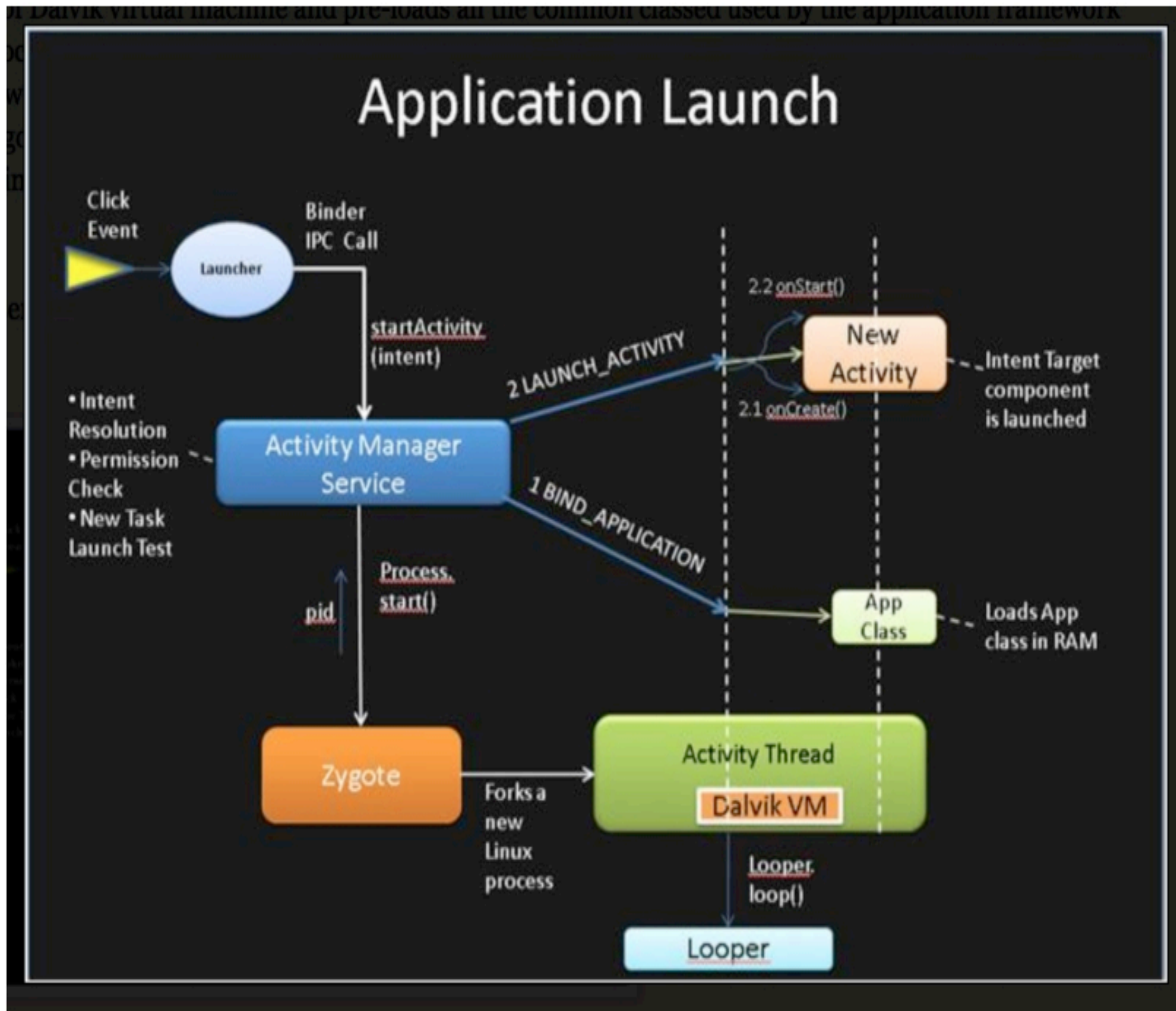


Handheld Application Development

Lec 3 : Activity lifecycle

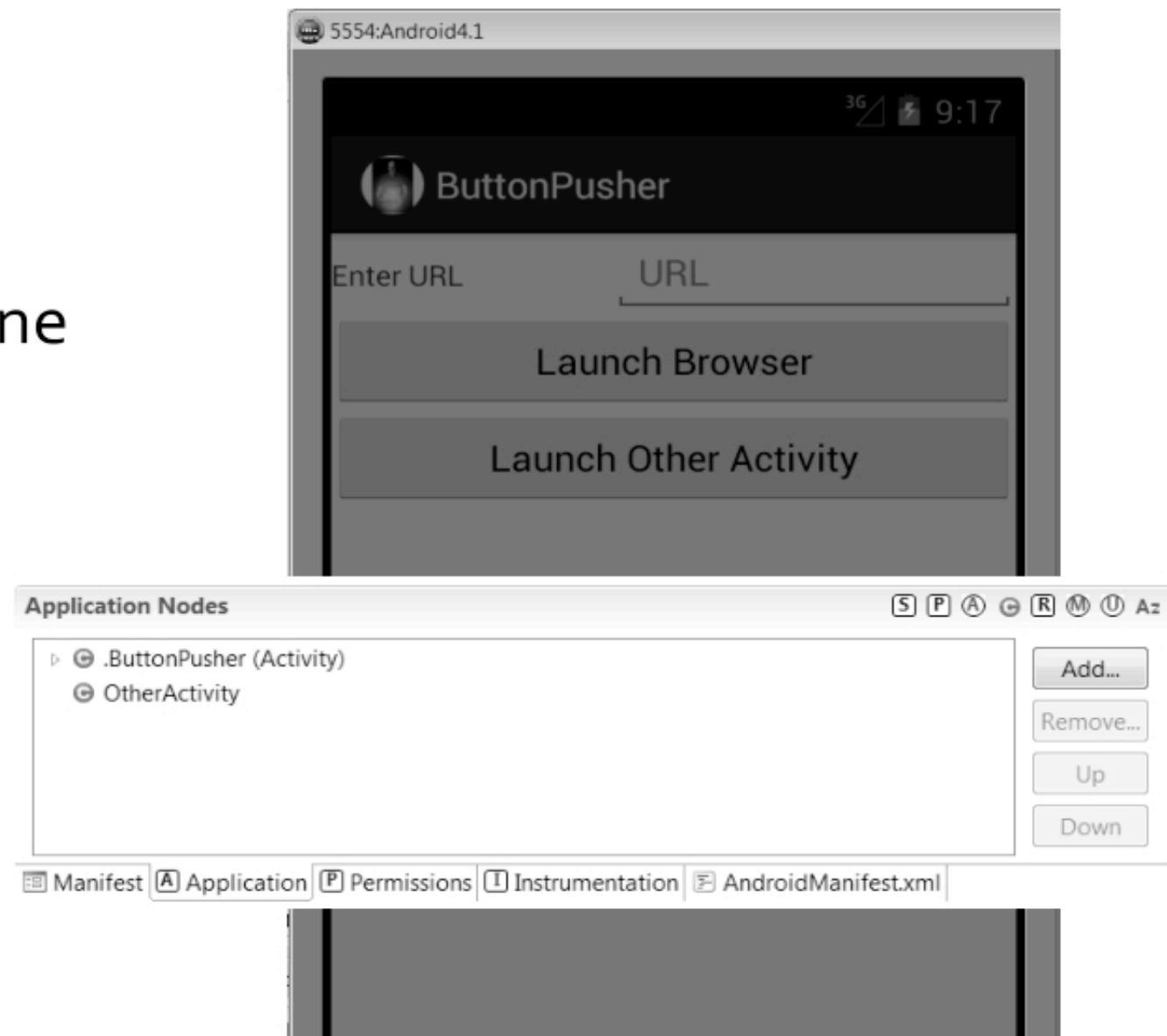
Ekarat Rattagan, Ph.D.



Reference : <https://android.jlelse.eu/android-application-launch-explained-from-zygote-to-your-activity-oncreate-8a8f036864b>

Activity

- Provides a visual interface for user interaction
- Typically supports one thing a user can do
 - View an email message
 - Show a login screen
- Applications can include several activities



Tasks

- A Task is a chain of related Activities
 - Task not necessarily provided by a single application
- Gives the illusion that multiple, unrelated Activities were developed as part of the same application

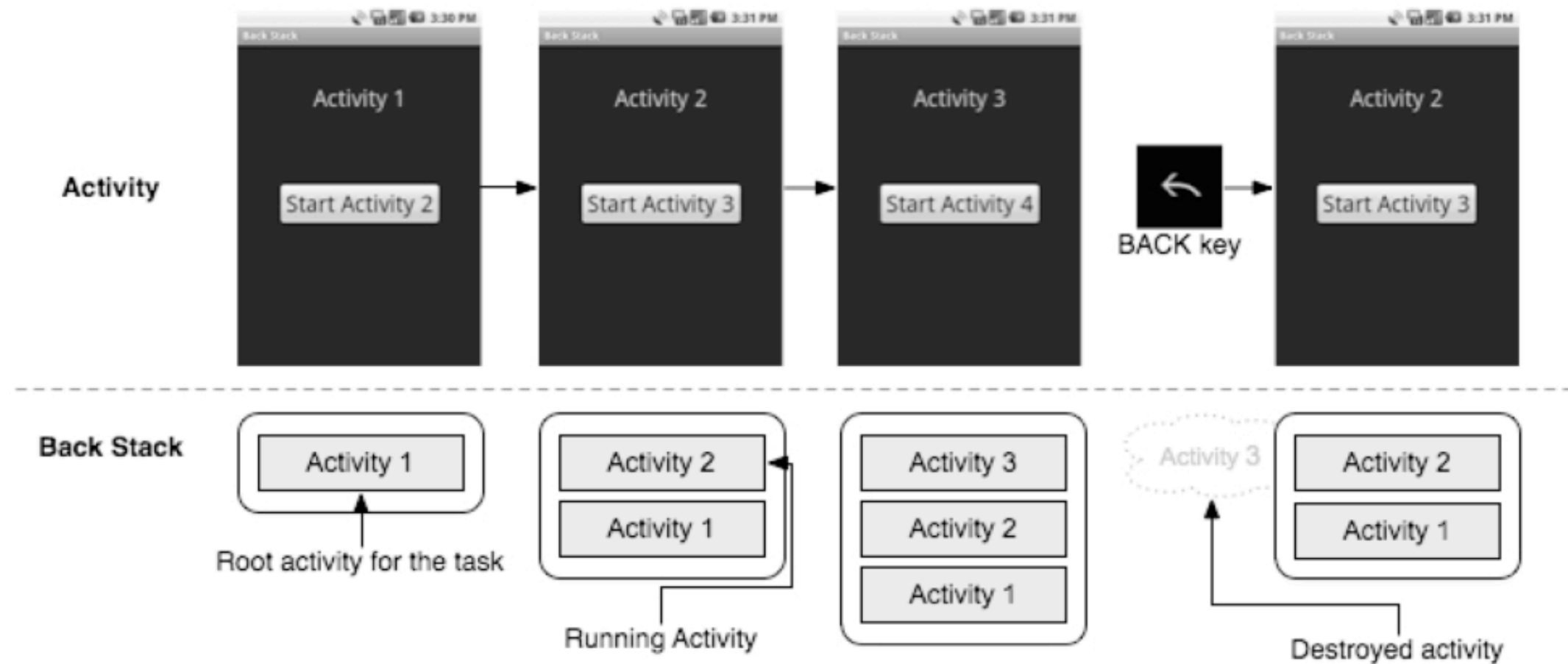


Tasks

- The task's Activity objects are stored on a "back stack" with the currently running Activity at the top
- At runtime
 - Launching an Activity places it on top of the stack
 - Hitting BACK button pops current activity off the stack



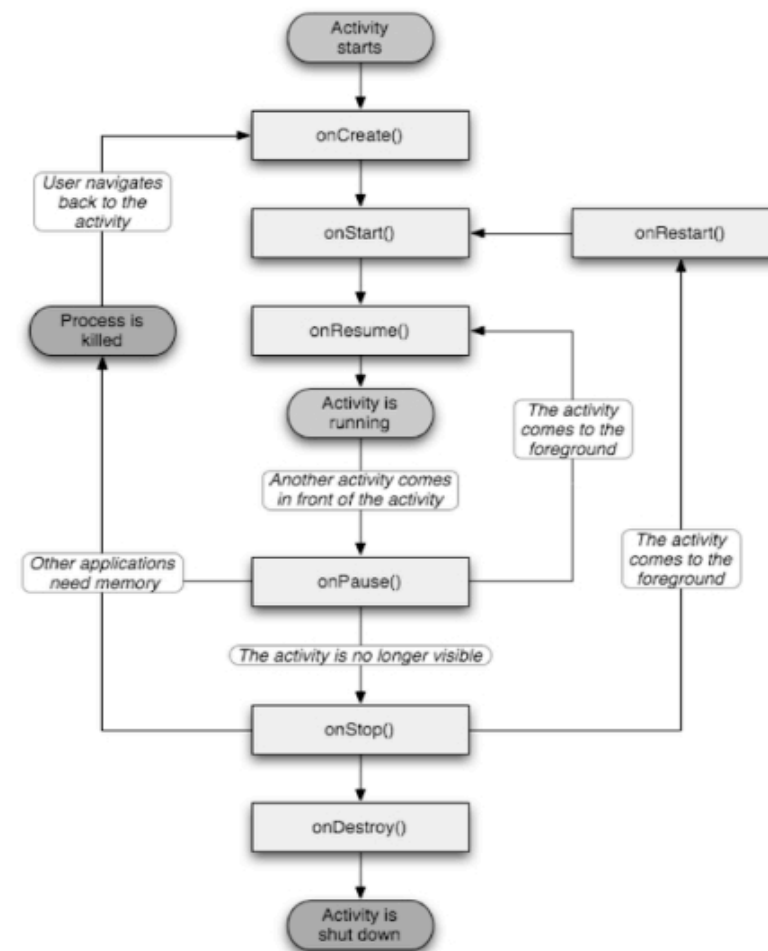
Task Stack



<http://developer.android.com/guide/topics/fundamentals/tasks-and-back-stack.html>

Activity Lifecycle Methods

- An Activity has several important methods that are called by the Android runtime to control its life-cycle:
 - **onCreate()** – this method is called when the Activity is first created. You will almost always override this method & provide setup code in this method
 - **onStop()** – this method is called when the user leaves your Activity for another Activity (your Activity is not visible)
 - **onPause()** – the user leaves your Activity but it is still visible in the background (e.g. transparent or partial foreground coverage)

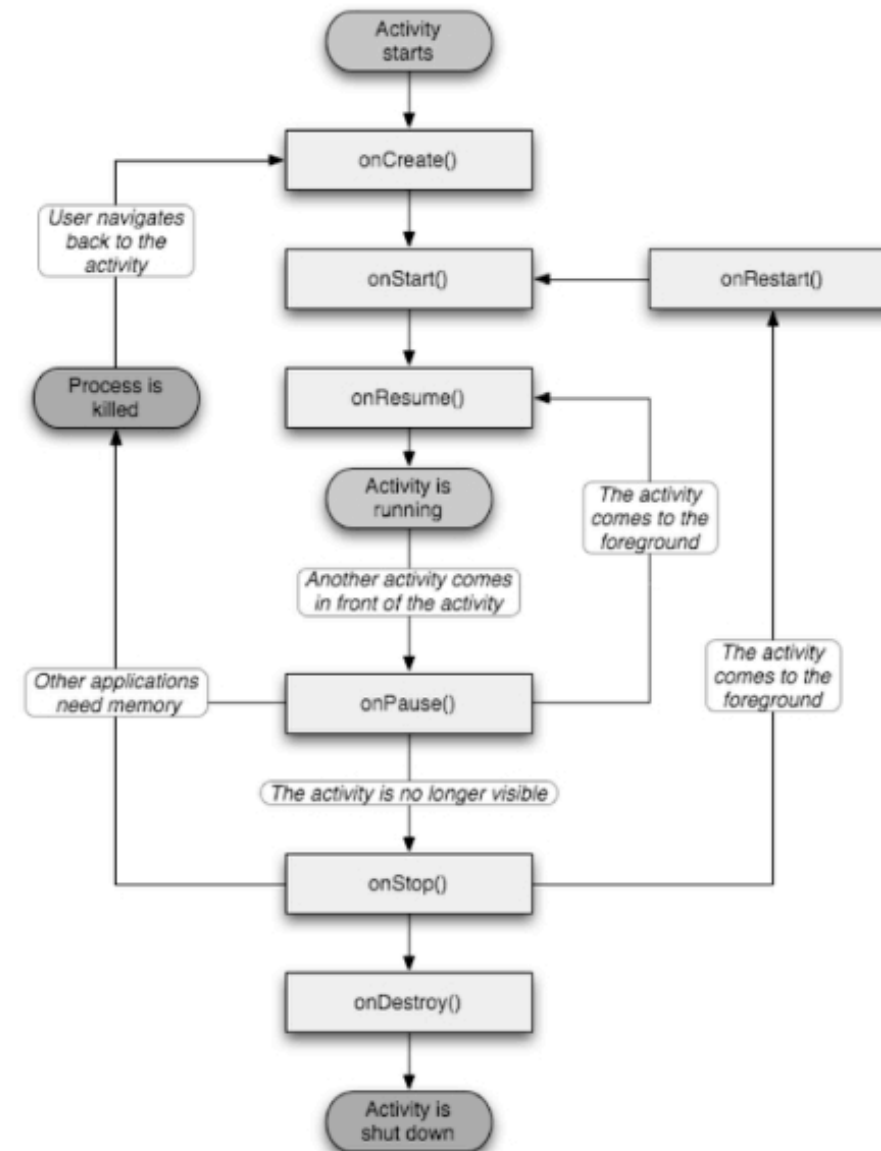


Why we need Activity lifecycle?

<http://www.akexorcist.com/2016/04/why-do-we-need-to-know-about-activity-life-cycle-th.html>

Activity Lifecycle Methods

- An Activity has several important methods that are called by the Android runtime to control its life-cycle:
 - **onResume()** – this method is called when the user returns to your Activity from another Activity
 - **onStart()** – this method is called after your Activity is created or stopped
 - **onDestroy()** – the Activity is being released & needs to clean up all resources



Reference

<https://stackoverflow.com/questions/8515936/android-activity-life-cycle-what-are-all-these-methods-for>