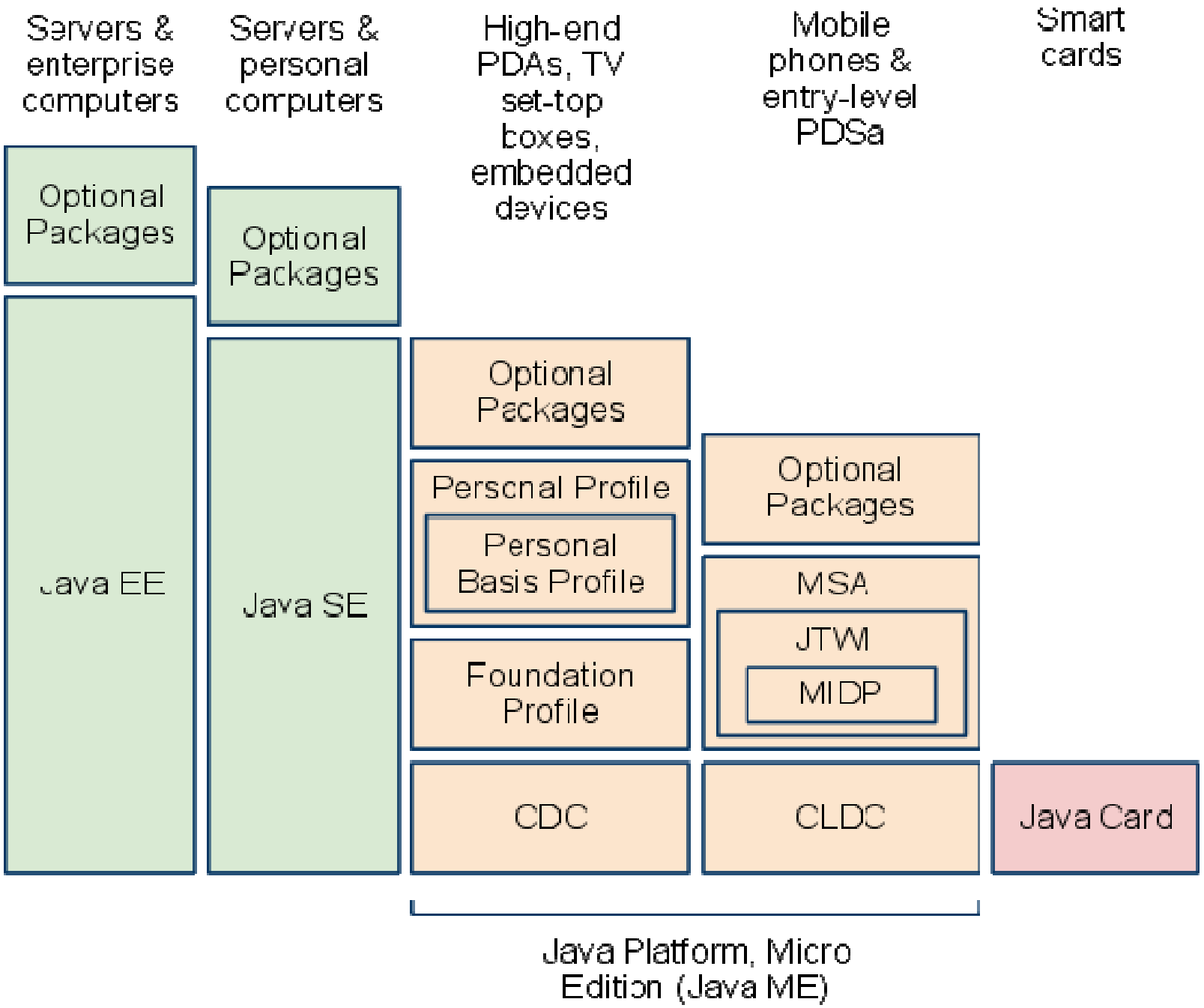
An Introduction to Java ME

What is Java ME

- Portable application development framework
  - Write once run everywhere (or write one debug everywhere)
- Rich set of APIs
- Ease of use
- There are more than 2 billion Java ME enabled mobile phones and PDAs

Java Versions

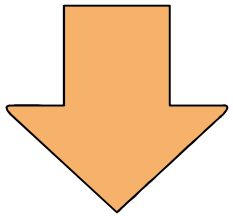


Java SE vs. Java ME

- Java ME is mainly a subset of J2SE
  - But different UI and event handling
  - Both CLDC and CDC support some Java APIs outside Java SE
  - Less utility classes
- Code runs on both platforms?
  - Basic algorithms
  - But whole applications need porting

Basic Terms - Configuration

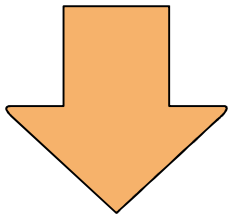
- Defines Java platform for different devices classes (specification for the JVM/KVM)
  - CLDC
    - Limited UI
    - Low computing power
    - Limited connectivity
  - CDC
    - High bandwidth network connections
    - Large memory requirements



Currently CLDC 1.1 in most new phones

Basic Terms - Profile

- Extension and more detailed specification for a configuration
  - Contains APIs for UI, event handling, data storage, networks, timer, ..
  - Minimum requirements for devices (screen size, input possibilities, ...)
- For mobile phones:
  - Mobile Information Device Profile (MIDP)



Currently MIDP 2.1 in most new phones

Basic Terms - JSR

- Java Specification Request (JSR)
  - Specifications for Java platform.
- Examples
  - JSR 82: Bluetooth APIs
  - JSR 179: Location APIs
  - JSR 184: Mobile 3D APIs
  - JSR 226: Scalable 2D Vector Graphics

Different phones will support different JSRs so you have to check the device manufacturers page to see which.

SDKs

- Device specific SDKs
  - Emulate target more accurately
  - Support device specific APIs
  - Additional device skins

Device specific SDKs are found on manufactures homepages

- SDK from Sun
  - Good generic SDK, useful for initial development

http://java.sun.com/javame/sdk/
http://www.oracle.com/technetwork/java/javame/