

# Introduction to Android, for .NET Developers



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# Urban Safari

- <http://gourbansafari.com>



# Android Overview

# Android Overview

- 900 Million Activations (July 2013)

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- 1.5 Million Daily

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- 900 Million Activations (July 2013)
- 1.5 Million Daily
- 4,000 devices in 2012 to 11,000 in 2013.



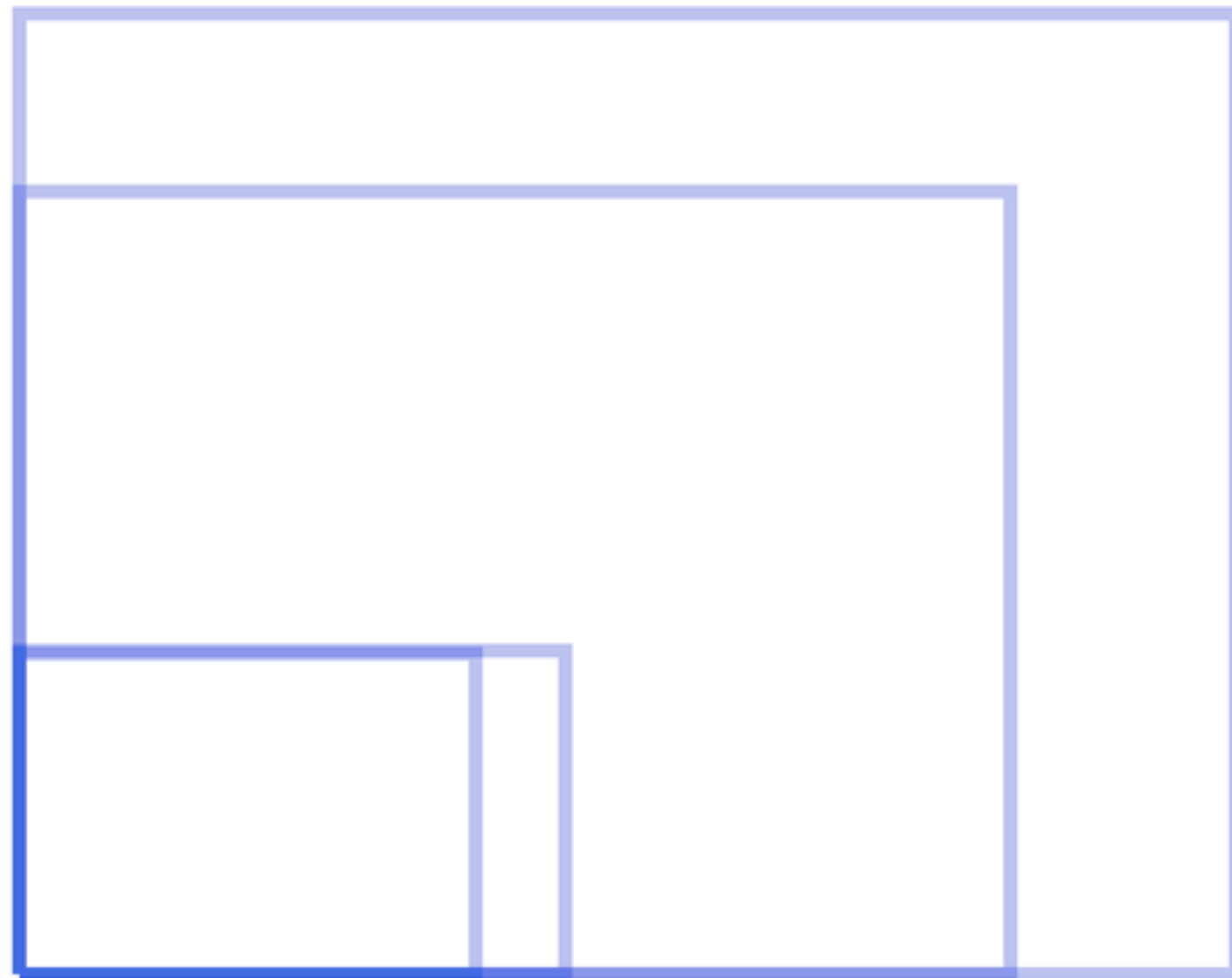
# Screen Size vs iOS

iOS

Android



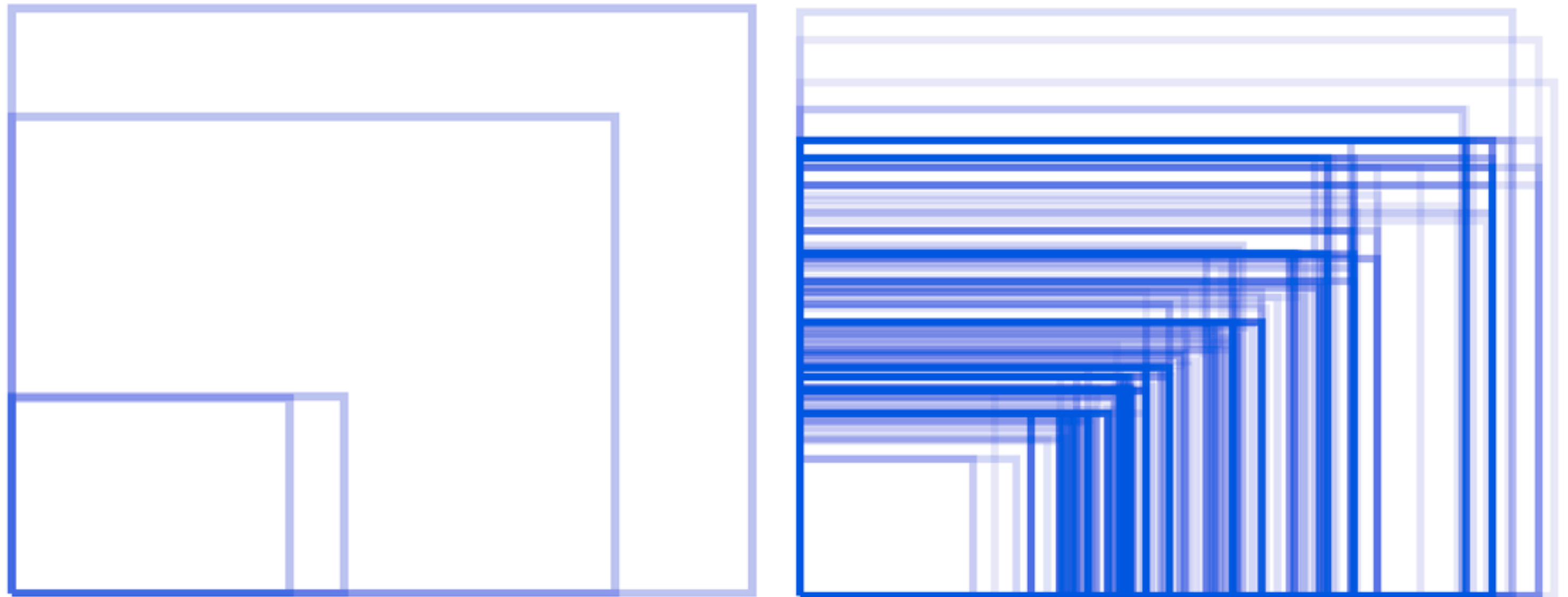
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iOS

Android

# Screen Size vs iOS

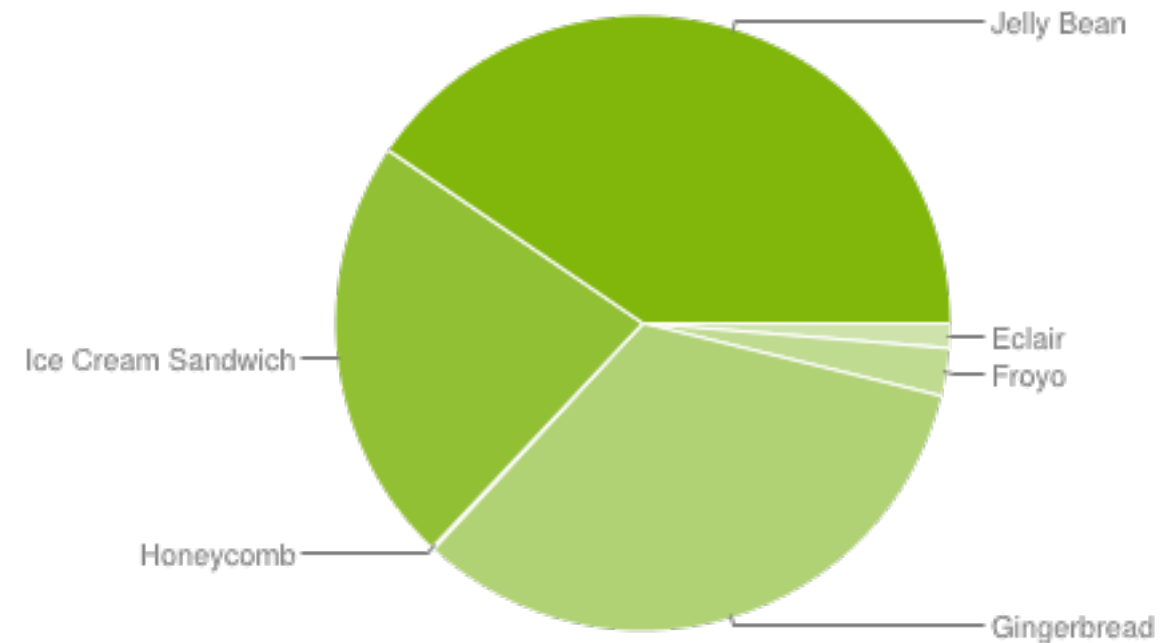


iOS

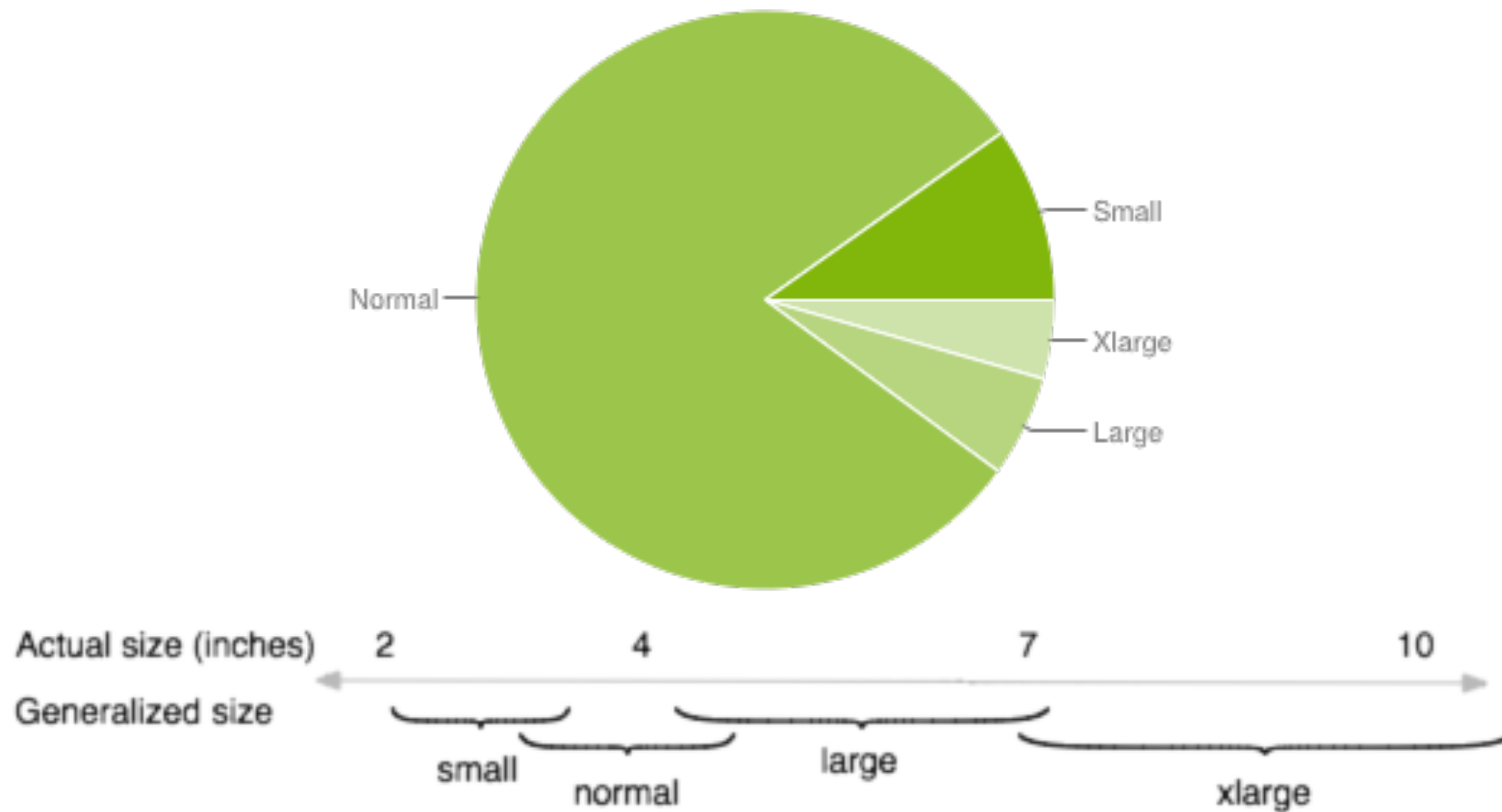
Android

# Android Ecosystem

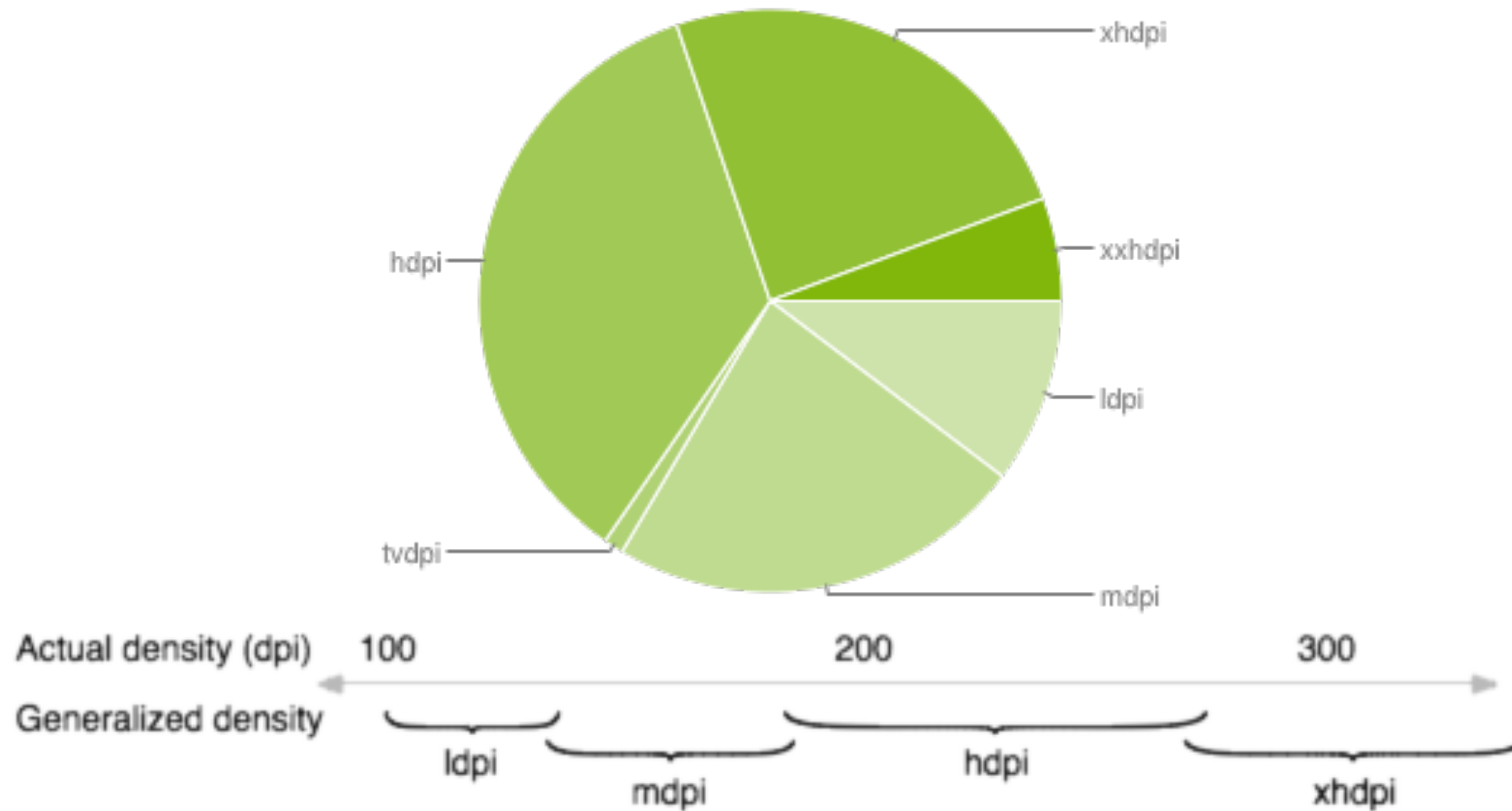
Version	Codename	API	Distribution
1.6	Donut	4	0.1%
2.1	Eclair	7	1.2%
2.2	Froyo	8	2.5%
2.3 - 2.3.2	Gingerbread	9	0.1%
2.3.3 - 2.3.7		10	33.0%
3.2	Honeycomb	13	0.1%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	22.5%
4.1.x	Jelly Bean	16	34.0%
4.2.x		17	6.5%



# Screen Sizes



# Screen Densities



# Developer Overview



# Developer Overview

- Flexible



# Developer Overview

- Flexible
- Complex





# Android Application

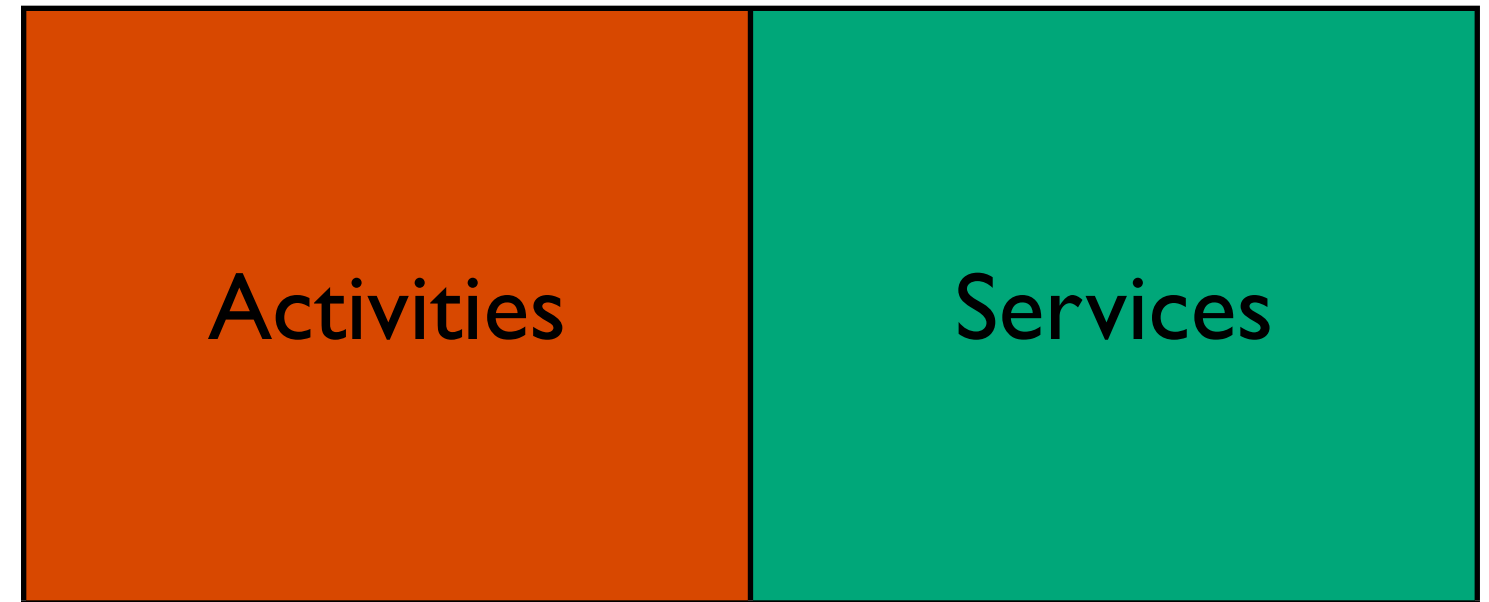
# Android Application

- Activities contain the UI for your app.



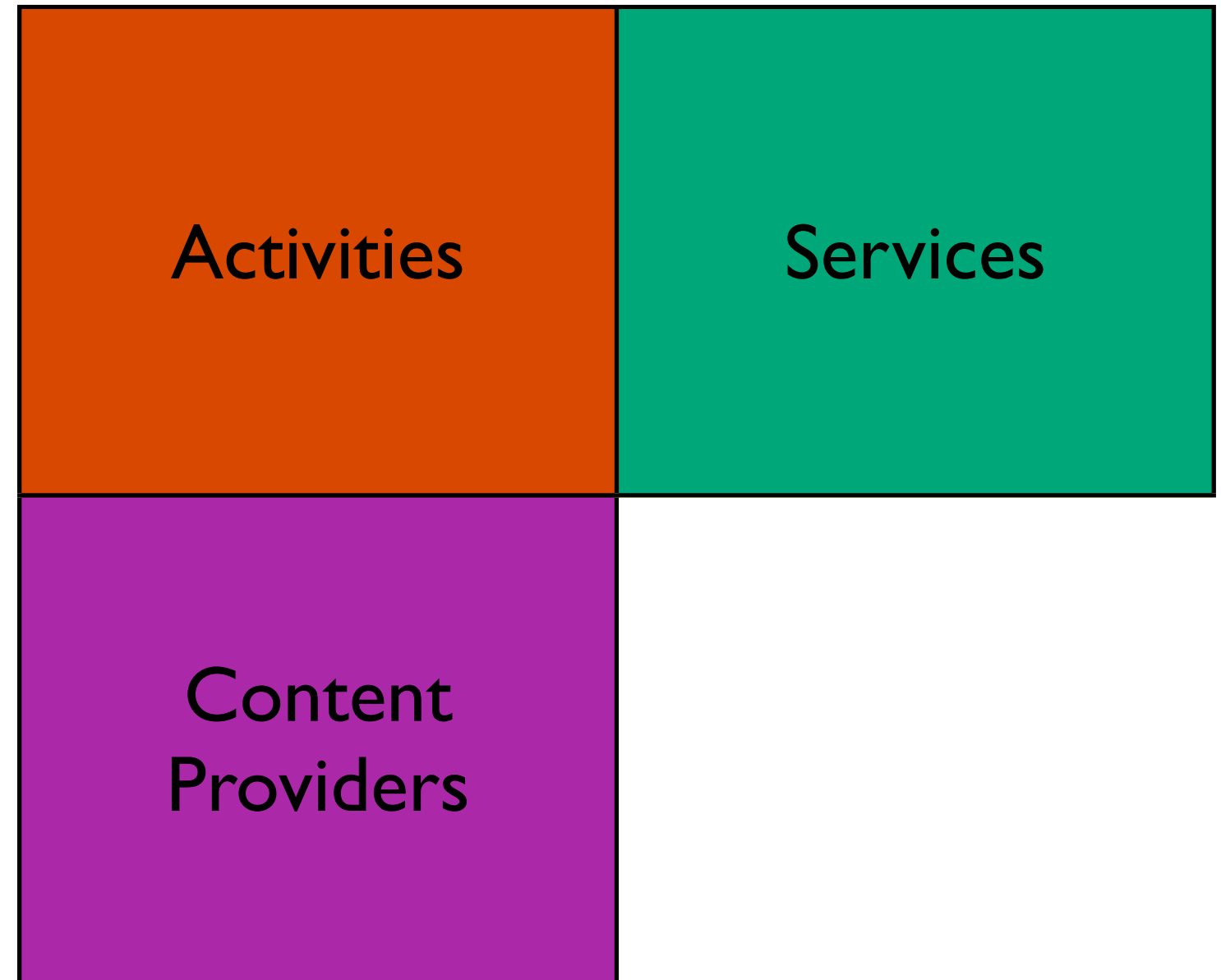
# Android Application

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- Services provide support for long running tasks



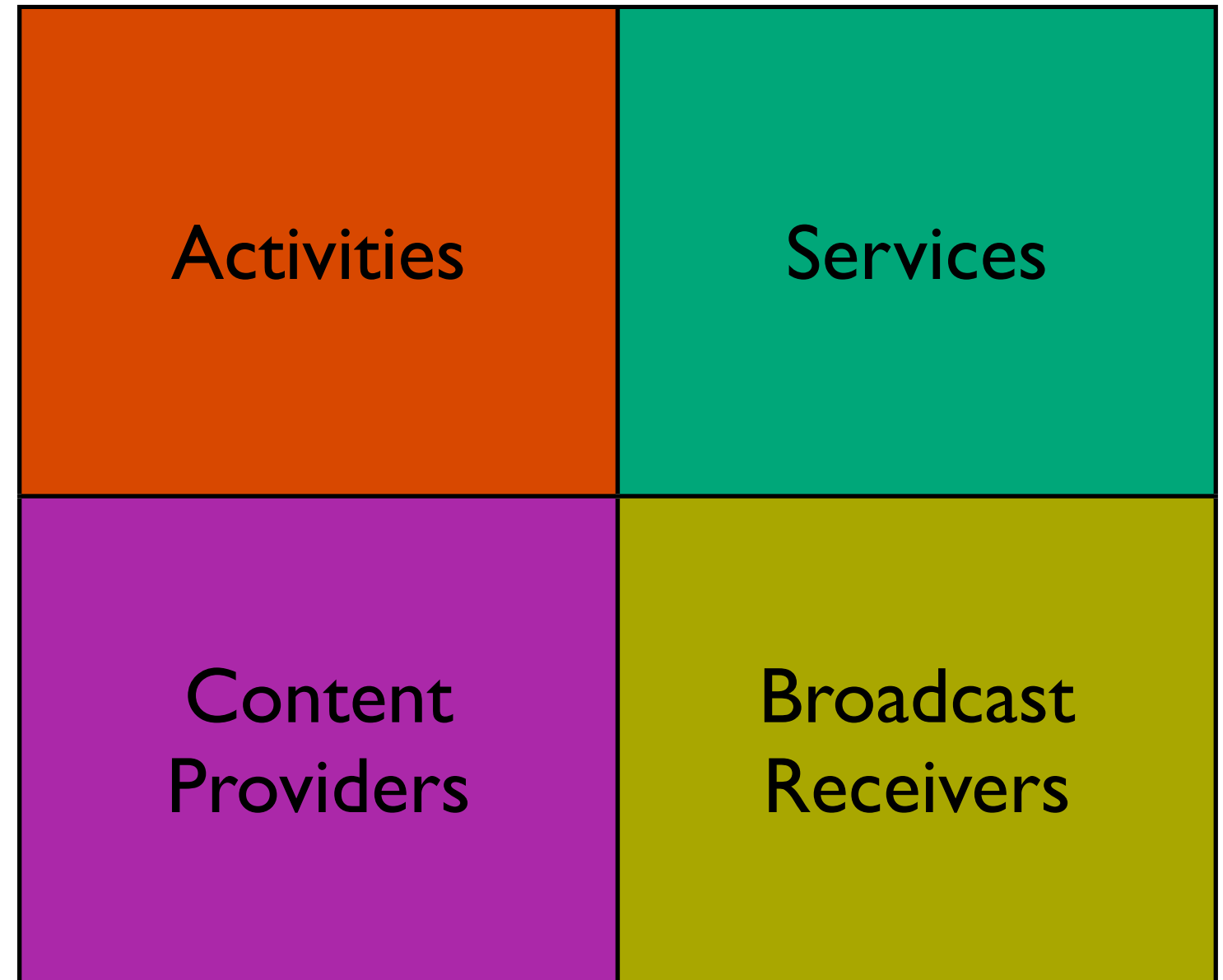
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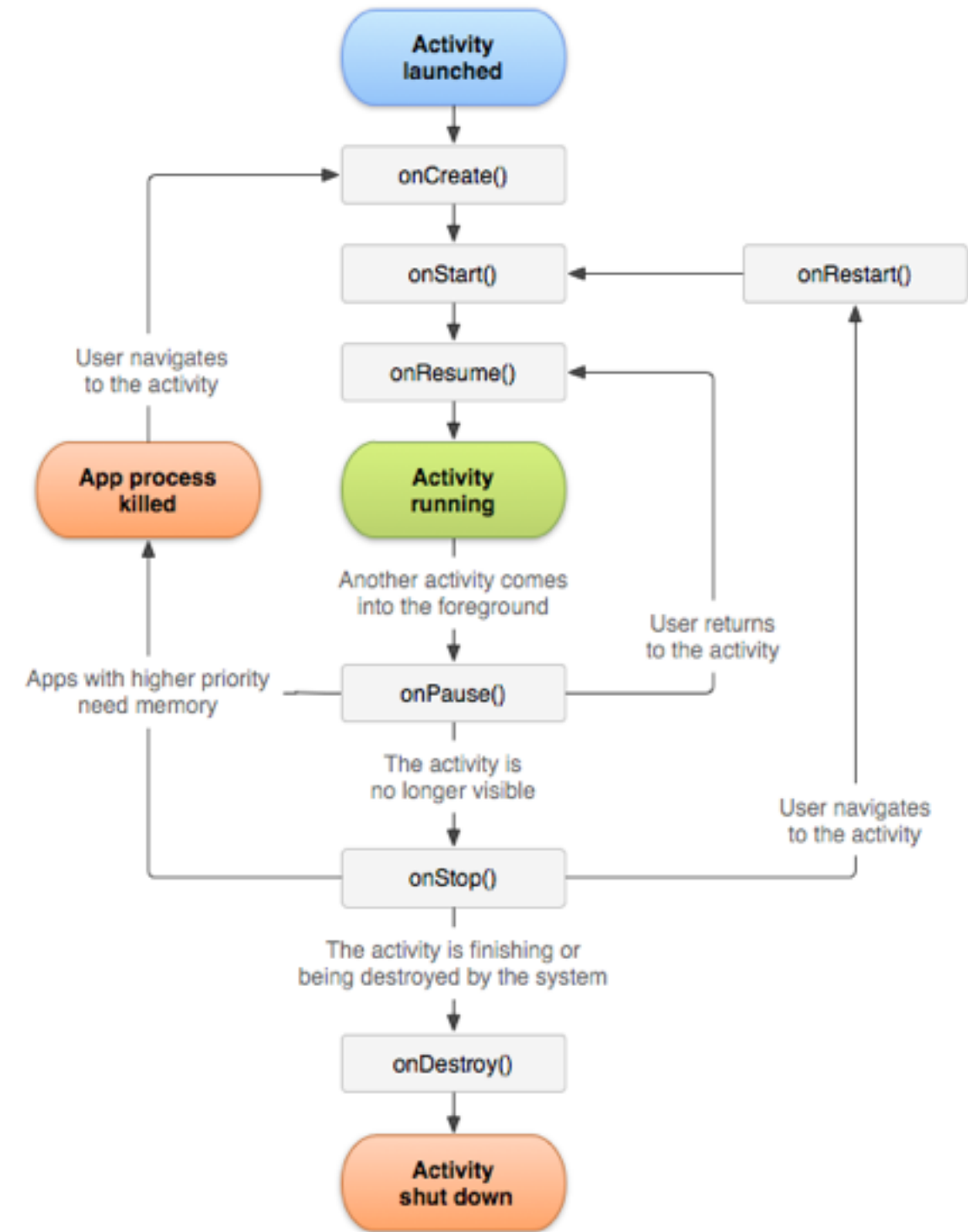
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- Services provide support for long running tasks
- Content Providers are an api for your data.
- Broadcast Receivers are system-wide event handlers.



# Activity Lifecycle

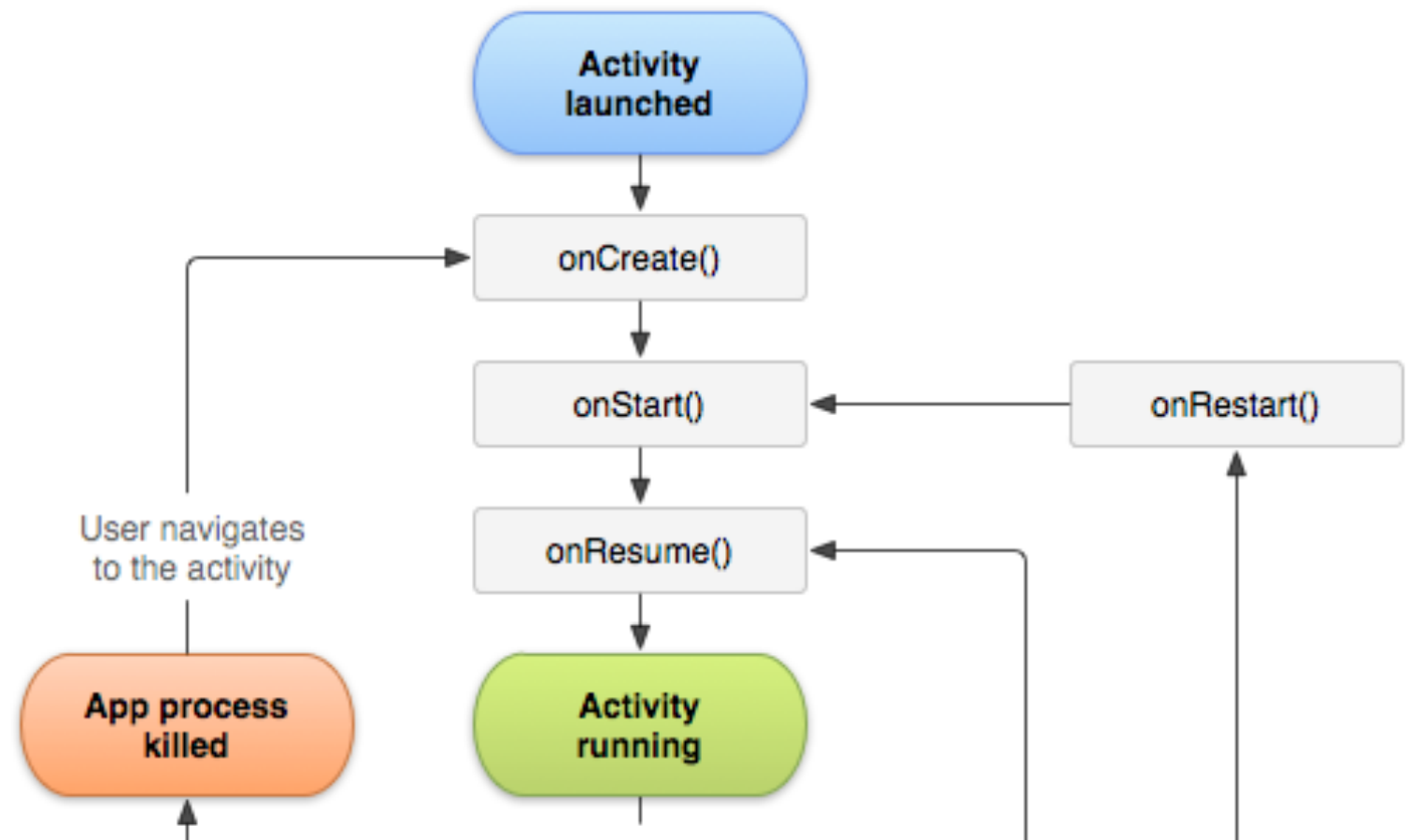
# Activity Lifecycle

- Similar to ASP.NET Form lifecycle



# Activity Lifecycle

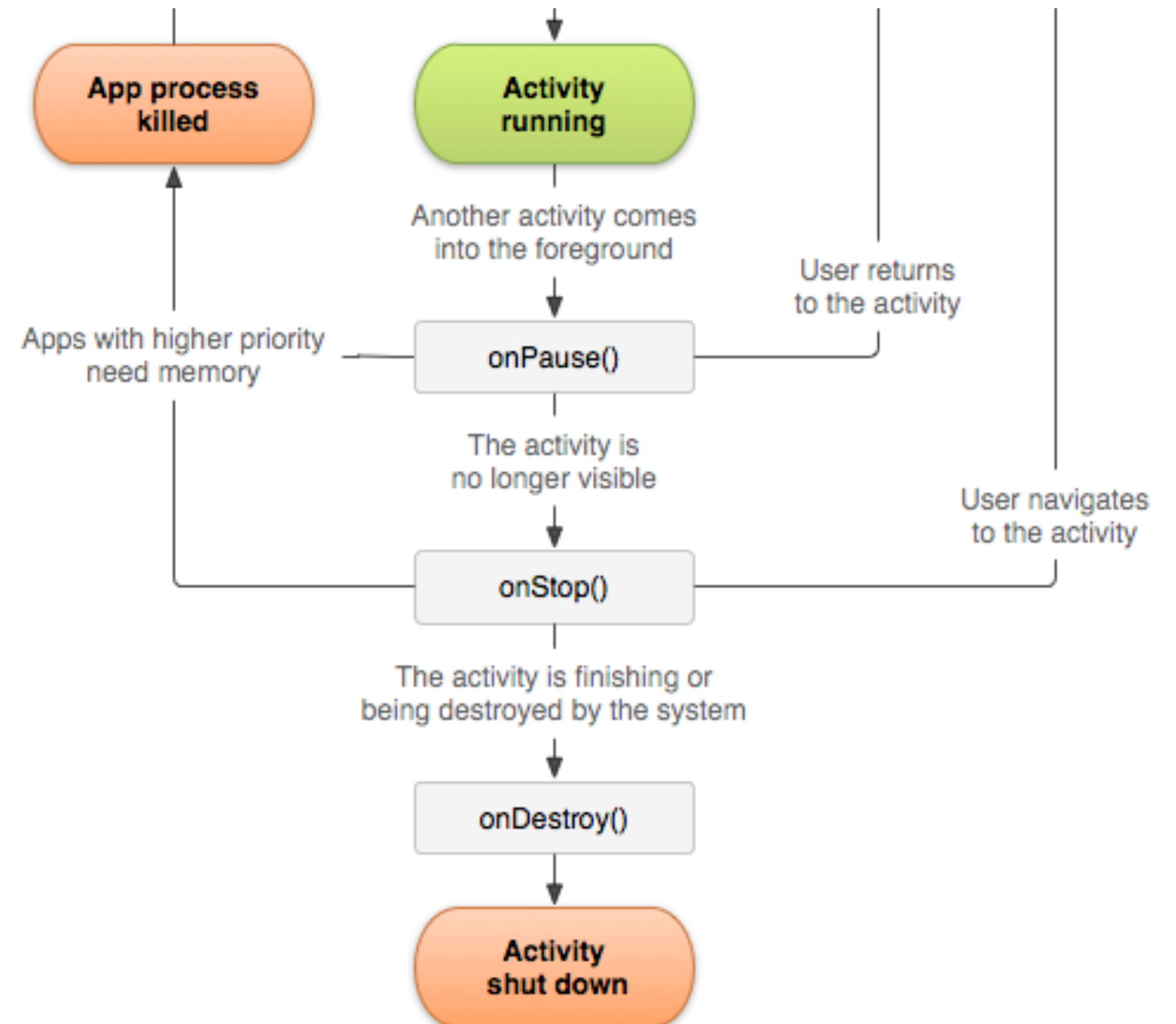
- Similar to ASP.NET Form lifecycle



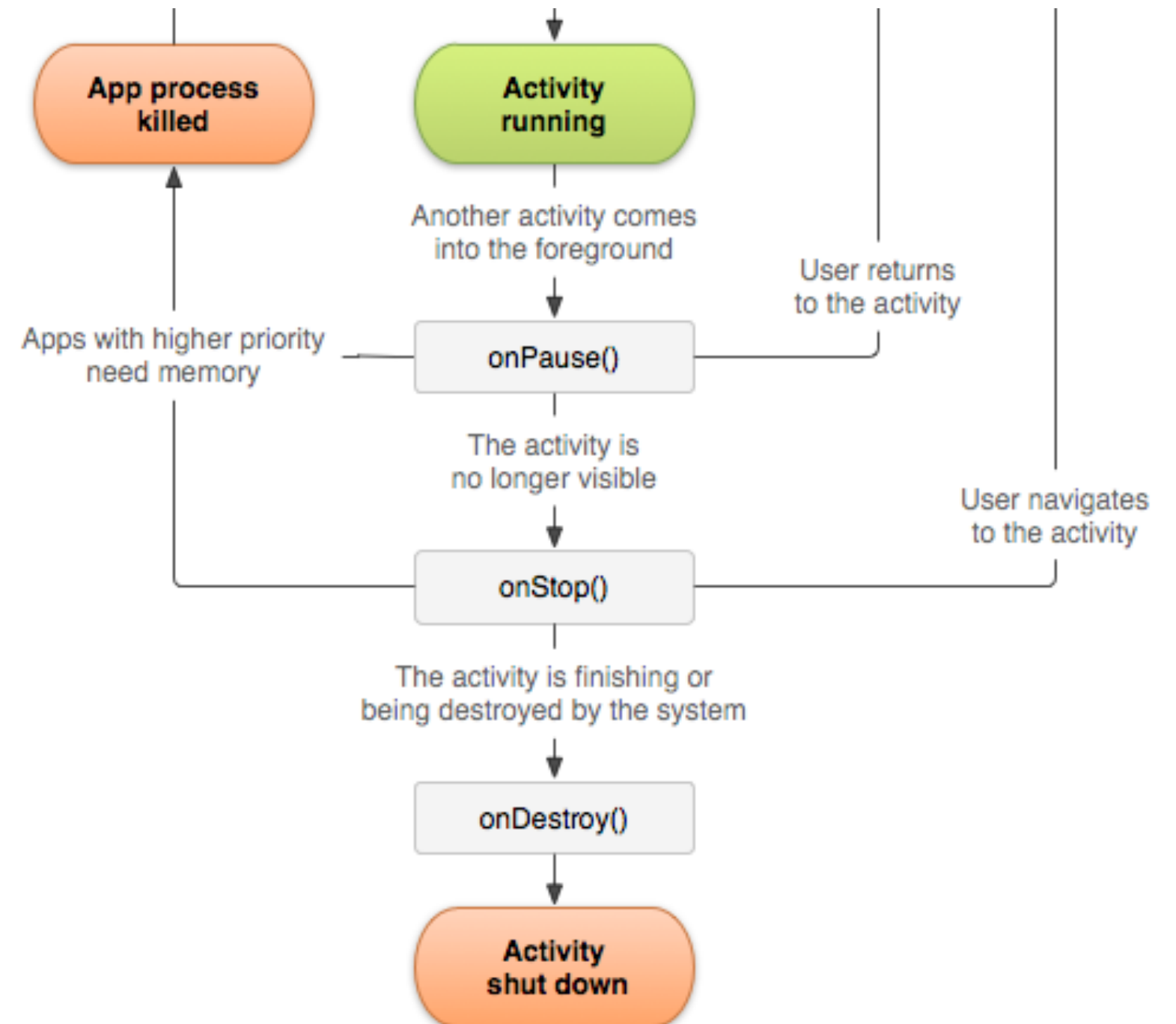


# Activity Lifecycle

- Similar to ASP.NET Form lifecycle



# Activity Lifecycle



- Similar to ASP.NET Form lifecycle
- Back Stack

# Layouts

- Absolute Layout
- Frame Layout
- Linear Layout
- Relative Layout
- Grid Layout (API 14)

# Layouts

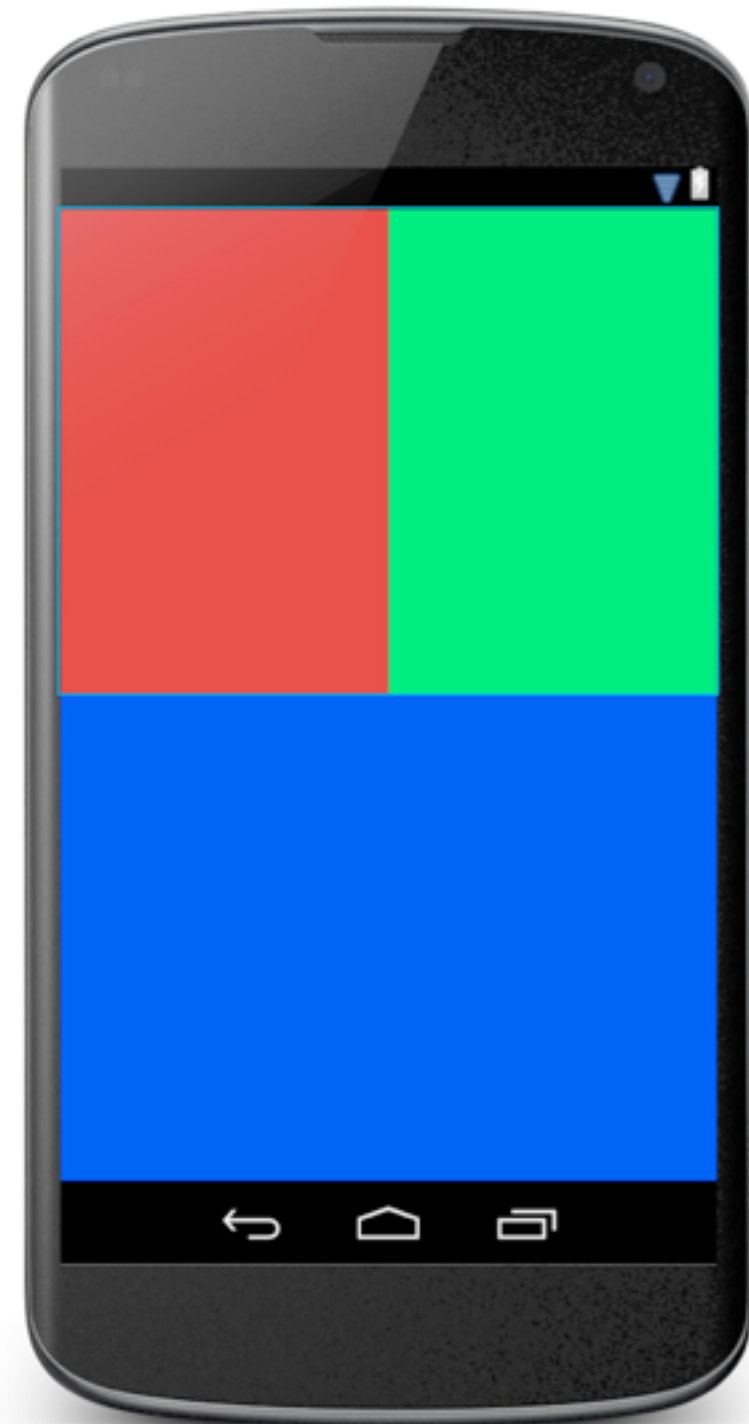
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Demo

# Pop Quiz

# Pop Quiz

- How to get this layout?



# Adapter based Layouts

# Adapter based Layouts

- List View



# Adapter based Layouts

- List View

## List View



Displays a scrolling single column list.

# Adapter based Layouts

- List View
- Grid View

List View



Displays a scrolling single column list.

Grid View



Displays a scrolling grid of columns and rows.

# Adapter based Layouts

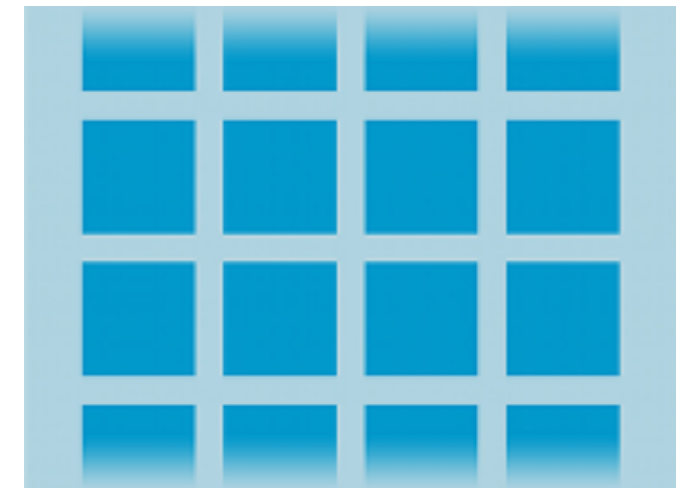
- List View
- Grid View
- Demo

List View



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Grid View

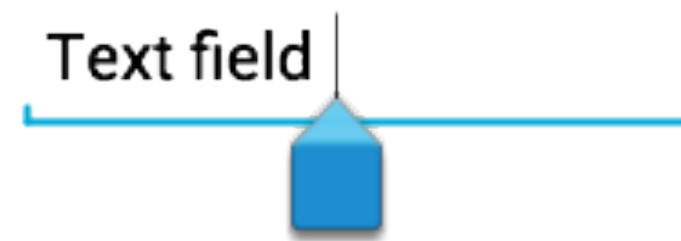
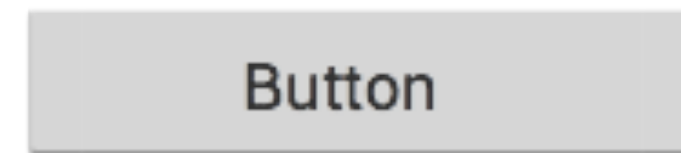


Displays a scrolling grid of columns and rows.

# Views

# Views

- Button, TextBox, CheckBox, RadioButton, Spinners (Dropdowns)



# Views

- Button, TextBox, CheckBox, RadioButton, Spinners (Dropdowns)
- Custom Views

# Views

- Button, TextBox, CheckBox, RadioButton, Spinners (Dropdowns)
- Custom Views
- Compound Views

# Fragments

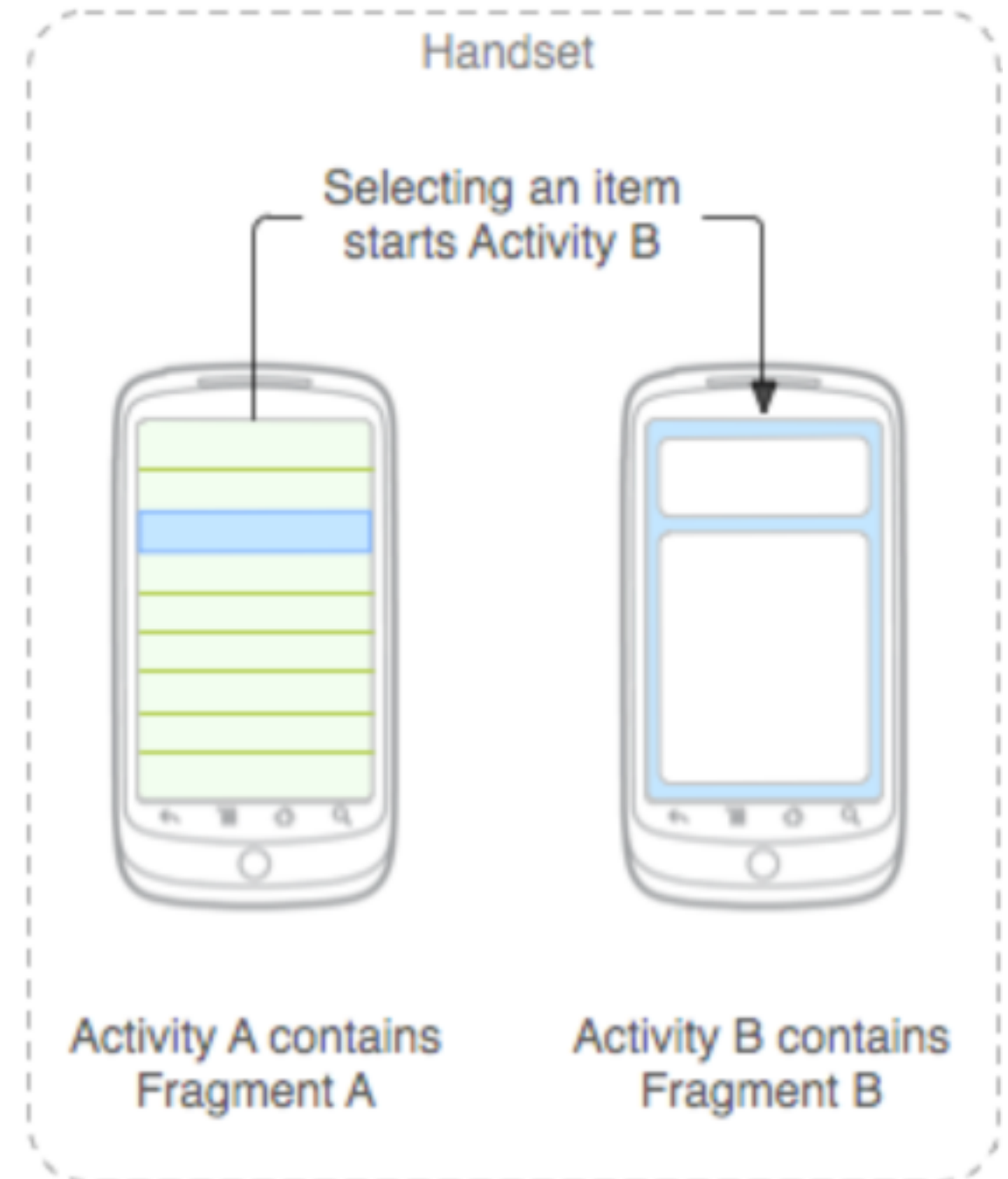


# Fragments

- Reusable components

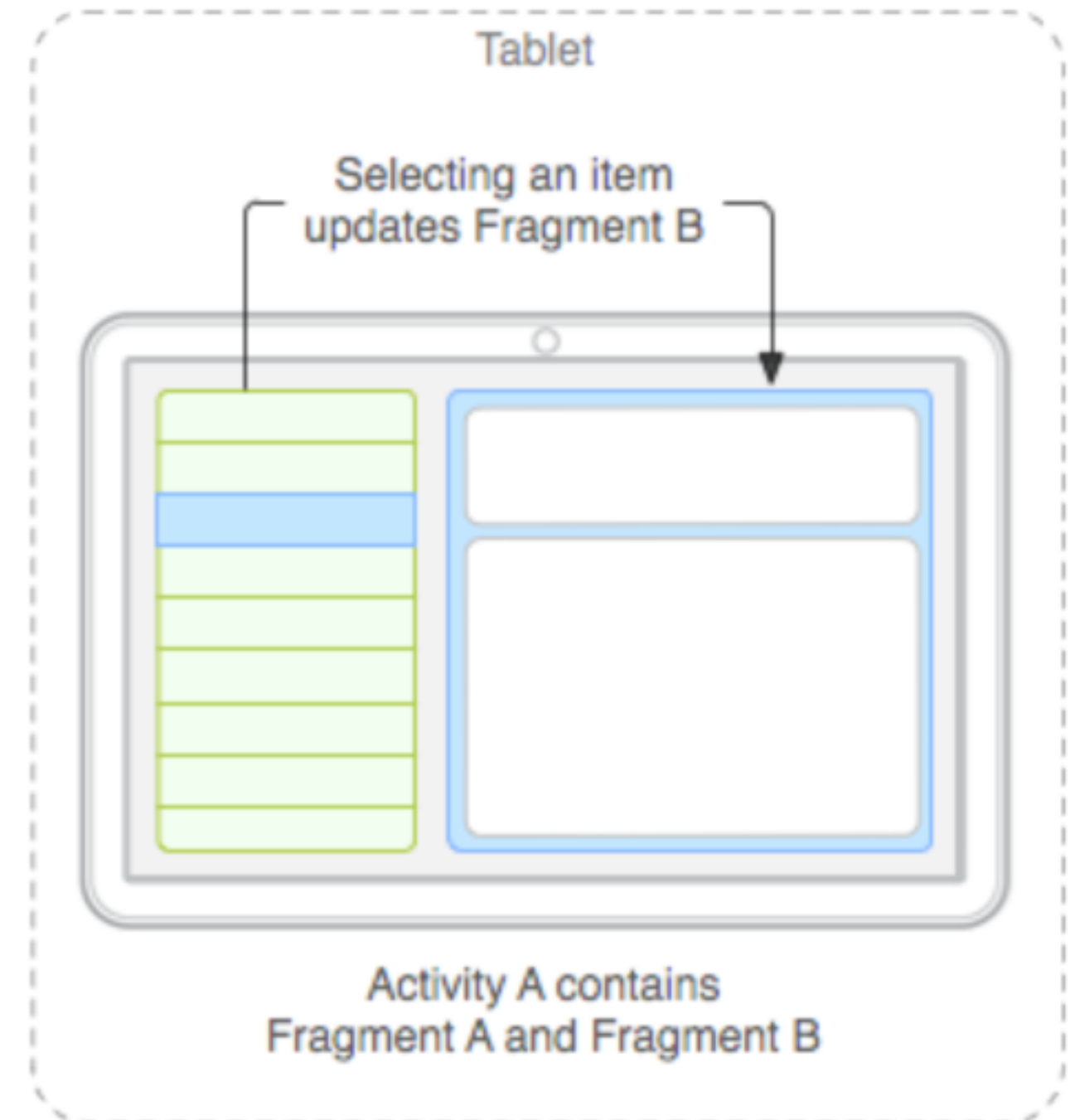
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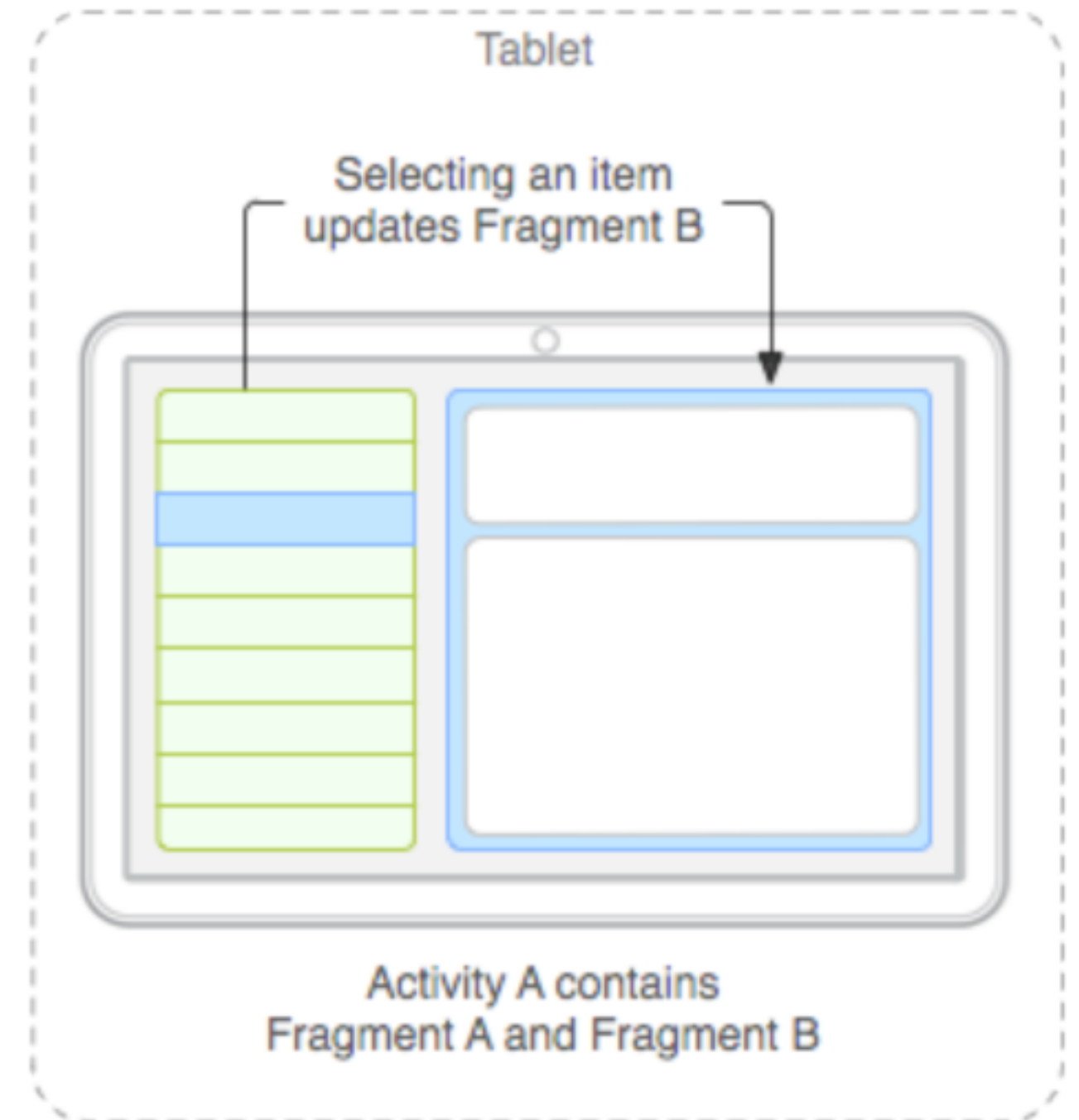
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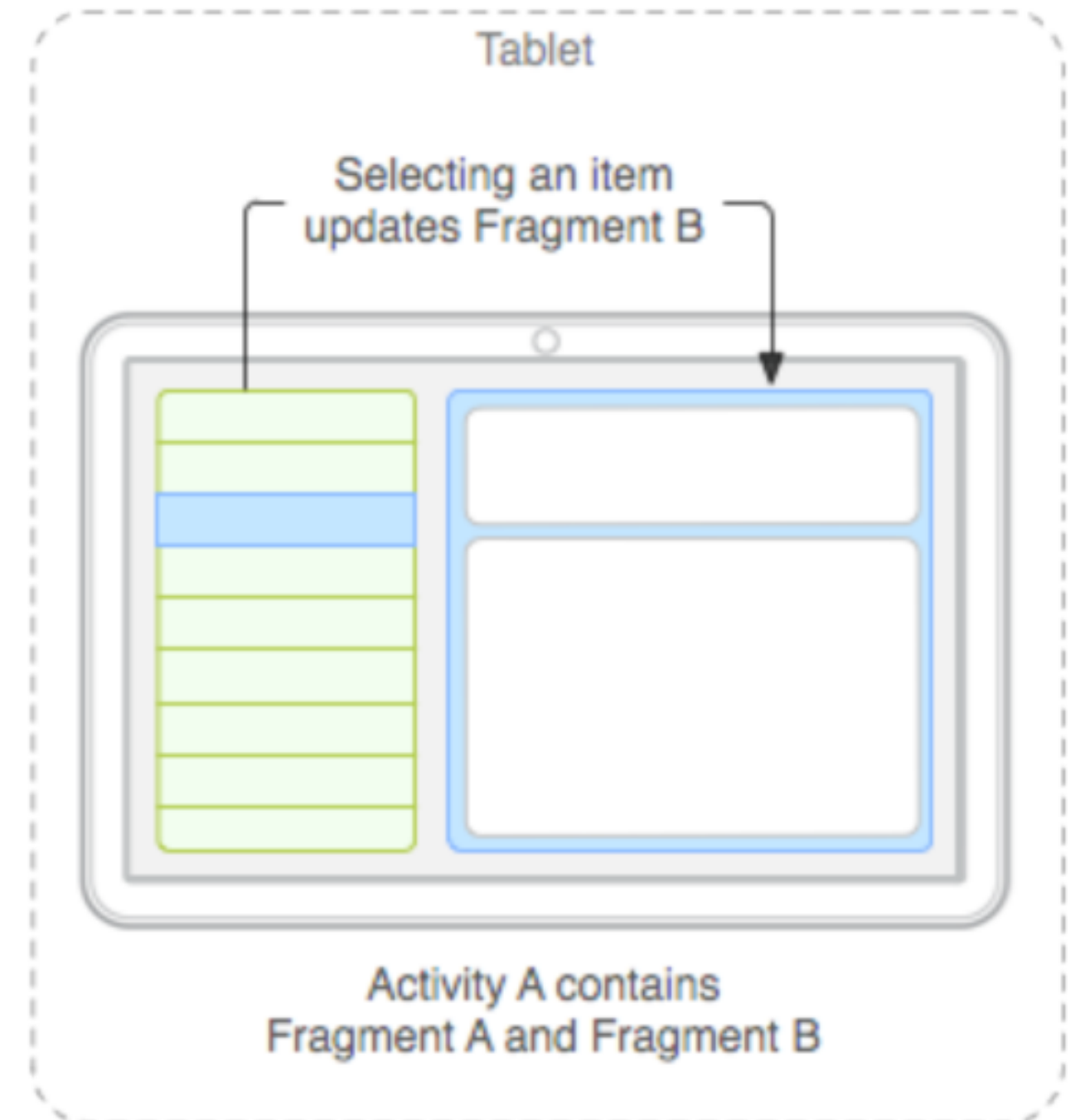
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- Reusable components
- Introduced in 3.0, back-ported via the support package



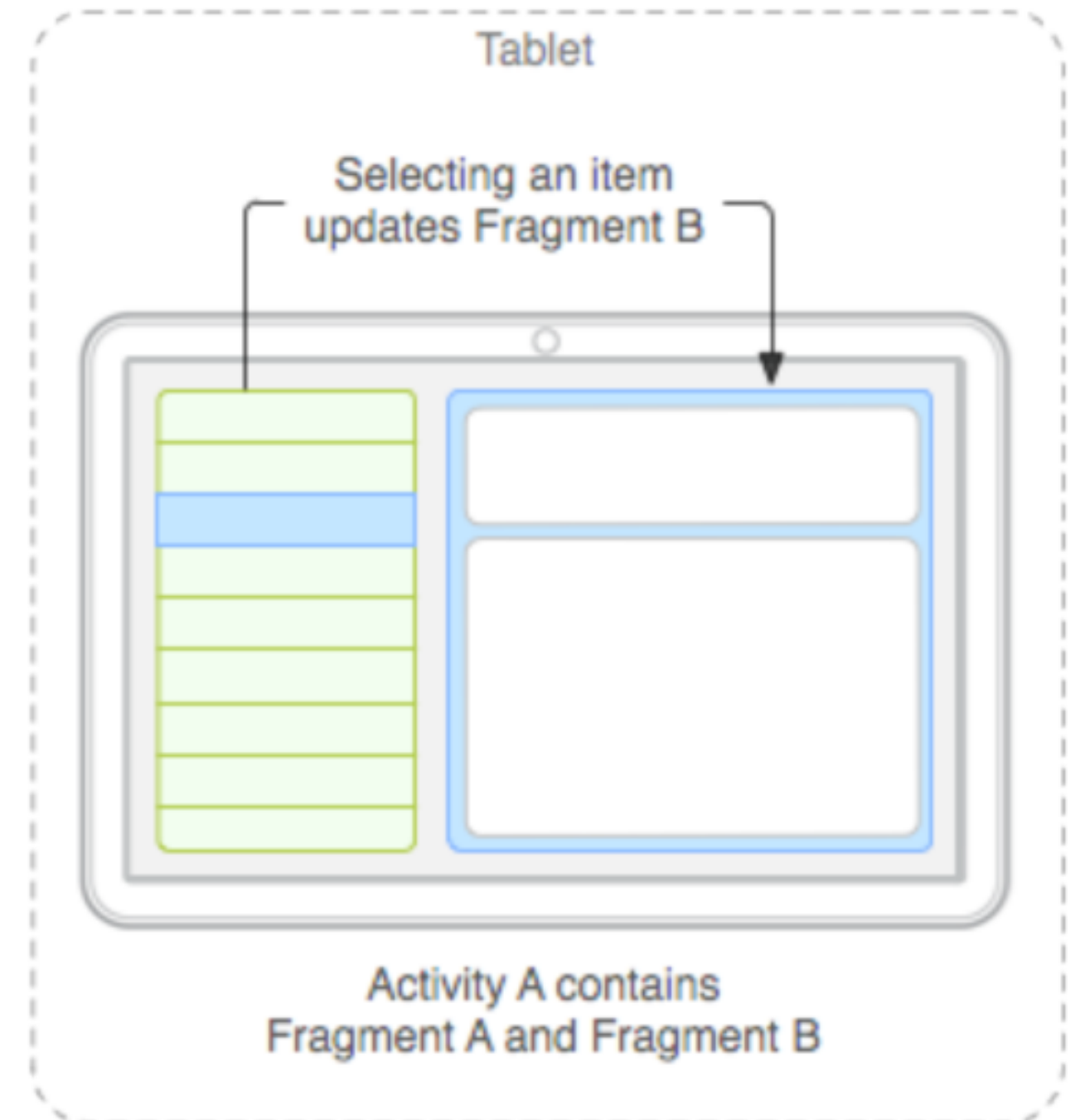
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- Reusable components
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- vs Compound Views?



# Multi-device support

- Specify sizes based on dip
- provides assets for multiple resolutions
- Specify layouts for different screen widths/heights
- Specify layouts for different orientations
- Styles

# Xamarin.Android

- You can do everything you can natively
- Binds to Java collections to .NET collections
- use .NET style properties, events and handlers
- Syntactical Sugar



- Github: <https://github.com/somya/AndroidIntro>

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