Android for .NET Developers Series
Adopting the Android Mindset

Using Activities across apps

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hardcore developer training

Outline

- Android's task oriented-approach
- Using explicit intents
- Using implicit intents
- Handling Activity requests with intent filters

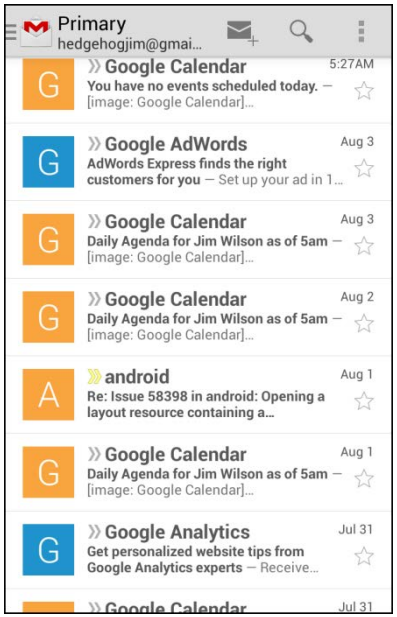
Adopting the android mindset

Think in terms of features.. not apps

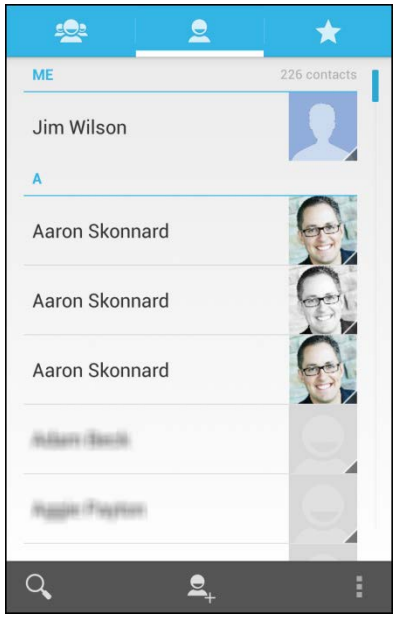
Device usage pattern

Mobile device usage tends to be task focused

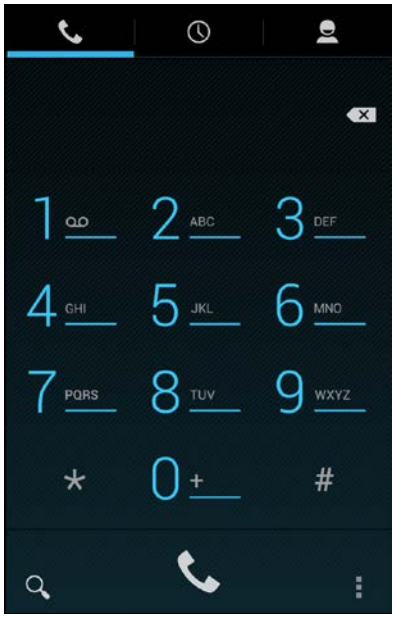
- Move from screen to screen with little thought on the underlying app



Mail



Calendar



Contacts

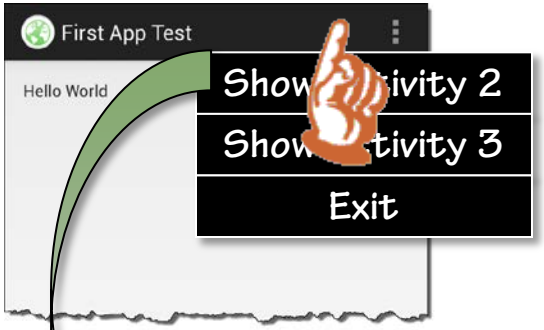
Phone

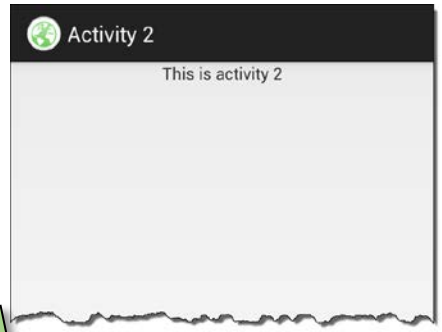
Task

Task oriented

- **Android extends this task-oriented opportunity to all apps**
  - Apps use Intents to request other Activities
    - Explicit Intents use component name to identify target
    - Implicit Intents use information to identify target
      - Caller needs no specific knowledge of Activity that will handle request
      - No package or library for target Activity required
    - The target Activity can be in any App
    - The app containing the target Activity need not be running
  - Activities use Intent Filters to advertise capabilities
    - Contain rules for the requests the Activity can handle

Showing Activities with explicit intent





startActivity
package: FirstAppTest
com.pluralsight.firstapptest.Activity2

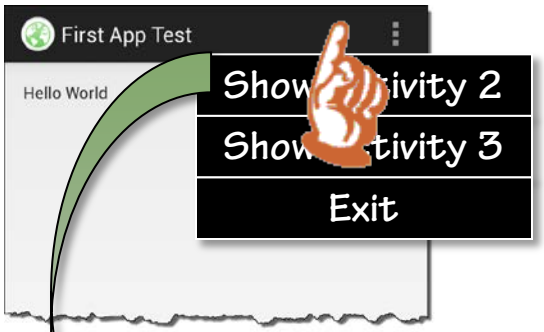
Package Manager

Package: FirstAppT
com.pluralsight.firstapptest.MainActivity
com.pluralsight.firstapptest.Activity2
com.pluralsight.firstapptest.Activity3

AndroidManifest.xml

```
<manifest . . . >
 . . .
 <application . . . >
  <activity
    android:name=".MainActivity" . . . />
  <activity
    android:name=".Activity2"    . . . />
  <activity
    android:name=".Activity3"    . . . />
 </application>
 . . .
</manifest>
```

Showing Activities with implicit intent



startActivity
action: com.ps.action.XX

Package Manager

```
<manifest .
 . . .
 <applicatio
  <ac ty
   oid: . . >
   ntent-filter>
    <action
      android:name="com.ps.action.XX" />
    <category
      android:name=
      "android.intent.category.DEFAULT" />
```

android	
android.media.action.IMAGE_CAPTURE	
android.intent.action.VIEW	other info
android.intent.action.VIEW	other info
com.ps.action.XX	

Package: OtherAppT
com.pluralsight.firstapptest.Activity2
com.pluralsight.firstapptest.Activity3

Intent & intent filter make up

- **Intents and intent filters have up to 3 parts**
  - Action
    - Intent: The operation to perform
    - Intent Filter: The operation that can be performed
  - Data
    - Intent: The specific data on which to perform the operation
    - Intent Filter: The type or format of data on which the operation can be performed
  - Category
    - Divides components into subgroups
    - Tend to be used more with intent filters than intents
    - Intent.CATEGORY_DEFAULT required by Activities that receive implicit intents
    - Intent.CATEGORY_LAUNCHER required for Activities to appear in app launcher

Summary

- **Think in terms of tying features into tasks**
- **Intent and intent filters are the key to this task-oriented approach**
  - Apps can lace individual Activities together
  - Android package manager takes care of the details
    - Finds the Activities; handles starting app if necessary
- **Intents come in two basic forms**
  - Explicit intent names a specific component
  - Implicit intent contains identifying information
- **Intent and intent filters contain up to 3 parts**
  - Action
  - Data
  - Category
- **Intent filters allow Activities to advertise capabilities**
  - All Activities that support startActivity must contain CATEGORY_DEFAULT

Course wrap up

- **Think Like an Android developer**
  - Partition the user interface
  - Be adaptable
  - Provide immediate access to commonly used features
  - Make app navigation easy
  - Think in terms of features … not apps
- **Use the full capabilities of the platform**