Intents &
Intent Filters

codeandroid.org

Intents & Intents Filter

- Intents : request for an action to be performed (usually on a set of data)

- Intent Filters : register Activities, Services, and Broadcast Receivers (as being capable of performing an action on a set of data)

- Broadcast Receivers : listens to intents

Intents

- Support interaction between any application components available on an Android device

    - start a new Activity

    - broadcast messages (broadcast intents)

Intents
Starting a new Activity

```
Intent intent = new Intent (.....................);
startActivity(intent);
```

Intents
Starting a new Activity

Dial a number

```
Intent intent = new Intent (Intent.ACTION_DIAL, Uri.parse("tel:93675359"));
startActivity(intent);
```

Launch a website

```
Intent intent = new Intent (Intent.ACTION_VIEW, Uri.parse("http://codeandroid.org"));
startActivity(intent);
```

Intents
Starting a new Activity

Launch an Activity

```
Intent intent = new Intent (this, HelloWorld.class);
startActivity(intent);
```

Launch an Activity

```
Intent intent = new Intent (this, HelloWorld.class);
intent.putExtra("title","Hello codeandroid");
startActivity(intent);
```

Intent Filters

AndroidManifest.xml

```xml
<activity android:name=".HelloWorld"
          android:label="@string/app_name">
        <intent-filter>
            <action android:name="android.intent.action.MAIN"/>
            <category android:name="android.intent.category.LAUNCHER"/>
        </intent-filter>
</activity>
```

Launch Hello World

```java
Intent intent = new Intent (this, HelloWorld.class);
startActivity(intent);
```

Intent Filters

- Required for Intent resolution to match Intents to Activities, Services, or BroadcastReceivers

- Most Intent Filters are declared in AndroidManifest.xml of an application

Intent Filters

AndroidManifest.xml

```xml
<activity android:name=".HelloWorld"
          android:label="@string/app_name">
        <intent-filter>
             <action android:name="org.codeandroid.intentstest.HelloWorld"/>
             <category android:name="android.intent.category.DEFAULT"/>
        </intent-filter>
</activity>
```

Launch Hello World

```java
Intent intent = new Intent ("org.codeandroid.intentstest.HelloWorld");
startActivity(intent);
```

Intent Filters

AndroidManifest.xml

```
<activity android:name=".HelloWorld"
        android:label="@string/app_name">
        <intent-filter>
            <action android:name="android.intent.action.VIEW"/>
            <category android:name="android.intent.category.DEFAULT"/>
            <category android:name="android.intent.category.BROWSABLE"/>
            <data android:scheme="http" android:host="androidium.org"/>
        </intent-filter>
</activity>
```

Launch Hello World

```
Intent intent = new Intent (Intent.ACTION_VIEW, Uri.parse("http://androidium.org"));
startActivity(intent);
```

Intent Filters

AndroidManifest.xml

```
<activity android:name=".HelloWorld"
          android:label="@string/app_name">
        <intent-filter>
                <action android:name="android.intent.action.VIEW"/>
                <category android:name="android.intent.category.DEFAULT"/>
                <category android:name="android.intent.category.BROWSABLE"/>
                <data android:scheme="http"
                    android:host="www.google.com"
                    android:pathPrefix="/advanced_search"
                />
        </intent-filter>
</activity>
```

Intent Filters

AndroidManifest.xml

```
<activity android:name=".HelloWorld"
          android:label="@string/app_name">
        <intent-filter>
                <action android:name="android.intent.action.VIEW"/>
                <category android:name="android.intent.category.DEFAULT"/>
                <category android:name="android.intent.category.BROWSABLE"/>
                <data android:scheme="codeandroid"/>
        </intent-filter>
</activity>
```

Launch Hello World

```
Intent intent = new Intent (Intent.ACTION_VIEW, Uri.parse("codeandroid://"));
startActivity(intent);
```

Intents
Launch the Android Market

```
Uri marketUri = Uri.parse("http://market.android.com/search?q=pname:com.buuuk.buUuk")
Intent intent = new Intent (Intent.ACTION_VIEW, marketUri);
startActivity(intent);
```

```
Uri marketUri = Uri.parse("market://search?q=pname:com.buuuk.buUuk")
Intent intent = new Intent (Intent.ACTION_VIEW, marketUri);
startActivity(intent);
```

Intents
Broadcast Intents

- broadcast messages between components with the *sendBroadcast* method

- makes an application more open, by broadcasting to current and other applications

Intents
Broadcast Intents

```
Intent intent = new
Intent("org.codeandroid.intentstest.TestBroadcastReceiver");
sendBroadcast(intent);
```

Broadcast Receivers

- listen to Broadcast Intents

- must be registered (either in code or within the app manifest

- use Intent Filter to specify which Intents it is listening for

Broadcast Receivers
registered inside code

```
IntentFilter filter = new IntentFilter("org.codeandroid.intentstest.TestBroadcastReceiver");
TestBroadcastReceiver receiver = new TestBroadcastReceiver();
registerReceiver(receiver, filter);
```

```
public class TestBroadcastReceiver extends Broadcast Receiver
{
    @Override
    public void onReceive(Context context, Intent intent)
    {
        (................... do something here...............)
    }
}
```

Broadcast Receivers
register in app manifest

```
<receiver android:name="CameraPressedReceiver">
       <intent-filter>
              <action
              android:name="android.intent.action.CAMERA_BUTTON"
          />
       </intent-filter>
</receiver>
```

```
    public class CameraPressed extends Broadcast Receiver
    {
        @Override
        public void onReceive(Context context, Intent intent)
        {
            (.................... do something here................)
        }
    }
```