

Software Development for Mobile Devices

Submission for Assignment A4.2P

Why is the intent messaging facility considered as a late run-time binding between components?

Because Intent object is used to start a new Activity in Android. Therefore, it cannot run during compile time but instead it runs when an Activity creates an Intent and invokes startActivity(). Thereafter, The Android System looks for the intent-filter which best matches the intent to start the matching activity. (Intent 2018)

What are the contents of the passive data structure (of an intent)?

The contents of Intent are action and data (Intent 2018).

Action: The action that we want to perform. For example, ACTION_VIEW tel: 111 is used to display a phone dialer and fill in given number.

Data: The data that the Intent instance is going to operate such as Activity and Url.

Why is the word “passive” used for the intent data structure?

Because Intent object does not have any threads executing any operations on it but instead we create it and let the other processes execute it. Additionally, it is a message which ask other components to do its purposes and provide its information to this process. For example, let say we want to go to Activity2 from Activity1. We initialize an Intent instance and declare the information that the Activity2 want to receive. Then the Intent instance itself is not able to start the activity but it ask the activity to invoke startActivity() method with the intent information.

```
Intent intent = new Intent(this, ImageDisplayActivity.class);
intent.putExtra(INTENT_DESCRIPTION_KEY, getString(R.string.image_description_2));
intent.putExtra(INTENT_IMAGE_KEY, R.drawable.thai);
startActivity(intent);
```

Use an example to better explain the sentence “abstract description of an operation to be performed”.

Example

```
startActivity(new Intent(Intent.ACTION_VIEW, Uri.parse("http://9news.com.au")));
```

In this example, the Intent is an “abstract description”, in which Android system will handle everything behind the scenes, and then they display a popup asking us to select the appropriate web browsers that we want to open the Url.

References

Intent, viewed 22 August 2018,

<<https://developer.android.com/reference/android/content/Intent#intent-structure>>.