

What is Intent in Android?

In Android, it is quite usual for users to witness a jump from one application to another as a part of the whole process, for example, searching for a location on the browser and witnessing a direct jump into Google Maps or receiving payment links in Messages Application (SMS) and on clicking jumping to PayPal or GPay (Google Pay). This process of taking users from one application to another is achieved by passing the Intent to the system. Intents, in general, are used for navigating among various activities within the same application, but note, is not limited to one single application, i.e., they can be utilized from moving from one application to another as well.

An intent is to perform an action on the screen. It is mostly used to start activity, send broadcast receiver, start services and send message between two activities. There are two intents available in android as Implicit Intents and Explicit Intents.

Types of Android Intents

There are two types of intents in android:

Implicit and

Explicit.

1. Implicit Intent

Implicit Intent doesn't specify the component. In such a case, intent provides information on available components provided by the system that is to be invoked. 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.kluniversity.com"));
startActivity(intent);
```

2. Explicit Intent

Explicit Intent specifies the component. In such a case, intent provides the external class to be invoked.

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

Android Implicit Intent Example

File: activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout xmlns:android="http://schemas.android.co
m/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="example.implicitintent.MainActivity">
```

```
<EditText
    android:id="@+id/editText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginEnd="8dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="60dp"
    android:ems="10"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.575"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
```

```
<Button
    android:id="@+id/button"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginRight="8dp"
    android:layout_marginLeft="156dp"
    android:layout_marginTop="172dp"
    android:text="Visit"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/editText" />
</android.support.constraint.ConstraintLayout>
```

Activity class

File: MainActivity.java

```
import android.content.Intent;
import android.net.Uri;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
```

```

import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    Button button;
    EditText editText;

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

        button = findViewById(R.id.button);
        editText = findViewById(R.id.editText);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                String url=editText.getText().toString();
                Intent intent=new Intent(Intent.ACTION_VIEW, Uri.parse(url));
                startActivity(intent);
            }
        });
    }
}

```

Android Explicit Intent Example

Android calling one activity from another activity example

File: activity_main.xml

```

<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.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="org.geeksforgeeks.explicit_intent.MainActivity">

```

```
<!-- add a button to move to next activity -->
    <Button
        android:id="@+id/Button01"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/TextView01"
        android:layout_marginTop="209dp"
        android:onClick="onClick"
        android:text="Go To Other Activity"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        tools:ignore="OnClick" />
```

```
<!-- add a TextView to write some text on activity -->
    <TextView
        android:id="@+id/TextView01"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/Button01"
        android:layout_alignParentTop="true"
        android:layout_marginTop="44dp"
        android:minHeight="60dip"
        android:text="This is First Activity"
        android:textSize="20sp"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
```

```
</android.support.constraint.ConstraintLayout>
```

File: MainActivityOne.java

```
package org.geeksforgeeks.explicit_intent;
import android.os.Bundle;
import android.app.Activity;
import android.content.Intent;
import android.view.View;
```

```

import android.view.View.OnClickListener;
import android.widget.Button;

public class MainActivity extends Activity {
    // Defining the object for button
    Button button1;
    @Override
    public void onCreate(Bundle savedInstanceState)
    {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // Bind the components to their respective objects
        // by assigning their IDs
        // with the help of findViewById() method
        button1 = (Button)findViewById(R.id.Button01);

        button1.setOnClickListener(new OnClickListener() {
            public void onClick(View view)
            {

                // Creating explicit intent
                Intent i = new Intent(getApplicationContext(),ActivityTwo.class);
                startActivity(i);
            }
        });
    }
}

```

activitytwo_main.xml

File: activitytwo_main.xml

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

```
<android.support.constraint.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="org.geeksforgeeks.explicit_intent.ActivityTwo">
```

```
<!-- add a button for moving to home activity -->
```

```
    <Button
        android:id="@+id/Button01"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_below="@+id/TextView01"
        android:layout_alignParentLeft="true"
        android:layout_marginBottom="220dp"
        android:onClick="onClick"
        android:text="Go to Home Activity"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.533"
        app:layout_constraintStart_toStartOf="parent"
        tools:ignore="OnClick" />
```

```
<!-- add a TextView to write some text on activity -->
```

```
    <TextView
        android:id="@+id/TextView01"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/Button01"
        android:layout_alignParentTop="true"
        android:layout_margin="71dp"
        android:layout_marginTop="144dp"
        android:layout_marginEnd="88dp"
        android:layout_marginRight="88dp"
        android:minHeight="60dip"
        android:text="This is Second Activity"
        android:textSize="20sp"
```

```
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintTop_toTopOf="parent" />
```

```
</android.support.constraint.ConstraintLayout>
```

ActivityTwo class

File: MainActivityTwo.java

```
package org.geeksforgeeks.explicit_intent;
import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class ActivityTwo extends Activity {

    // Defining the object for button
    Button button1;
    @Override
    public void onCreate(Bundle bundle)
    {
        super.onCreate(bundle);
        setContentView(R.layout.activity_two);

        // Bind the components to their respective objects
        // by assigning their IDs
        // with the help of findViewById() method
        button1 = (Button)findViewById(R.id.Button01);

        button1.setOnClickListener(new OnClickListener() {
            public void onClick(View view)
            {
                // Creating explicit intent
                Intent i = new Intent(getApplicationContext(),
                                                    MainActivity.class);
                startActivity(i);
            }
        });
    }
}
```

```
}  
  }  
});
```