

Understanding Activity Lifecycle



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What to Expect from This Module



Activity Lifecycle

Activity Lifecycle Methods

Activity State Management

Activity Lifecycle

Common causes of Activity destruction

- Leaving with the back button
- Calling finish method
- System initiated

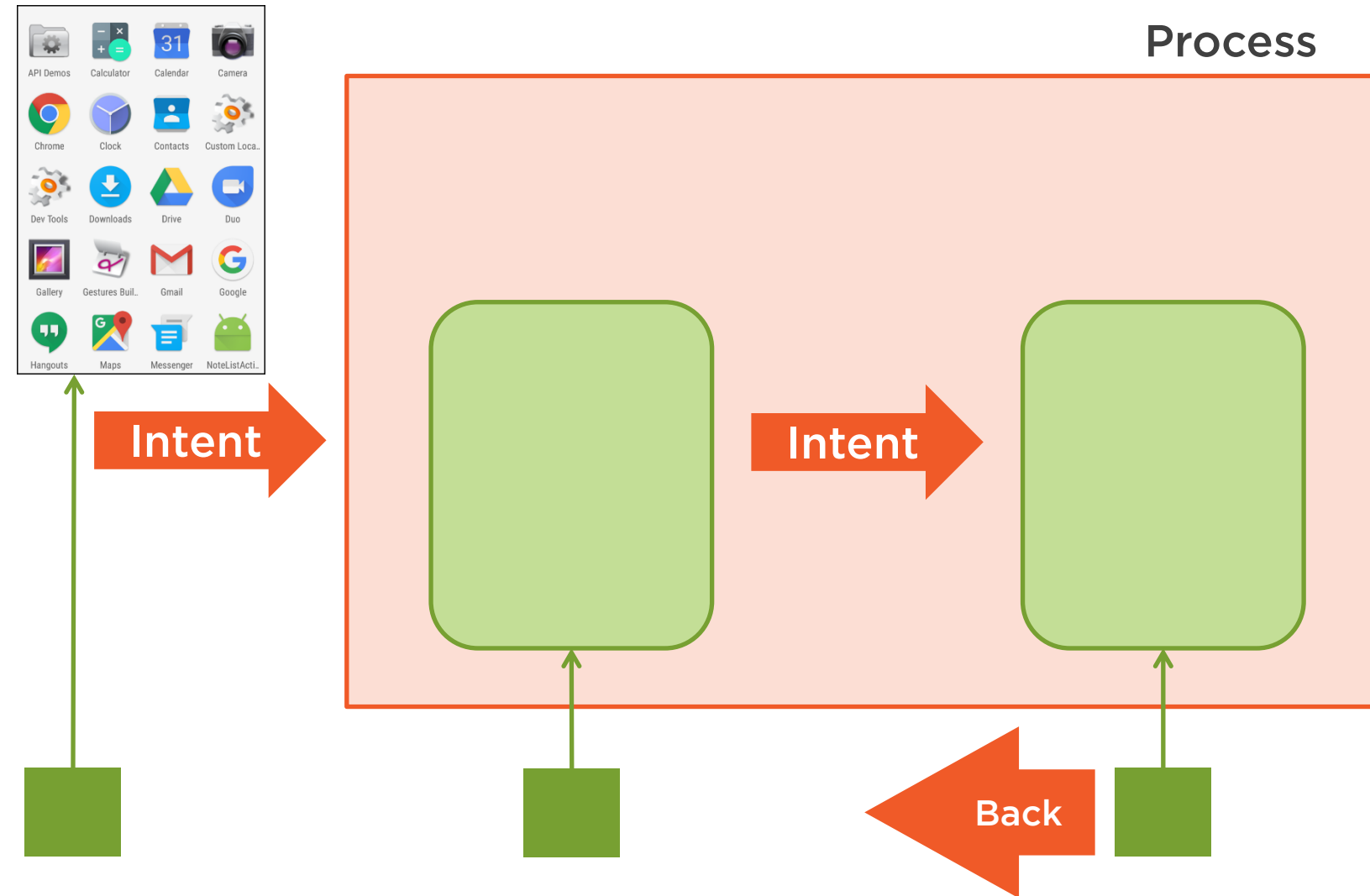
System initiated destruction

- Generally to reclaim resources
- Prolonged period in the background
- System experiencing resource pressure



Task

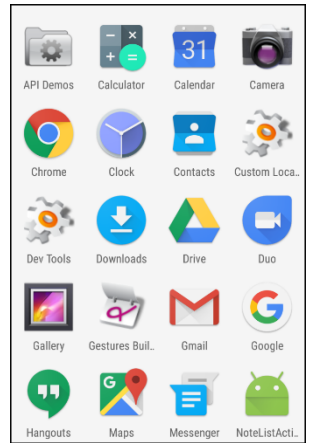
Process



Task

Process

Process



Intent

Intent

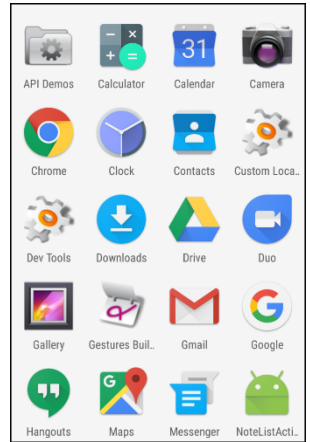
Intent



Task

Process

Process



Intent

Intent

Intent

Back

Back



Activity Lifecycle Methods

Lifetimes within Activity lifecycle

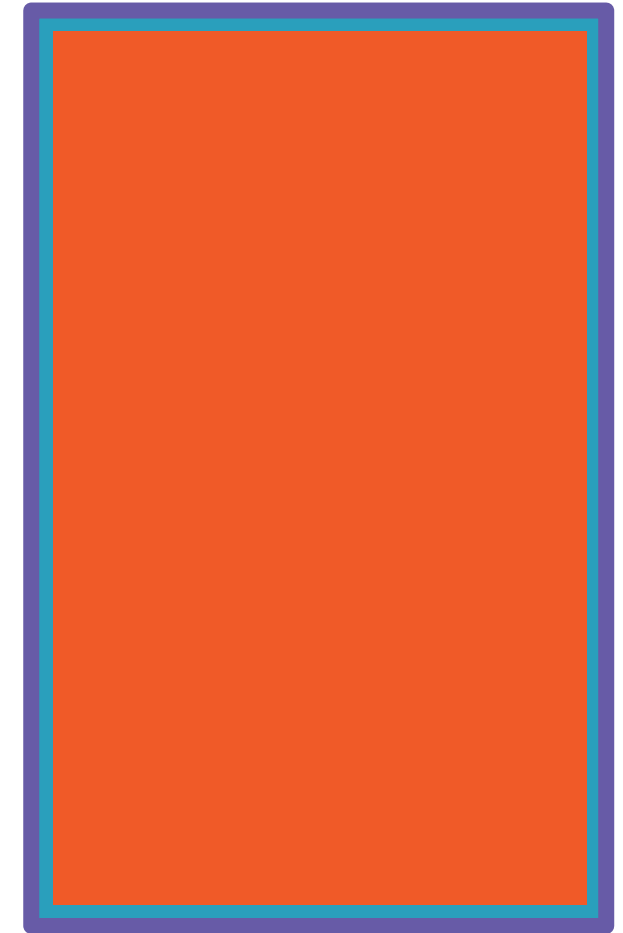
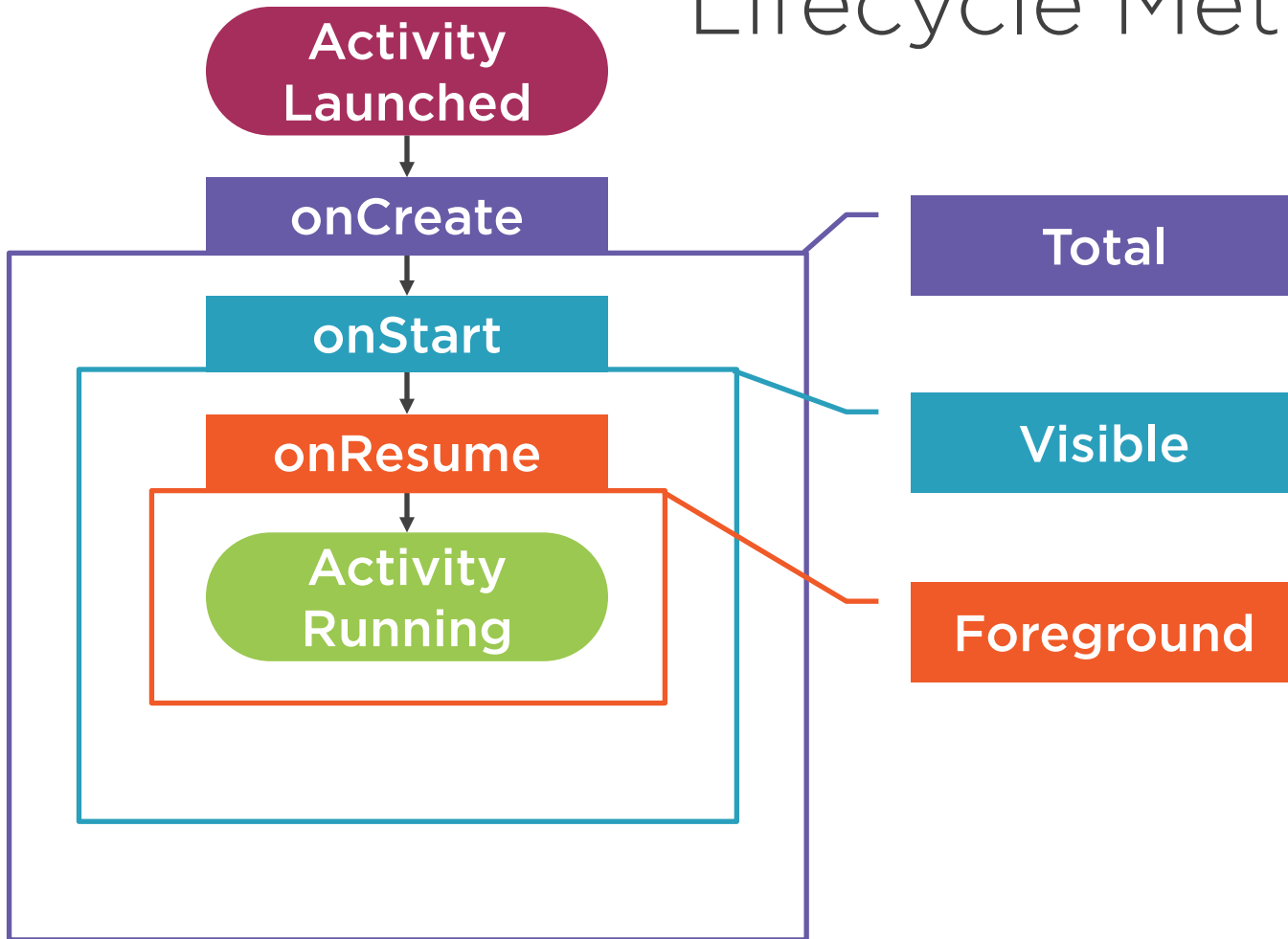
- Total lifetime
- Visible lifetime
- Foreground lifetime

Activity lifecycle methods

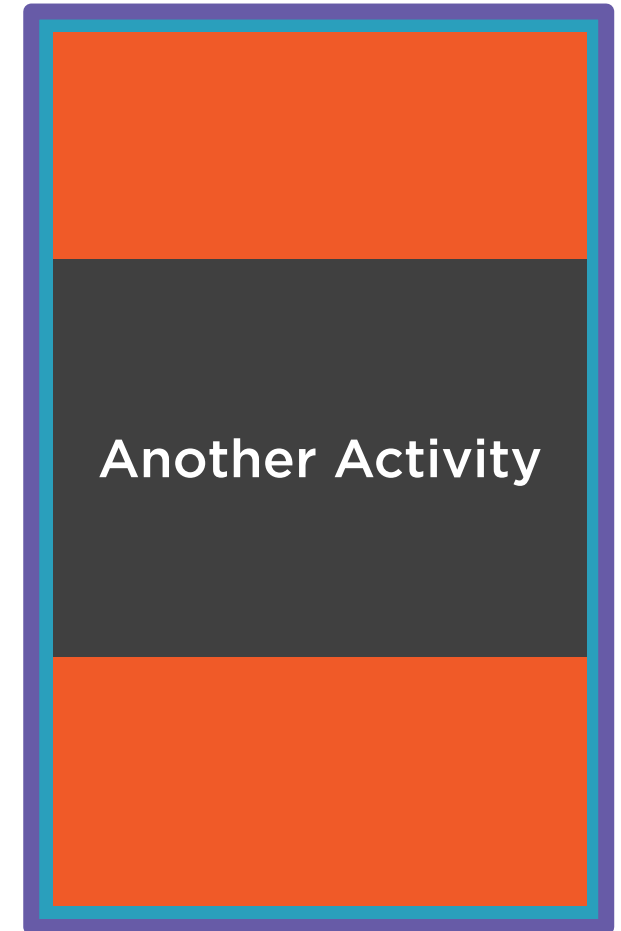
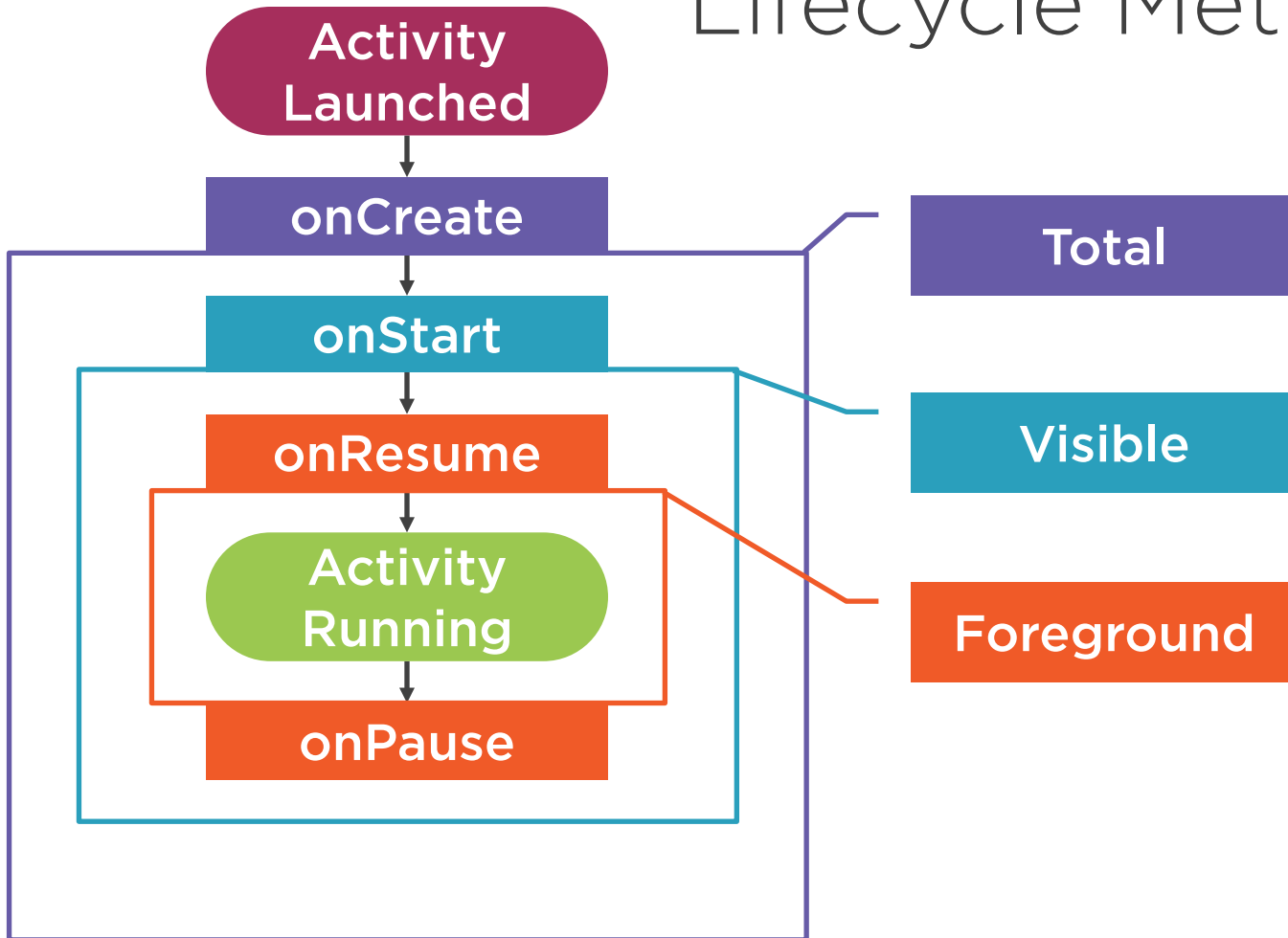
- Methods for start/end of each lifetime
- A few additional methods for transitions



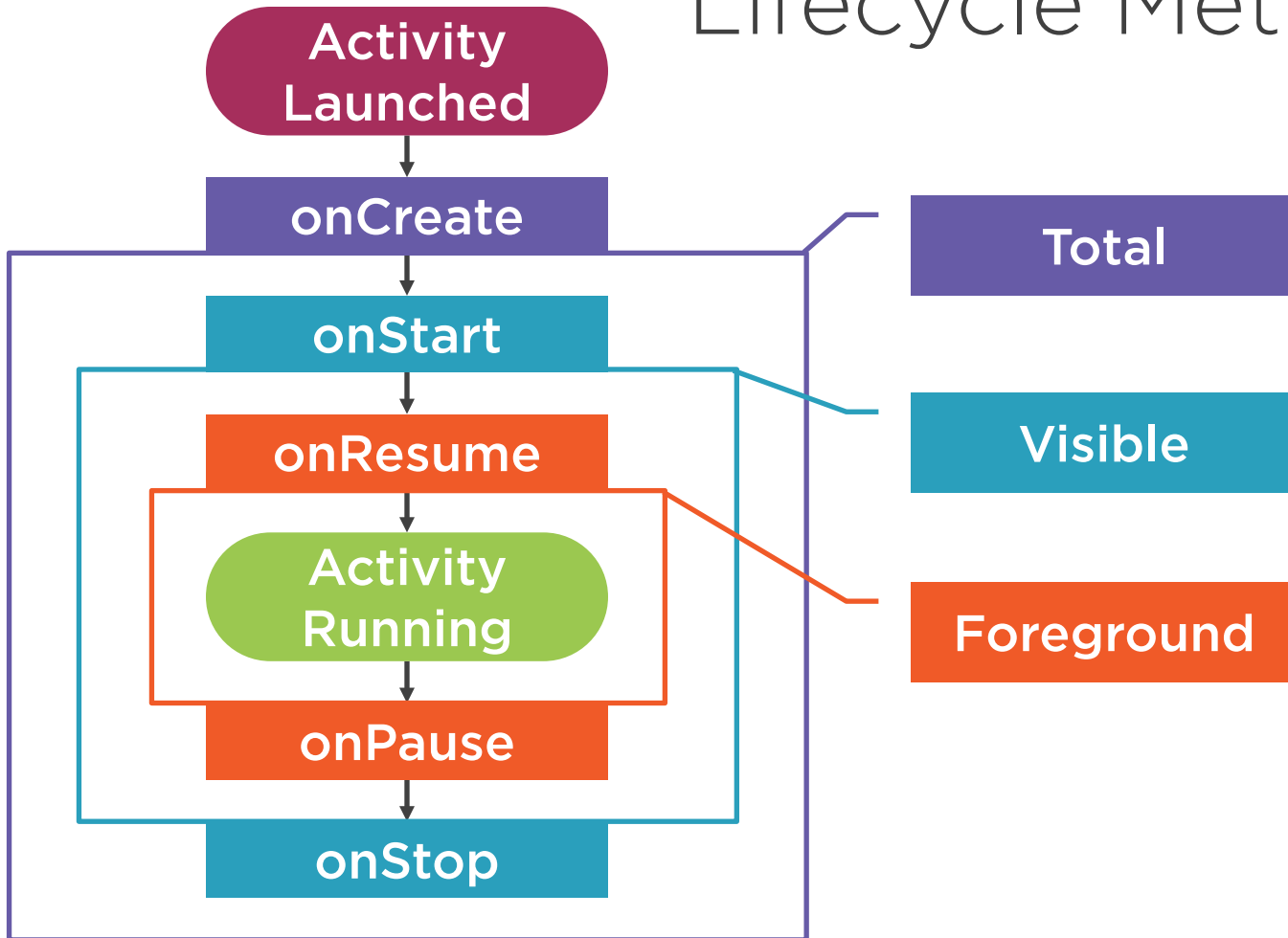
Lifecycle Methods



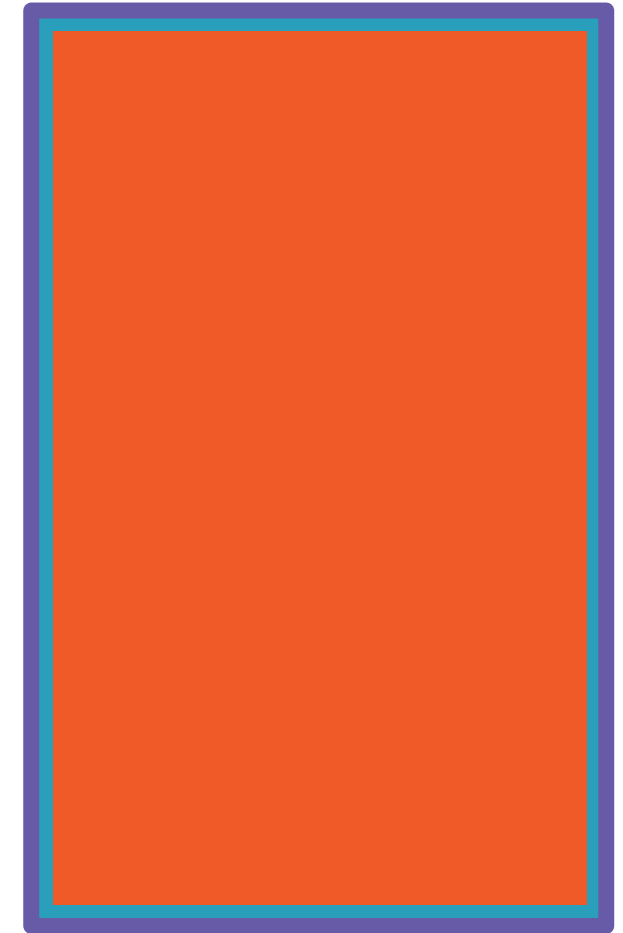
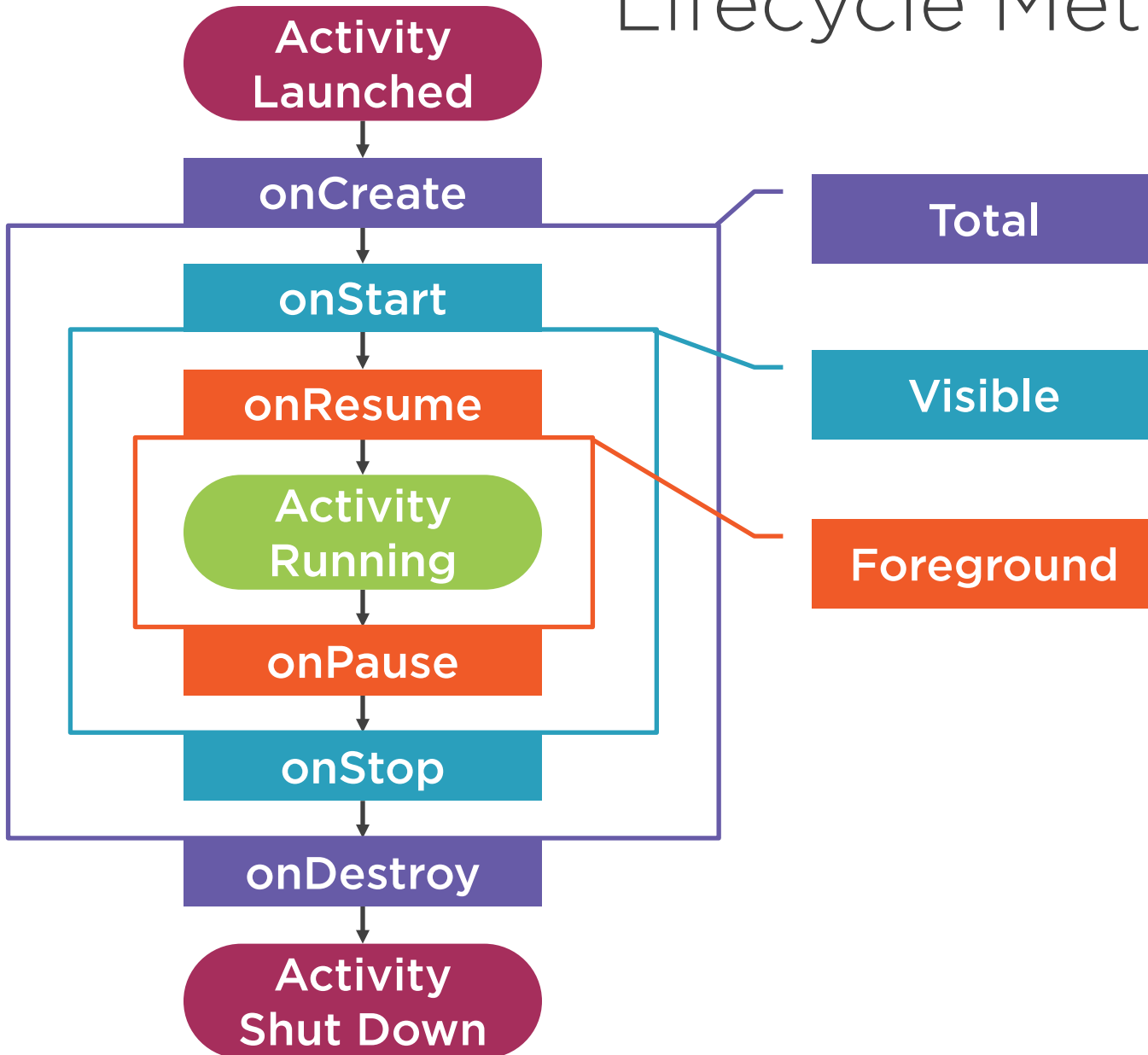
Lifecycle Methods



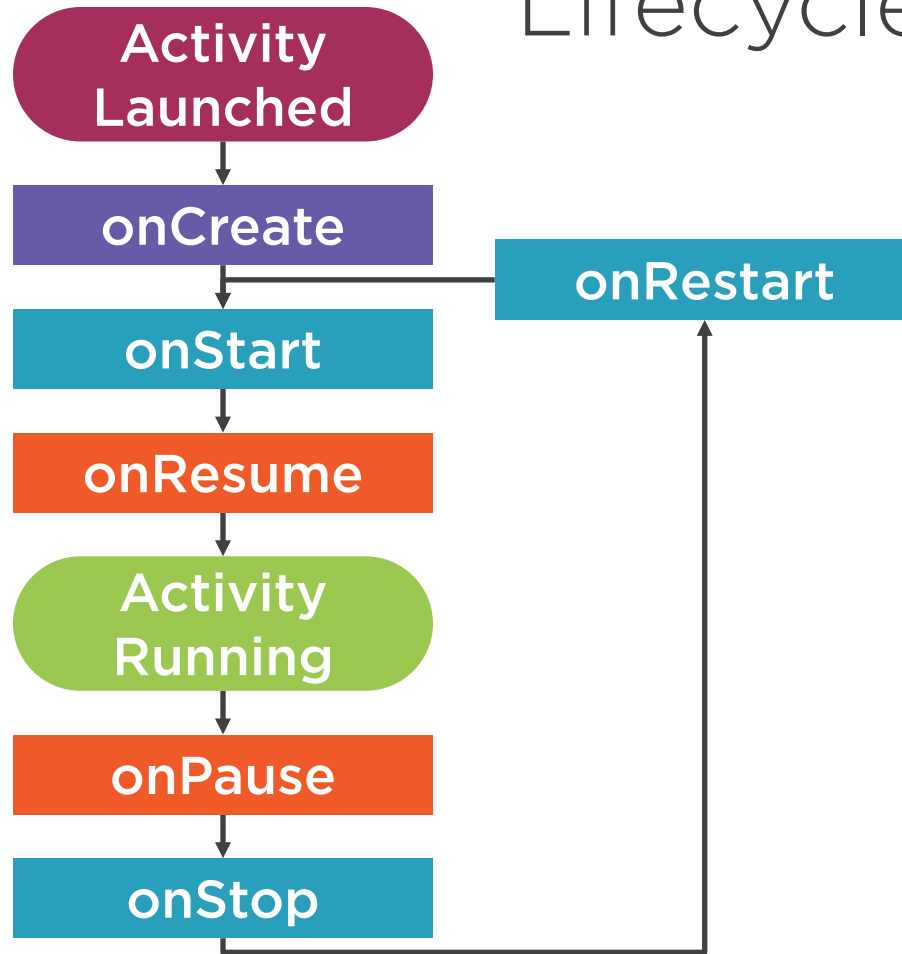
Lifecycle Methods



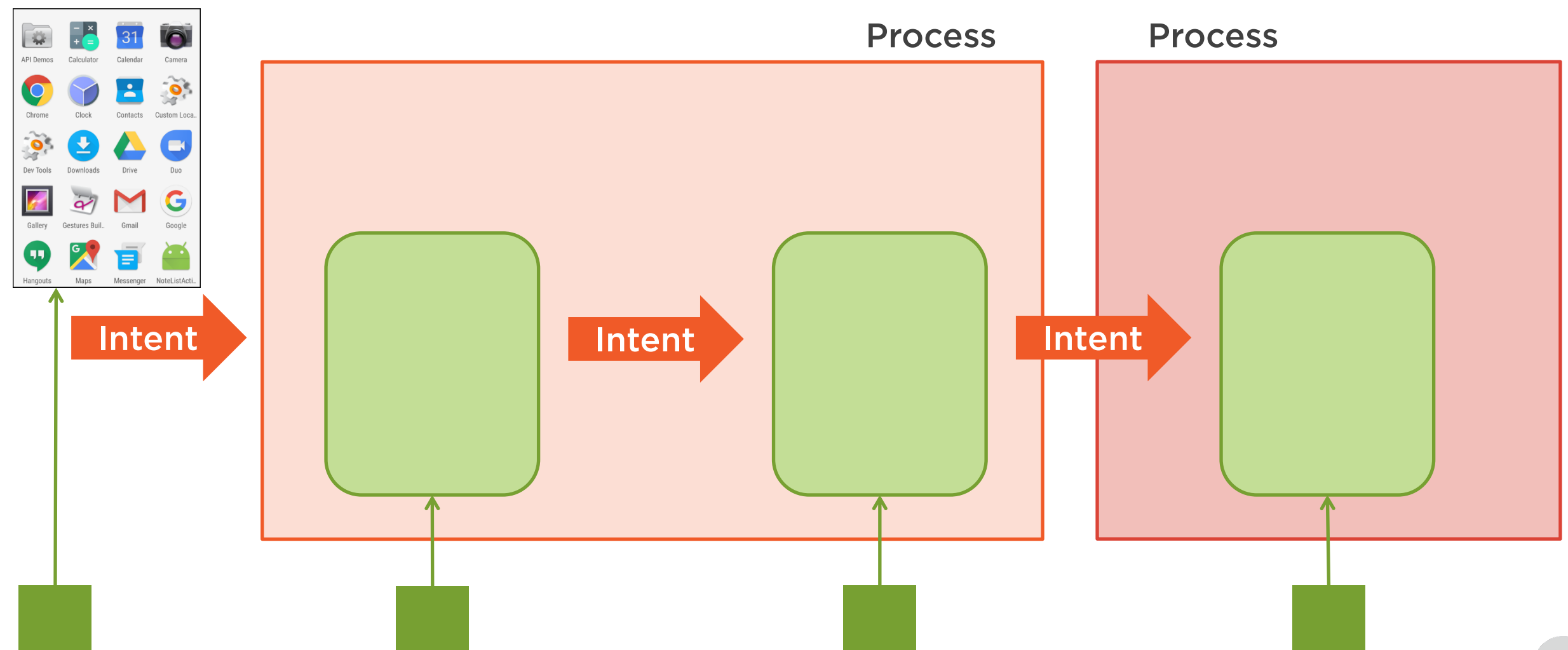
Lifecycle Methods



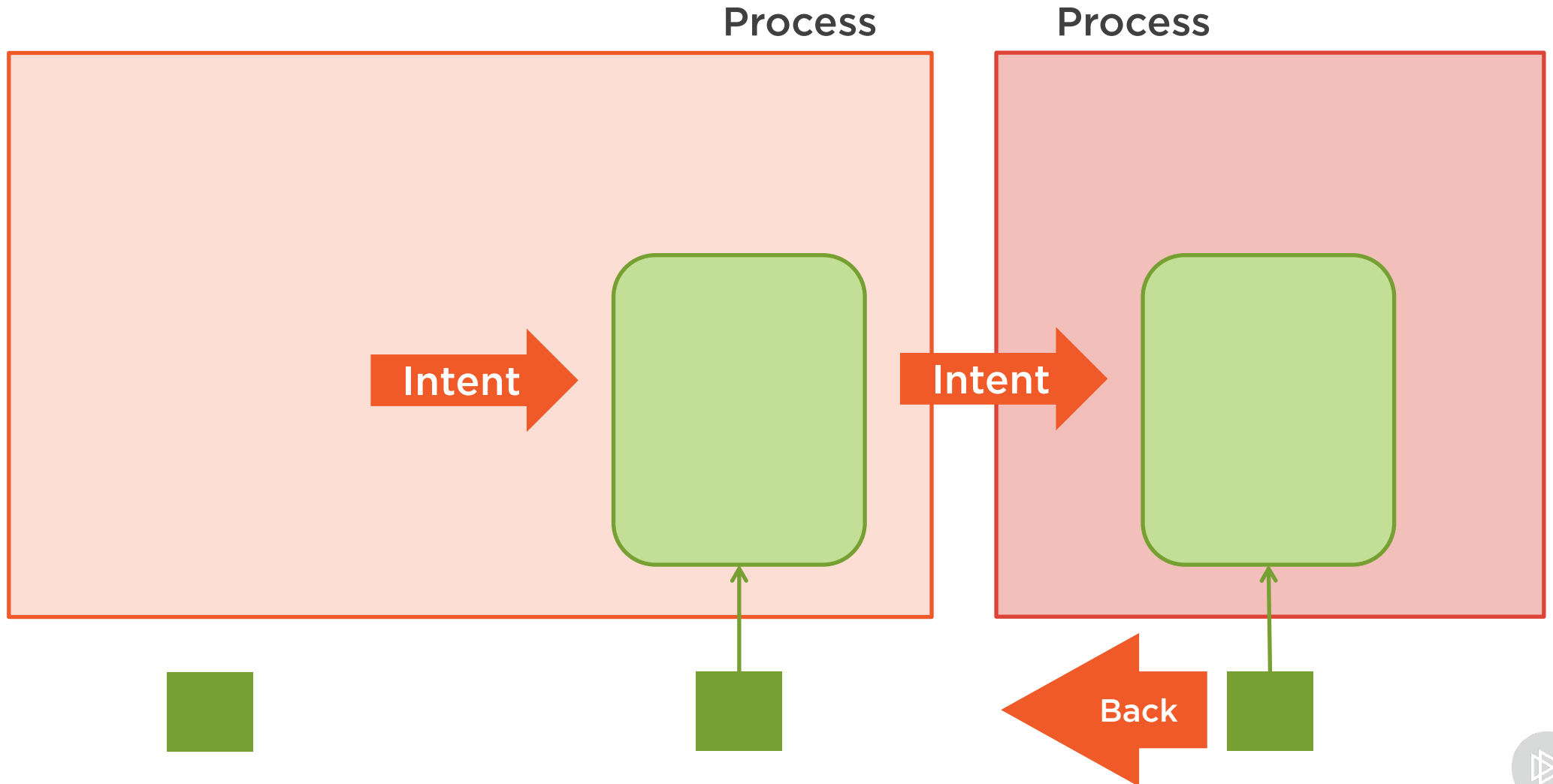
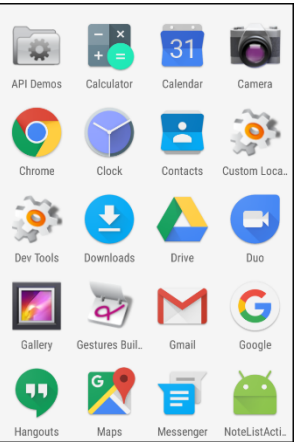
Lifecycle Methods



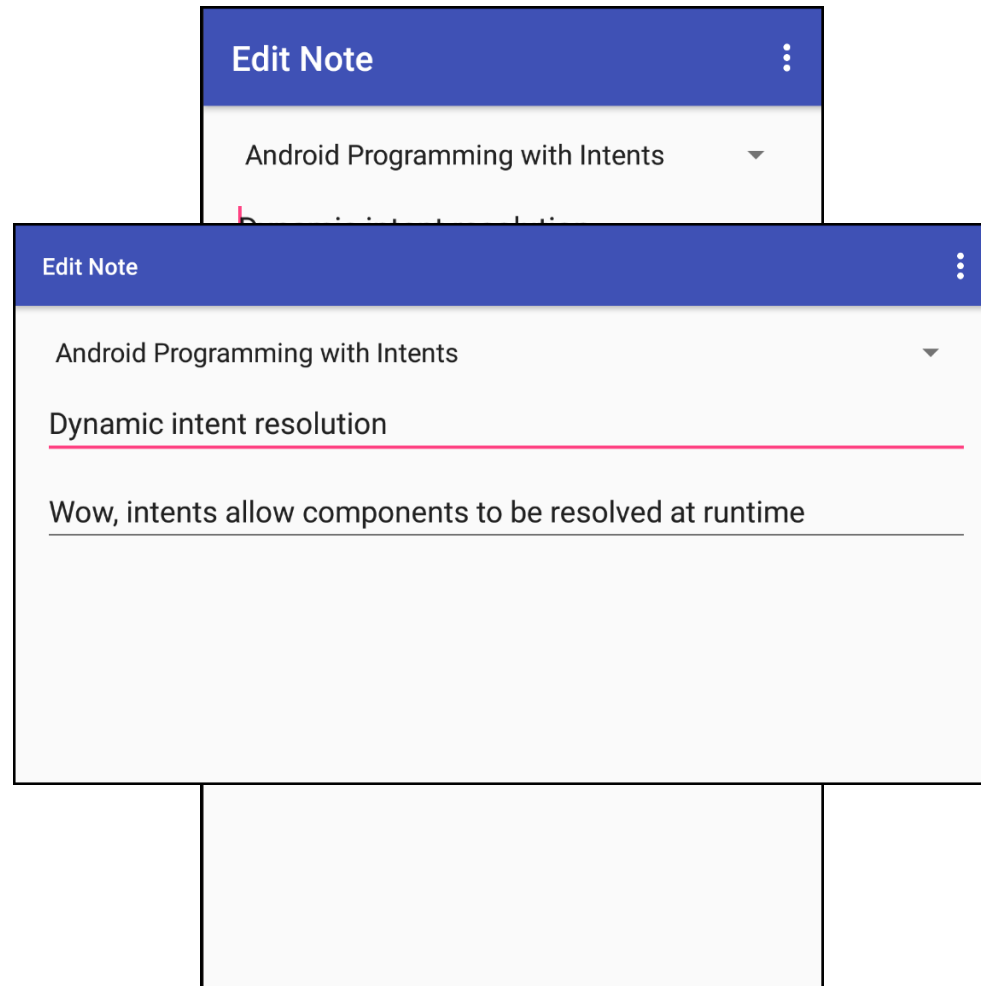
Activity State Management



Activity State Management



Activity State Management



Activity State Management

Activities provide state management

- Opportunity to save before destroy
- Saved state provided on restore

Saving state

- onSaveInstanceState
- Write Activity state to passed Bundle

Restoring state

- onCreate
- Receives saved Bundle on restore
- Bundle is null on initial create
- Intent remains available on restore



Summary



Activity lifecycle

- Total lifetime
- Visible lifetime
- Foreground lifetime
- Methods for start/end of each lifetime

Activity state management

- Activities often destroyed & restored
- Save state in `onSaveInstanceState`
- Saved state passed to `onCreate`

