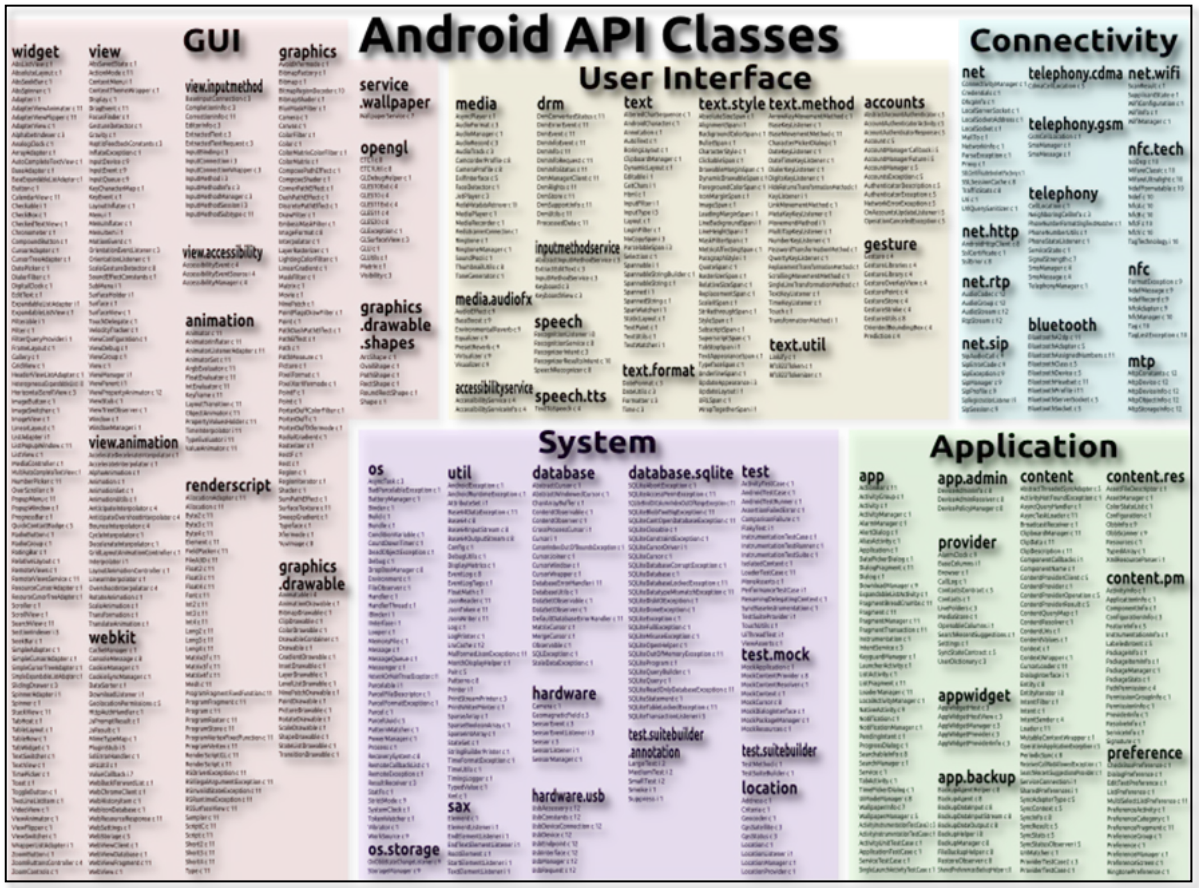
Overview of the Android Runtime: Core Android Libraries

Android Runtime

- Supports concurrently executing Java apps on mobile devices
  - Virtual Machine (VM)
  - **Core Libraries**
    - Core Java classes
    - android.* classes



See www.makelinux.net/android/classes

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    - android.* classes
    - Android concurrency frameworks

See www.vogella.com/tutorials/AndroidBackgroundProcessing/article.html

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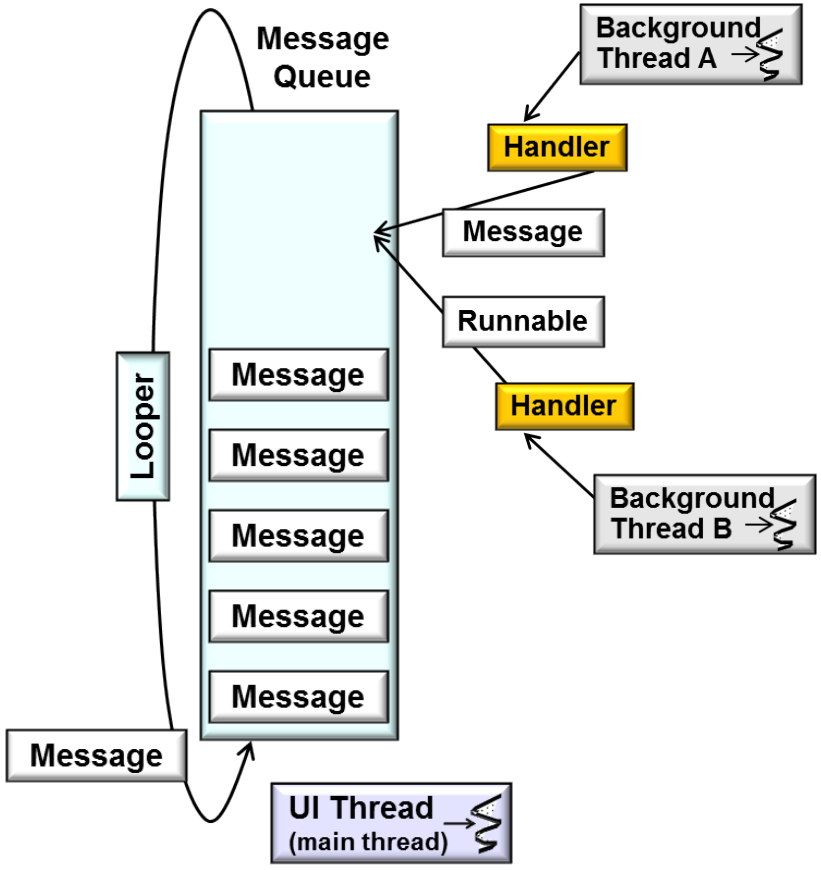
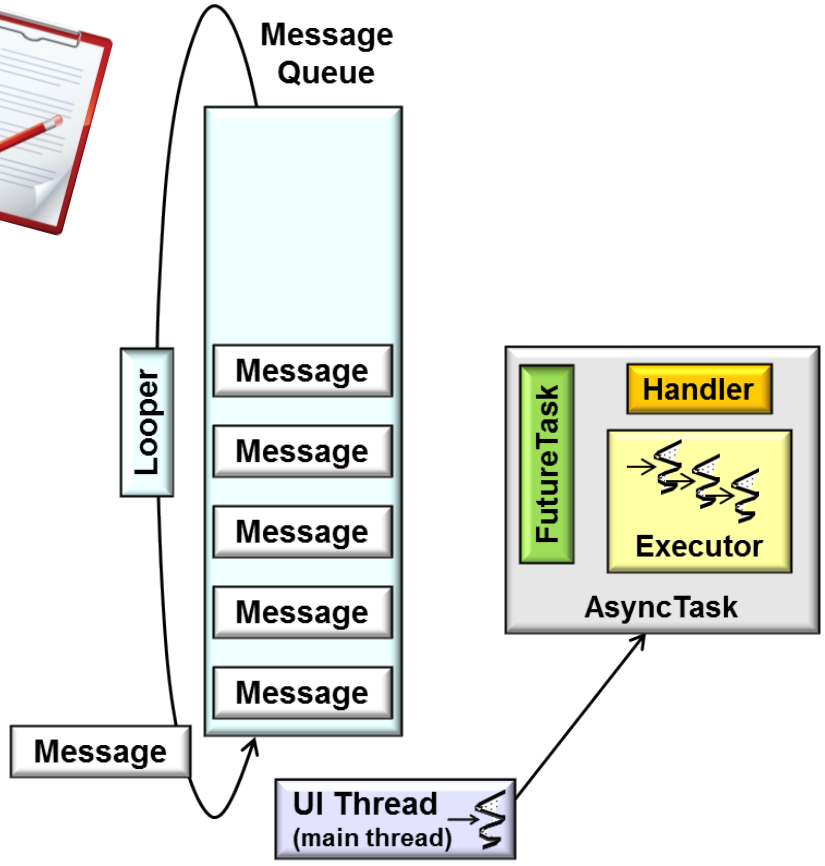
    - Android concurrency frameworks
      - *Handlers, Messages, & Runnables (HaMeR)*
        - Allows operations to run in one or more background threads that publish their results to the UI thread



Android Runtime

- Supports concurrently executing Java apps on mobile devices
  - **Virtual Machine (VM)**
  - **Core Libraries**
    - Core Java classes
    - android.* classes
    - Android concurrency frameworks
      - *Handlers, Messages, & Runnables (HaMeR)*
      - *AsyncTask*
        - Allows operations to run in one or more background threads & publish results to the UI thread *without* manipulating threads or handlers



Android Runtime

- Supports concurrently executing Java apps on mobile devices
  - **Virtual Machine (VM)**
  - **Core Libraries**
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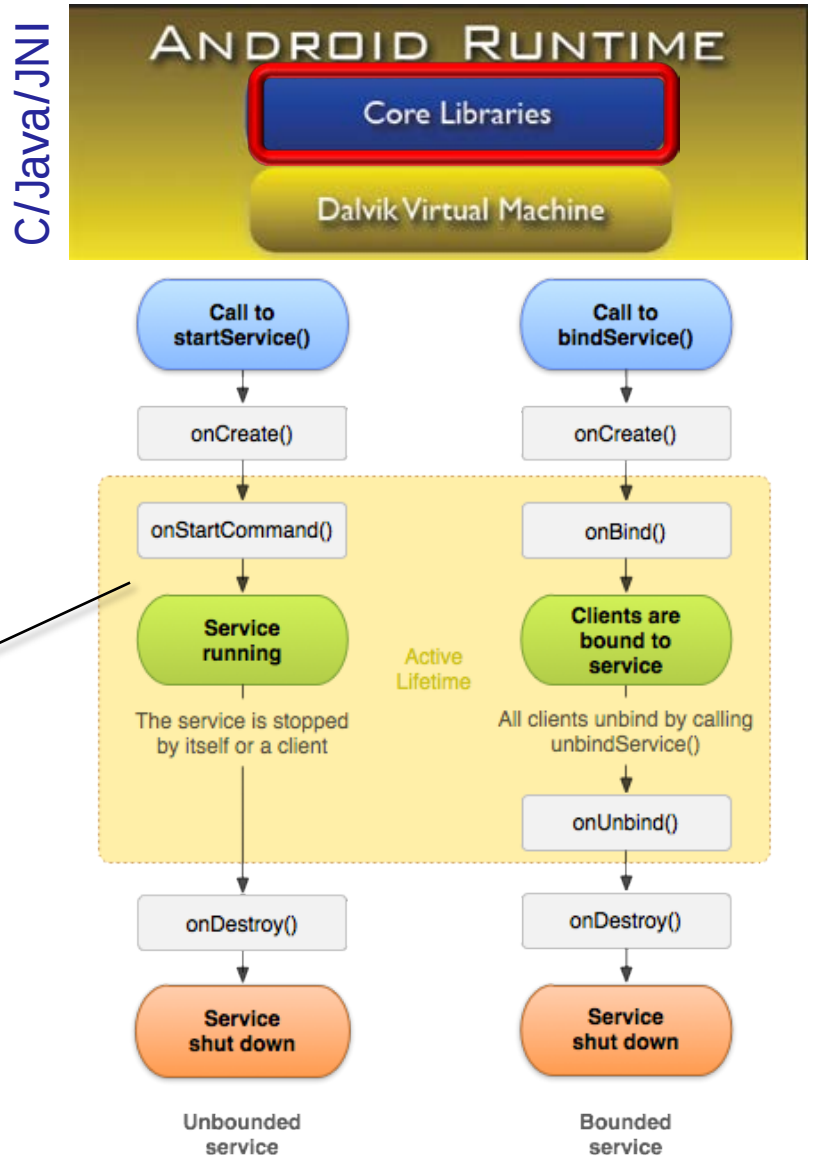
    - android.* classes
    - Android concurrency frameworks
    - Android services framework

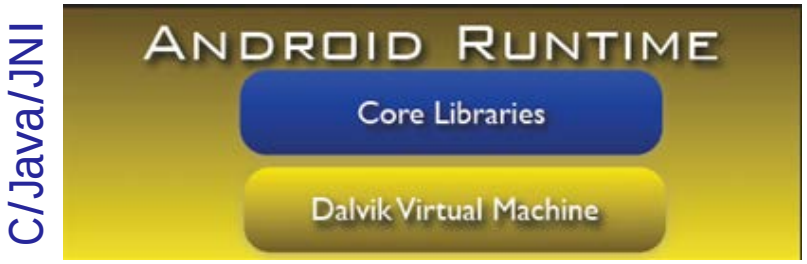


Android services allow computations & communication to run in the background

See developer.android.com/guide/components/services.html

Android Runtime

- Supports concurrently executing Java apps on mobile devices
- We'll examine lots of source code related to the Android Runtime



android | Source | Devices | Accessories | Compatibility

Overview
Codelines, Branches, and Releases
Codenames, Tags, and Build Numbers
Project Roles
Brand Guidelines
Licenses
FAQ
Downloading and Building
Developing
Contributing
Community

The Android Source Code

Android is an open-source software stack created for a wide array of devices with different form factors. The primary purposes of Android are to create an open software platform available for carriers, OEMs, and developers to make their innovative ideas a reality and to introduce a successful, real-world product that improves the mobile experience for users. We also wanted to make sure there was no central point of failure, where one industry player could restrict or control the innovations of any other. The result is a full, production-quality consumer product with source code open for customization and porting.

Governance Philosophy

Android was originated by a group of companies known as the Open Handset Alliance, led by Google. Today, many companies -- both original members of the OHA and others -- have invested heavily in Android. These companies have allocated significant engineering resources to improve Android and bring Android devices to market.

The companies that have invested in Android have done so on its merits because we believe an open platform is necessary. Android is intentionally and explicitly an open-source -- as opposed to a free software -- effort; a group of organizations with shared needs has pooled resources to collaborate on a single implementation of a shared product. The Android philosophy is pragmatic, first and foremost. The objective is a shared product that each contributor can tailor and customize.

See source.android.com