Android Jump Start

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November 8th, 2012

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Skills Prerequisites

- Knowledge and understanding of the following topics in Java:

  Procedural Programming

  Object Oriented Programming

  Arrays & Strings

  Inheritance

  Inner Classes

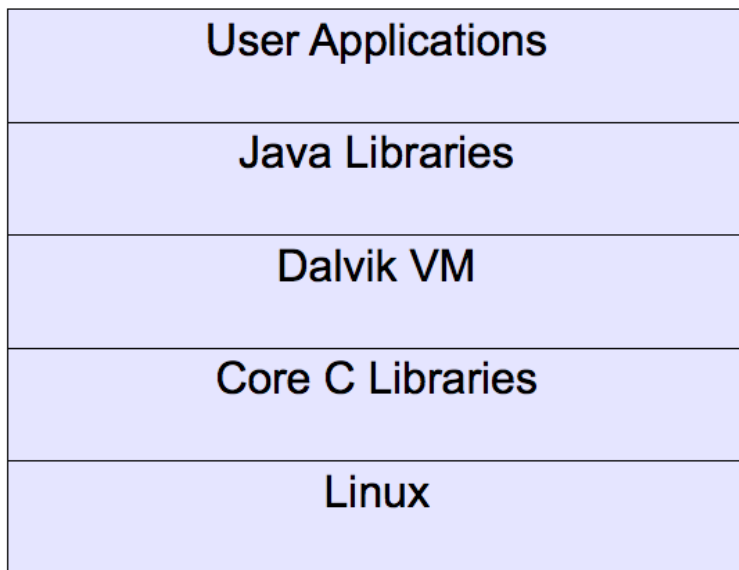 Exceptions Handling

  Threads

  I/O Streams

  Generics

  Collections

Software Installation

- Eclipse IDE Classic / Eclipse IDE for Java Developers

  www.eclipse.org

- Android Development Tools (ADT) Plugin for Eclipse

  http://developer.android.com/tools/sdk/eclipse-adt.html

- Android Software Development Tools (SDK)

  http://developer.android.com/sdk/index.html

The Android Platform

- "Android is a software platform that delivers a complete set of software for mobile devices, including an operating system, a middle-ware and key mobile applications" (Google)

User Applications
Java Libraries
Dalvik VM
Core C Libraries
Linux

Declarative User Interface

- We can create the user interface using XML (similar to silverlight).

```xml
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent" >

    <EditText
        android:id="@+id/editText1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentTop="true"
        android:layout_centerHorizontal="true"
        android:layout_marginTop="44dp"
        android:ems="10"
        android:inputType="numberDecimal" >

        <requestFocus />
    </EditText>
</RelativeLayout>
```

Application Resources

- The application resources are static collections of bits held outside the Java source code.

```java
package com.abelski.sample;

public final class R {
    public static final class attr {
    }
    public static final class drawable {
        public static final int ic_action_search=0x7f020000;
        public static final int ic_launcher=0x7f020001;
    }
    public static final class id {
        public static final int button1=0x7f070002;
        public static final int editText1=0x7f070000;
        public static final int editText2=0x7f070001;
        public static final int editText3=0x7f070003;
        public static final int menu_settings=0x7f070004;
    }
```

The SQLite Database

- The application resources are static collections of bits held outside the Java source code.

Federation of Components

- The android platform is a federation of components of different types, including activities, services, broadcast receivers and content providers.

Activity	Service	Broadcast Receiver

Content Provider

Implicit and Explicit Intents

- The intent is an abstract description of an operation to be performed. (google)

```
Intent intent = new Intent("android.intent.action.PICK");
intent.addCategory("android.intent.category.DEFAULT");
```

```
<intent-filter>
    <action android:name="android.intent.action.PICK" />
    <category android:name="android.intent.category.DEFAULT" />
</intent-filter>
```

Self Learning Resources

- Android Developers Web Site

  developers.android.com

- Israeli Guide to Android

  www.androidbook.co.il

Questions & Answers

- Two courses you might find interesting include

  Android 4.1 Applications Development

  [more info](#)

  PHP Cross Platform Mobile Applications

  [more info](#)

- If you enjoyed my lecture please leave me a comment

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  Thanks for your time!

  Haim.

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