            app:layout_constraintStart_toStartOf="parent"/>

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

Nav_graph.xml:
```
<?xml version="1.0" encoding="utf-8"?>
<navigation 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:id="@+id/nav_graph"
    app:startDestination="@id/FirstFragment">

    <fragment
        android:id="@+id/FirstFragment"
        android:name="com.example.implicitintend.FirstFragment"
        android:label="@string/first_fragment_label"
        tools:layout="@layout/fragment_first" >

        <action
```

```xml
            android:id="@+id/action_FirstFragment_to_SecondFragment"
            app:destination="@id/SecondFragment" />
    </fragment>
    <fragment
        android:id="@+id/SecondFragment"
        android:name="com.example.implicitintend.SecondFragment"
        android:label="@string/second_fragment_label"
        tools:layout="@layout/fragment_second" >

        <action
            android:id="@+id/action_SecondFragment_to_FirstFragment"
            app:destination="@id/FirstFragment" />


        <action
            android:id="@+id/action_SecondFragment_to_ThirdFragment"
            app:destination="@id/ThirdFragment" />
    </fragment>

    <fragment
        android:id="@+id/ThirdFragment"
        android:name="com.example.implicitintend.ThirdFragment"
        android:label="Third Fragment"
        tools:layout="@layout/fragment_third" >


        <action
            android:id="@+id/action_ThirdFragment_to_SecondFragment"
            app:destination="@id/SecondFragment" />
    </fragment>
</navigation>
```

MainActivity.java:
```java
package com.example.implicitintend;

import android.os.Bundle;
import com.google.android.material.snackbar.Snackbar;
import androidx.appcompat.app.AppCompatActivity;
import android.view.View;
```

```java
import androidx.navigation.NavController;
import androidx.navigation.Navigation;
import androidx.navigation.ui.AppBarConfiguration;
import androidx.navigation.ui.NavigationUI;
import com.example.implicitintend.databinding.ActivityMainBinding;

import android.view.Menu;
import android.view.MenuItem;

public class MainActivity extends AppCompatActivity {

    private AppBarConfiguration appBarConfiguration;
    private ActivityMainBinding binding;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        binding = ActivityMainBinding.inflate(getLayoutInflater());
        setContentView(binding.getRoot());

        setSupportActionBar(binding.toolbar);

        NavController navController = Navigation.findNavController(this,
R.id.nav_host_fragment_content_main);
        appBarConfiguration = new
AppBarConfiguration.Builder(navController.getGraph()).build();
        NavigationUI.setupActionBarWithNavController(this, navController,
appBarConfiguration);


    }
@Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.menu_main, menu);
        return true;
    }
```

```java
  @Override
  public boolean onOptionsItemSelected(MenuItem item) {
    // Handle action bar item clicks here. The action bar will
    // automatically handle clicks on the Home/Up button, so long
    // as you specify a parent activity in AndroidManifest.xml.
    int id = item.getItemId();

    //noinspection SimplifiableIfStatement
    if (id == R.id.action_settings) {
      return true;
    }

    return super.onOptionsItemSelected(item);
  }

  @Override
  public boolean onSupportNavigateUp() {
    NavController navController = Navigation.findNavController(this,
R.id.nav_host_fragment_content_main);
    return NavigationUI.navigateUp(navController, appBarConfiguration)
        || super.onSupportNavigateUp();
  }
}
```

FirstFragment.java:
```java
package com.example.implicitintend;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import androidx.annotation.NonNull;
import androidx.fragment.app.Fragment;
```

```
import androidx.navigation.fragment.NavHostFragment;
import com.example.implicitintend.databinding.FragmentFirstBinding;

public class FirstFragment extends Fragment {

private FragmentFirstBinding binding;
  Button button;
  EditText url;
  @Override
  public View onCreateView(
      @NonNull LayoutInflater inflater, ViewGroup container,
      Bundle savedInstanceState
  ) {

    binding = FragmentFirstBinding.inflate(inflater, container, false);
    return binding.getRoot();

  }

  public void onViewCreated(@NonNull View view, Bundle savedInstanceState) {
     super.onViewCreated(view, savedInstanceState);

    view.findViewById(R.id.open).setOnClickListener(view1 ->
        NavHostFragment.findNavController(FirstFragment.this)
            .navigate(R.id.action_FirstFragment_to_SecondFragment)
     );

    button = view.findViewById(R.id.button);
    url = view.findViewById(R.id.url);
    button.setOnClickListener(view12 -> {
      String urlText = url.getText().toString();
      Toast.makeText(getContext(), urlText, Toast.LENGTH_SHORT).show();
      //Implicit Intent to open URL
      Uri webpage = Uri.parse(urlText);
      Intent intent = new Intent(Intent.ACTION_VIEW);
      intent.setData(webpage);
      startActivity(intent);
      //..
    });
```

```
      }

}
```

SecondFragment.java:
```java
package com.example.implicitintend;

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

import androidx.annotation.NonNull;
import androidx.fragment.app.Fragment;
import androidx.navigation.fragment.NavHostFragment;
import com.example.implicitintend.databinding.FragmentSecondBinding;

public class SecondFragment extends Fragment {

private FragmentSecondBinding binding;

  @Override
  public View onCreateView(
      @NonNull LayoutInflater inflater, ViewGroup container,
      Bundle savedInstanceState
  ) {

    binding = FragmentSecondBinding.inflate(inflater, container, false);
    return binding.getRoot();

  }

  public void onViewCreated(@NonNull View view, Bundle savedInstanceState) {
    super.onViewCreated(view, savedInstanceState);

    view.findViewById(R.id.button_second).setOnClickListener(view1 ->
        NavHostFragment.findNavController(SecondFragment.this)
            .navigate(R.id.action_SecondFragment_to_FirstFragment)
    );
```

```
    view.findViewById(R.id.button_third).setOnClickListener(view23->{
        NavHostFragment.findNavController(SecondFragment.this)
            .navigate(R.id.action_SecondFragment_to_ThirdFragment);
    });
  }
}
```

ThirdFragment.java:

```
package com.example.implicitintend;

import android.os.Bundle;

import androidx.annotation.NonNull;
import androidx.fragment.app.Fragment;
import androidx.navigation.fragment.NavHostFragment;

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

import com.example.implicitintend.databinding.FragmentSecondBinding;
import com.example.implicitintend.databinding.FragmentThirdBinding;


public class ThirdFragment extends Fragment {

  private FragmentThirdBinding binding;

  @Override
  public View onCreateView(
      @NonNull LayoutInflater inflater, ViewGroup container,
      Bundle savedInstanceState
  ) {

    binding = FragmentThirdBinding.inflate(inflater, container, false);
    return binding.getRoot();

  }
```
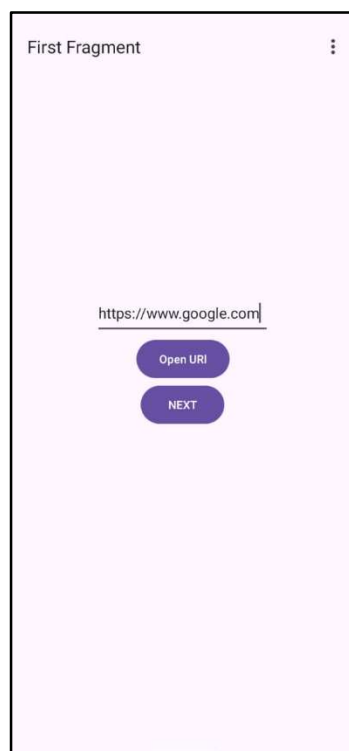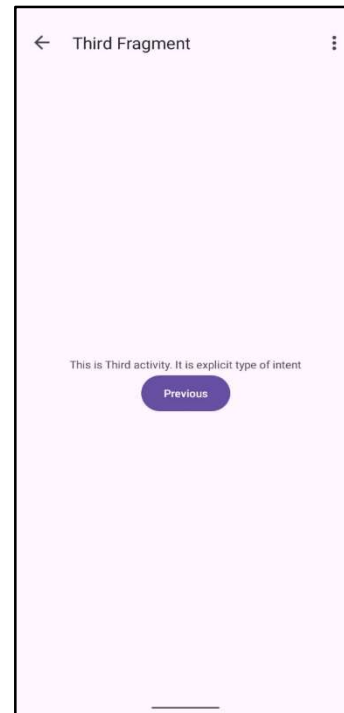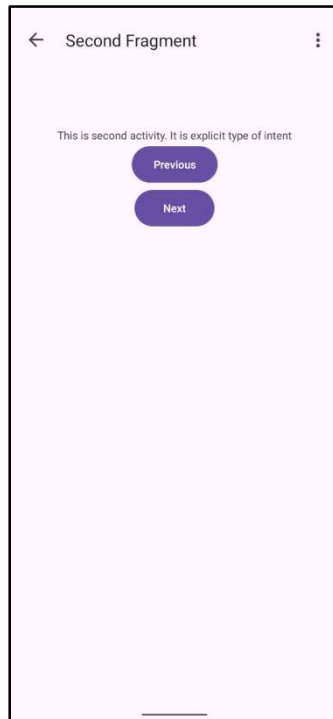
```java
public void onViewCreated(@NonNull View view, Bundle savedInstanceState) {
    super.onViewCreated(view, savedInstanceState);

    view.findViewById(R.id.button_second).setOnClickListener(view1 ->
        NavHostFragment.findNavController(ThirdFragment.this)
            .navigate(R.id.action_ThirdFragment_to_SecondFragment)
    );
    }
}
```

Output:

Conclusion - Understanding Intents is essential for building interactive and dynamic Android applications. By using both implicit and explicit intents, you can effectively navigate users within your app and leverage functionality from other apps on the device.