



# Android Development Tutorial

## **Chapter – IV**

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- ▶ Intents and Intent Filters



# Intents

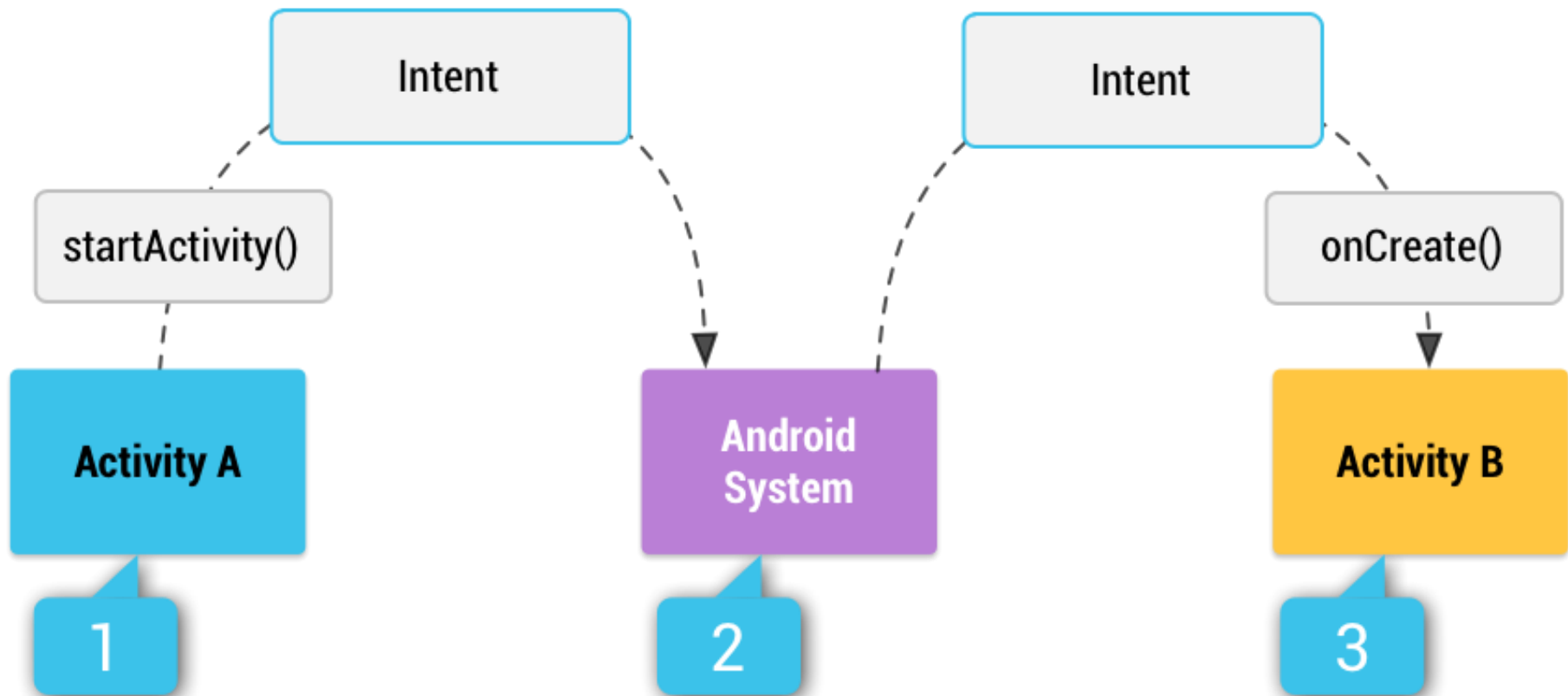
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**An Intent is a messaging object you can use to request an action from another app component. Although intents facilitate communication between components in several ways**

**Dictionary meaning of intent is *intention or purpose***

## Intent Cont.

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# Some Fundamental use

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- ▶ Start the service
- ▶ Launch an activity
- ▶ Display a web page
- ▶ Display a list of contacts
- ▶ Broadcast a message
- ▶ Dial a phone call etc.

# Types of Android Intents

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## ► Implicit Intent

Implicit Intent doesn't specify the component. In such case, intent provides information of available components provided by the system that is to be invoked.

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

```
Intent i=new Intent(Intent.ACTION_VIEW);  
i.setData(Uri.parse("http://www.javatpoint.com"));  
startActivity(intent);
```

# Types of Android Intents

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

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



# Message Passing

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## First Activity

```
Intent myIntent = new Intent(MainActivity.this, Main2Activity.class);  
myIntent.putExtra("msg", "Hello " );  
startActivity(myIntent);
```

## Second Activity

```
String msg=getIntent().getStringExtra("msg");
```

## Some Intent actions

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ACTION\_CALL – make a phone call

ACTION\_EDIT – show data on screen for user editing

ACTION\_MAIN – start the main activity

ACTION\_SYNC – synchronize device data with server

ACTION\_SENDTO – Send sms

# Intent Filters

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- ▶ An Intent is sent to the Android system, it will determine suitable applications for this Intent. If several components have been registered for this type of Intent, Android offers the user the choice to open one of them.
- ▶ This determination is based on IntentFilters

# Intent Filters Cont.

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Following are **2 ways to define a filter**

## 1. Manifest file

If you define the intent filter in the manifest, your application does not have to be running to react to the intents defined in its filter. Android registers the filter when your application gets installed.

## 2. Broadcast Receiver

If you want your *broadcast receiver* to receive the intent only when your application is running. Then you should define your intent filter during run time (programmatically). Keep in mind that this works for broadcast receivers only.

# AndroidManifest.xml

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- Applications should declare everything needed on the the **AndroidManifest.xml** file ...
- One AndroidManifest.xml for application ..
- What's contained in it?
  - *Permissions*
  - *Hw and Sw resources used by the Application*
  - *Activities*
  - *Intent-filters*

# Activities and AndroidManifest.xml

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- An Android application can be composed of **multiple Activities** ...
- Each activity should be declared in the file: **AndroidManifest.xml**
- Add a child element of <application>:

<application>

    <activity android:name=".MyActivity" />

    <activity android:name=".SecondActivity" />

</application>

# AndroidManifest.xml example

---

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

```
<manifest>
```

```
    <application android:icon="@drawable/icon.png" >
```

```
        <activity
```

```
            android:name="com.example.project.MyActivity"
```

```
            android:label="@string/label">
```

```
        </activity>
```

```
    </application>
```

```
</manifest>
```

# Implicit intent

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```
<activity
    android:name="com.pycitup.pyc.WebViewActivity"
    android:label="@string/title_activity_web_view" >
    <intent-filter>
        <action android:name="android.intent.action.VIEW" />
        <category
            android:name="android.intent.category.DEFAULT" />
        <data android:scheme="http" />
    </intent-filter>
</activity>
```



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# Thank You

Akshaya Kumar Barik  
Dept of CSE, ITER

