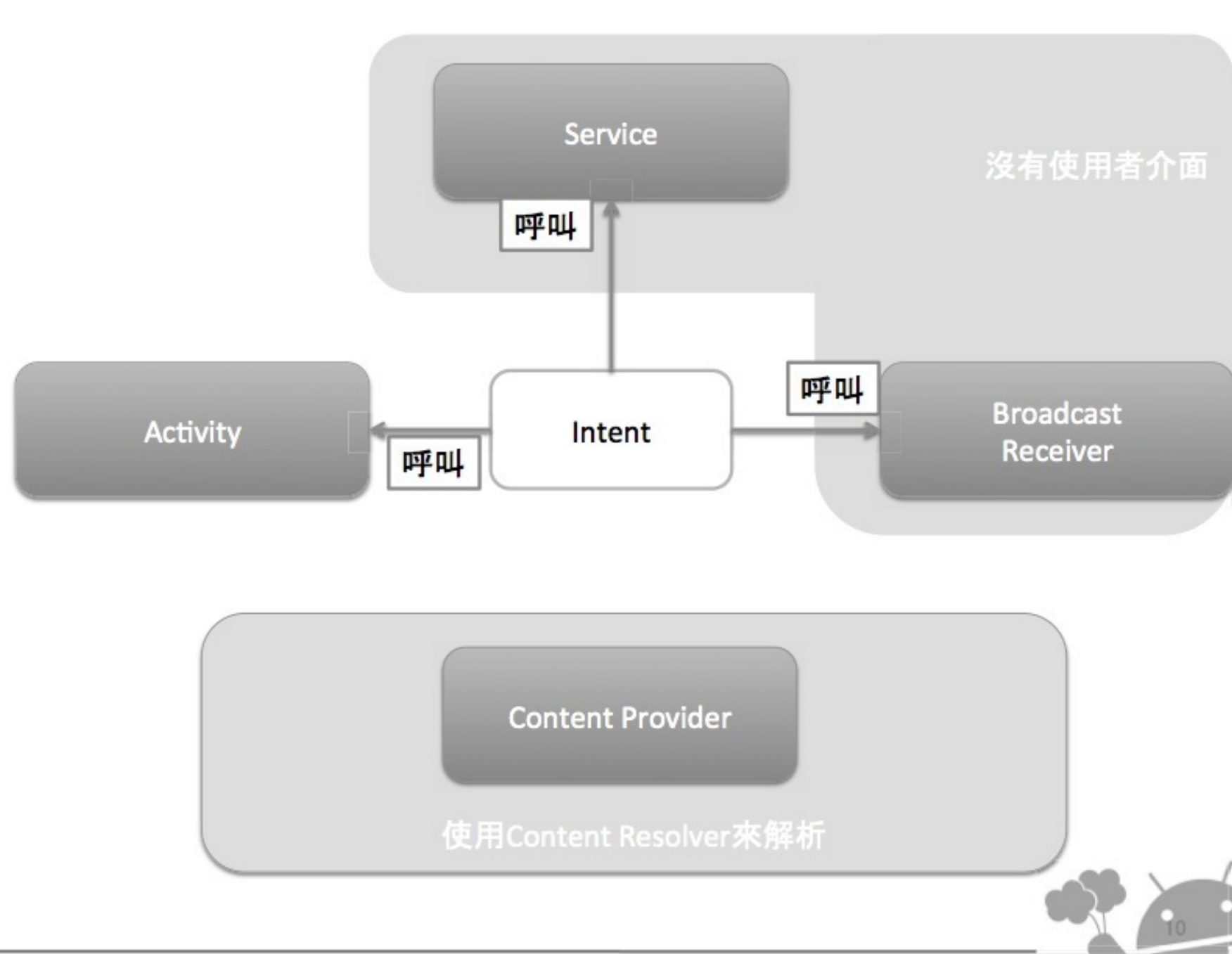


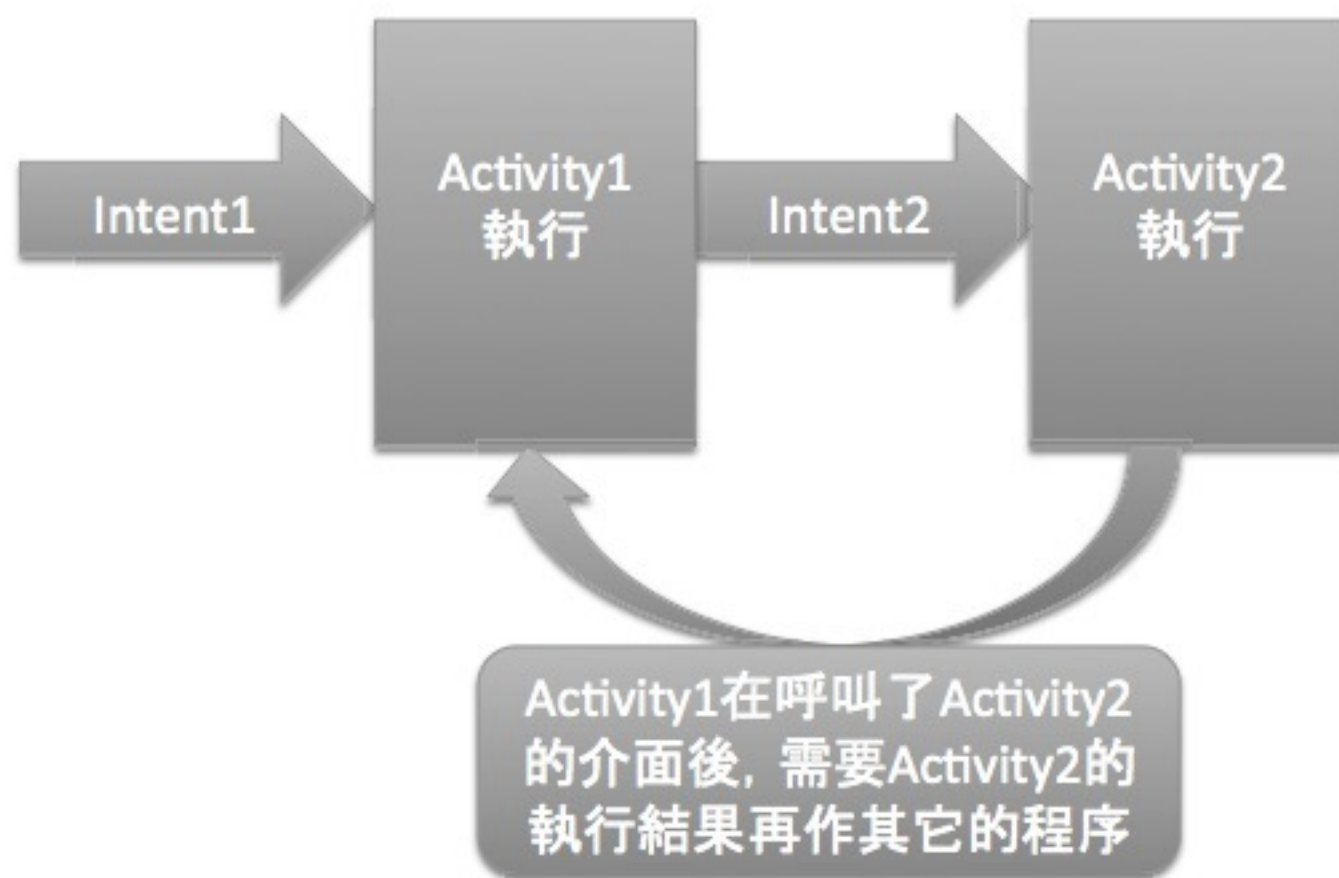
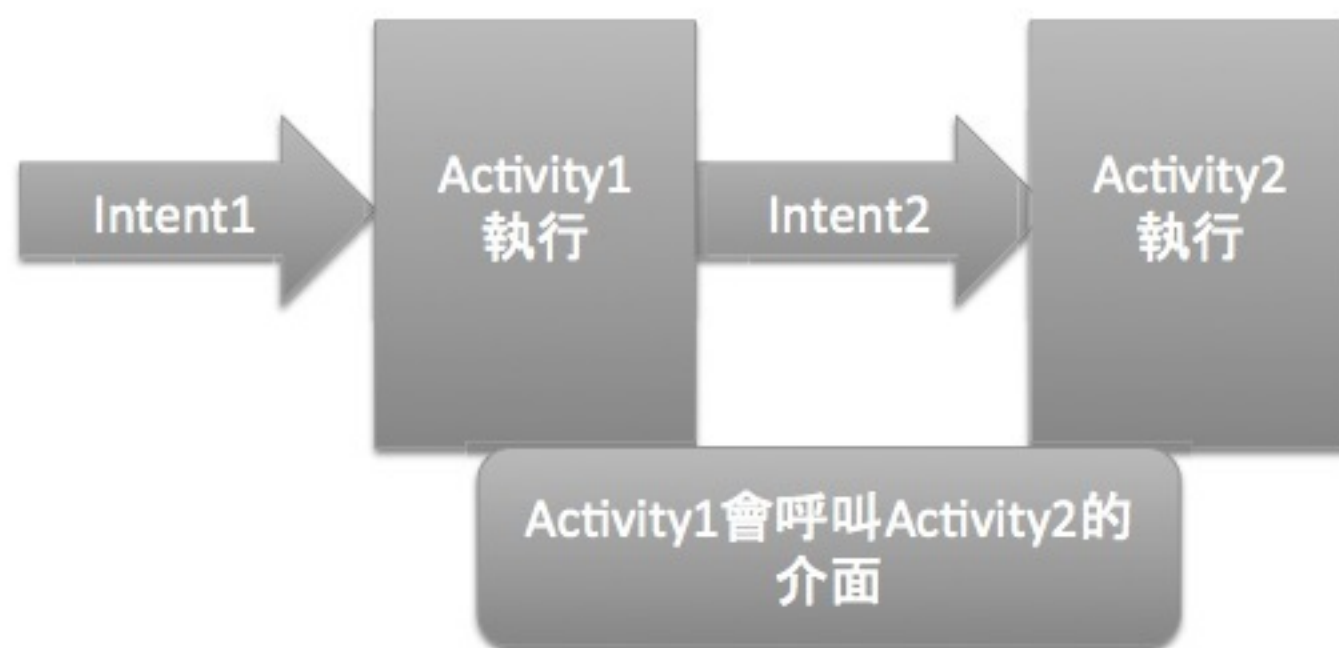
Android Activity Communication

Agenda

- Activity communication types Review
- Intent
- Pass data between activities
- Override back button behavior

Review





Intent

- Call another activity
- Make a phone call (System level activity)
- Chap 3-3

Make a call

- Permission Settings in AndroidManifest.xml
- Intent

AndroidManifest.xml

.....

```
<uses-sdk
```

```
    android:minSdkVersion="8"
```

```
    android:targetSdkVersion="17" />
```

```
  <uses-permission
```

```
    android:name="android.permission.CALL_PHONE"/>
```

.....

Code

```
Intent it = new Intent();
```

```
it.setAction(“android.intent.action.CALL”);
```

```
it.setData(Uri.parse("tel:0225149191"));
```

```
startActivity(it);
```


Lab : Phone Call

Type 1

- Activity must be declared in `AndroidManifest.xml`
- Use Intent object to switch activity

AndroidManifest.xml

```
<application  
    .....  
    <activity  
        android:name="com.example.activity_communication.MainActivity"  
        android:label="@string/app_name" >  
        <intent-filter>  
            .....  
        </intent-filter>  
    </activity>  
    <activity  
        android:name="com.example.activity_communication.Act2Activity"  
        android:label="@string/title_activity_act2" >  
    </activity>
```

Intent

```
Intent it = new Intent();
```

```
it.setClass(this, Act2Activity.class);
```

```
this.startActivity(it);
```

```
this.finish();// *
```

Lab : Type 1

Pass data between activities

- Intent
- Bundle

Case 1 : Sender

```
Intent it = new Intent();
```

```
it.setClass(this, Act3Activity.class);
```

```
//Set Pass Data
```

```
Bundle data = new Bundle();
```

```
data.putString("Name", "Ken");
```

```
data.putString("Age", "40");
```

```
it.putExtras(data);
```

```
this.startActivity(it);
```

Case 2 : Sender

```
Intent it = new Intent();
```

```
it.setClass(this, Act3Activity.class);
```

```
//Set Pass Data
```

```
it.putExtra("Name", "Ken2");
```

```
it.putExtra("Age", "402");
```

```
this.startActivity(it);
```


Receiver

Intent it = this getIntent();

Bundle data = **it.getExtras()**;

String message = data.getString("**Name**")+" is
"+data.getString("**Age**")+" years old.";

Lab : Pass data

Type 2

- Activity must be declared in AndroidManifest.xml
- Use Intent object to switch activity
 - Caller
 - startActivityForResult(...)
 - override onActivityResult(...)
 - Callee
 - setResult(...)
- The first activity can not be finished when go to the next activity

AndroidManifest.xml

```
<application  
    .....  
    <activity  
        android:name="com.example.activity_communication.MainActivity"  
        android:label="@string/app_name" >  
        <intent-filter>  
            .....  
        </intent-filter>  
    </activity>  
    <activity  
        android:name="com.example.activity_communication.Act2Activity"  
        android:label="@string/title_activity_act2" >  
    </activity>
```

Type 2 : Caller -1

```
Intent it = new Intent();
```

```
it.setClass(this, Act2Activity.class);
```

```
startActivityForResult(it,0);
```

Type 2 : Caller -2

@Override

```
protected void onActivityResult(int requestCode, int resultCode, Intent data) {  
    super.onActivityResult(requestCode, resultCode, data);  
    switch(requestCode){  
        case 0:  
            Log.i("onActivityResult","onActivityResult");  
            String msg = data.getExtras().getString("Message");  
            break;  
        default:  
            break;  
    }  
}
```

Type 2 : Callee

```
Intent it = new  
Intent(Act2Activity.this, MainActivity.class);  
  
it.putExtra("Message", "OK OK!");  
  
setResult(RESULT_OK, it);  
  
finish();
```

Lab : Type 2

Type 2 application

- SpeechRecognition
- Internet access permission

AndroidManifest.xml

```
<uses-permission  
android:name="android.permission.INTERNET"/>
```

SpeechRecognition - 1

```
Intent it = new  
Intent(RecognizerIntent.ACTION_RECOGNIZE_SPEECH)  
;
```

```
it.putExtra(RecognizerIntent.EXTRA_LANGUAGE_MODEL,RecognizerIntent.LANGUAGE_MODEL_FREE_FORM);
```

```
it.putExtra(RecognizerIntent.EXTRA_PROMPT, “請說欲搜尋之關鍵字”);
```

```
startActivityForResult(it, 1);
```

SpeechRecognition - 2

@Override

```
protected void onActivityResult(int requestCode, int resultCode, Intent data) {  
    // TODO Auto-generated method stub  
    super.onActivityResult(requestCode, resultCode, data);  
    if(requestCode==1 && resultCode== RESULT_OK){  
        ArrayList<String> results = data.getStringArrayListExtra(RecognizerIntent.EXTRA_RESULTS);  
        if(results!=null && results.size()>0){  
            input.setText(results.get(0));  
        }  
    }  
}
```

Override back button behavior

- `override onBackPressed(...)`

Sample 1

```
AlertDialog.Builder dialog = new AlertDialog.Builder(this);

dialog.setTitle("Title");

dialog.setMessage("Are U sure?");

dialog.setPositiveButton("Go", new DialogInterface.OnClickListener() {

    @Override

    public void onClick(DialogInterface dialog, int which) {

        Act2Activity.super.onBackPressed();

    }

});

dialog.setNegativeButton("Cancel",

    new DialogInterface.OnClickListener() {

        @Override

        public void onClick(DialogInterface dialog, int which) {

            //Do NOTHING

        }

    });

dialog.show();
```

Sample 2

```
new AlertDialog.Builder(this)

.setTitle("Title")

.setMessage("Are U sure?")

.setPositiveButton("Go", new DialogInterface.OnClickListener() {

    @Override

    public void onClick(DialogInterface dialog, int which) {

        Act2Activity.super.onBackPressed();

    }

}))

.setNegativeButton("Cancel", new DialogInterface.OnClickListener() {

    @Override

    public void onClick(DialogInterface dialog,int which) {

        //Do NOTHING

    }

}).show();
```