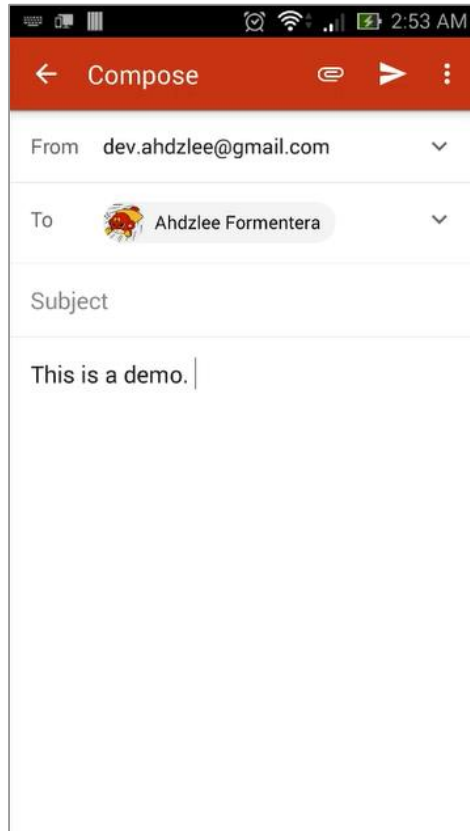
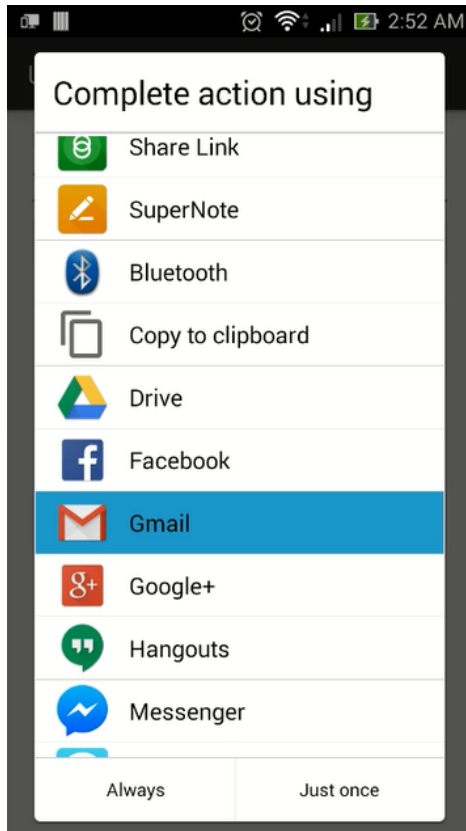




Using Implicit Intents

All about
Intents

The Scenario



I need email functionality in my app

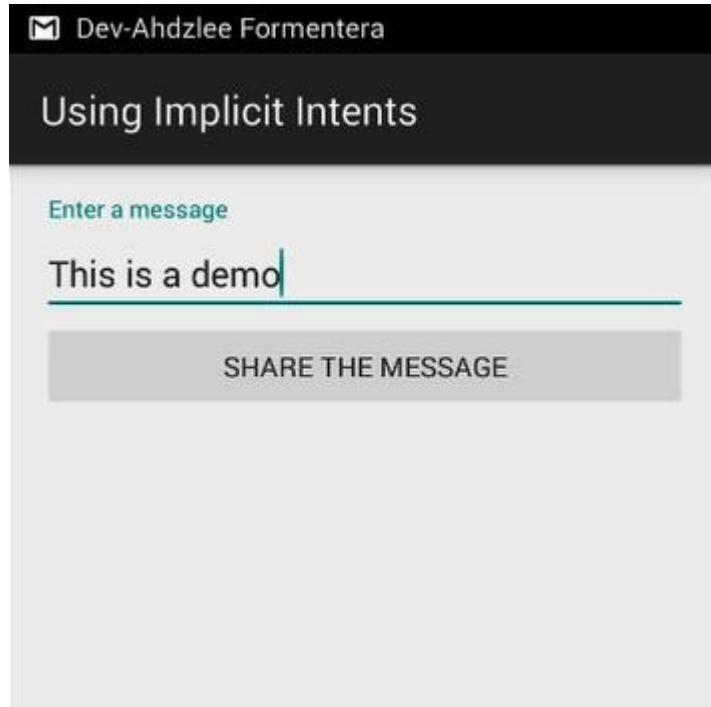
I don't want to waste time building email functionality

I will use an existing Activity for sending email

I don't know exactly which Activity on my device can send email



What do I do with Intents?



Tell what action you want to perform without worrying about who can perform it.

Get a notification when something happens in your system.



Four pieces of an Intent

Action

Define what you want to do (eg., Place a phone call)

Data

What type of data do you want to work with (e.g., URI, images)

Extras

What additional information you need to provide (key/value pairs)
(e.g., Phone number of the person to call)

Categories

Create groups of components to handle the Intent
Give additional information along with the ACTION
(e.g., Place Activity A in the Launcher)



Who do you call?

You can call any one of them using an Intent object.

The component you call doesn't need to be actively running.

Android **PackageManager** is responsible for deciding which component is best suited to handle your Intent.



Activities



Broadcast Receivers



Services

What is an IntentFilter?

```
<activity
    android:name=".MainActivity"
    android:label="Using Implicit Intents" >
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />

        <category android:name="android.intent.category.LAUNCHER" />
    /intent-filter>
```



Action

Category

Data



What is an Intent Filter?

Describe what ACTION, DATA or CATEGORIES that component can handle. Defined mostly inside your manifest but may also be dynamically registered in code.

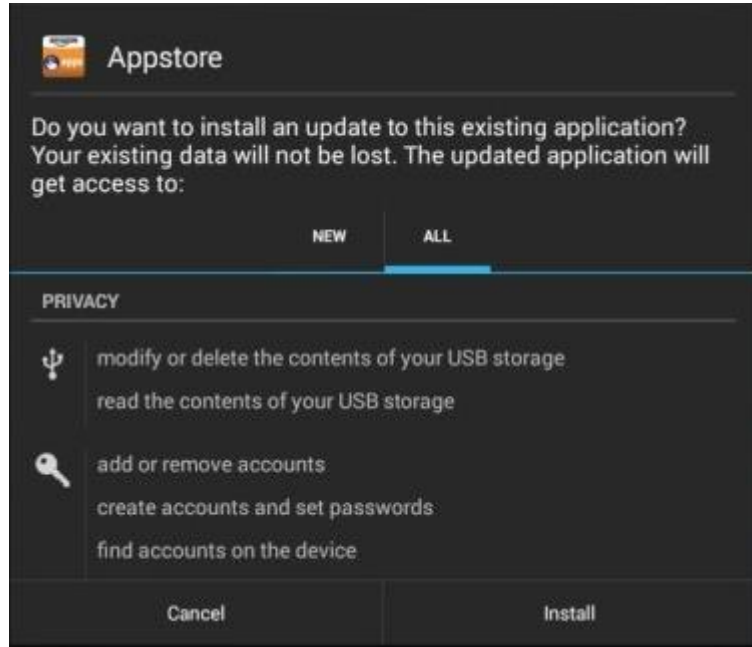
Define what Intent can be handled by that component.

What do you write inside an Intent Filter?

- a. One or more <action> to indicate what actions can be handled by your component.
- b. One or more <category> to indicate what grouping does your component support.
- c. <data> to indicate what data can be handled by your component.



PackageManager with Activities and Services



Package Manager



PackageManager with Activities and Services

How many Activities or Services does the app have?

What Intents can be handled by each Activity or Service?



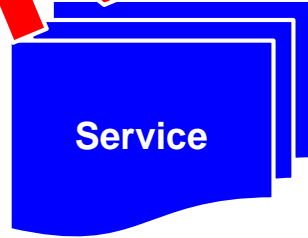
Package Manager



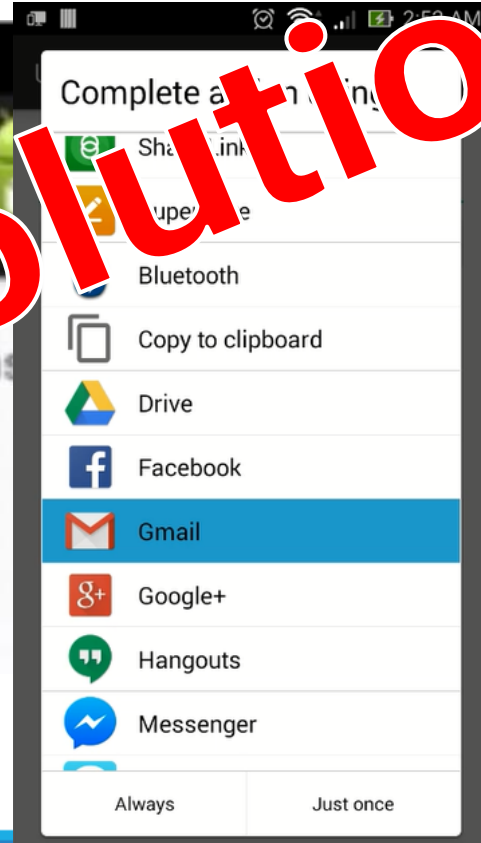
PackageManager with Activities and Services



Package Manager



Intent Resolution



PackageManager with Broadcast Receivers



PackageManager with Broadcast Receivers



