

# Apps just got sweeter

Making a Lollipop out of an Eclair

Lyubomir Ganev



AppDocs

# AppDetox is an app which

- allows users to define rules which prevent starting apps
- thus allows users to control excessive apps usage
- was hacked together over a couple of weekends in 2012
- is available for Android 2.1+
- tries to look Holo
- has grown to be more than a quick research experiment

# AppDocs team



Lyubomir Ganey



Markus Löchtefeld



Matthias Böhmer


Initially started at



German Research  
Center for  
Artificial Intelligence

Why our app needs a  
Lollipop treat


# Needs better look


 AppDetox

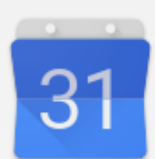
VIOLATIONS


YOUR APPS


RULES


**Instagram**  
Violated at 14:59 on 11/22


**Instagram**  
Violated at 14:59 on 11/22


**Calendar**  
Violated at 14:59 on 11/22

**Facebook**  
Violated at 14:59 on 11/22

**Facebook**  
Violated at 14:59 on 11/22

**CHIP Online**  
Violated at 14:59 on 11/22


**CHIP Online**  
Violated at 14:59 on 11/22


 AppDetox


VIOLATIONS


YOUR APPS


RULES


**#SquareDroid**  
Launches: 0


**Adobe Reader**  
Launches: 0


**Airbnb**  
Launches: 0

**Album**  
Launches: 0

**Analytics**  
Launches: 0

**Andlytics**  
Launches: 0

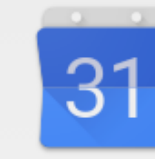
**Androidify**  
Launches: 0


 AppDetox


VIOLATIONS


YOUR APPS

RULES

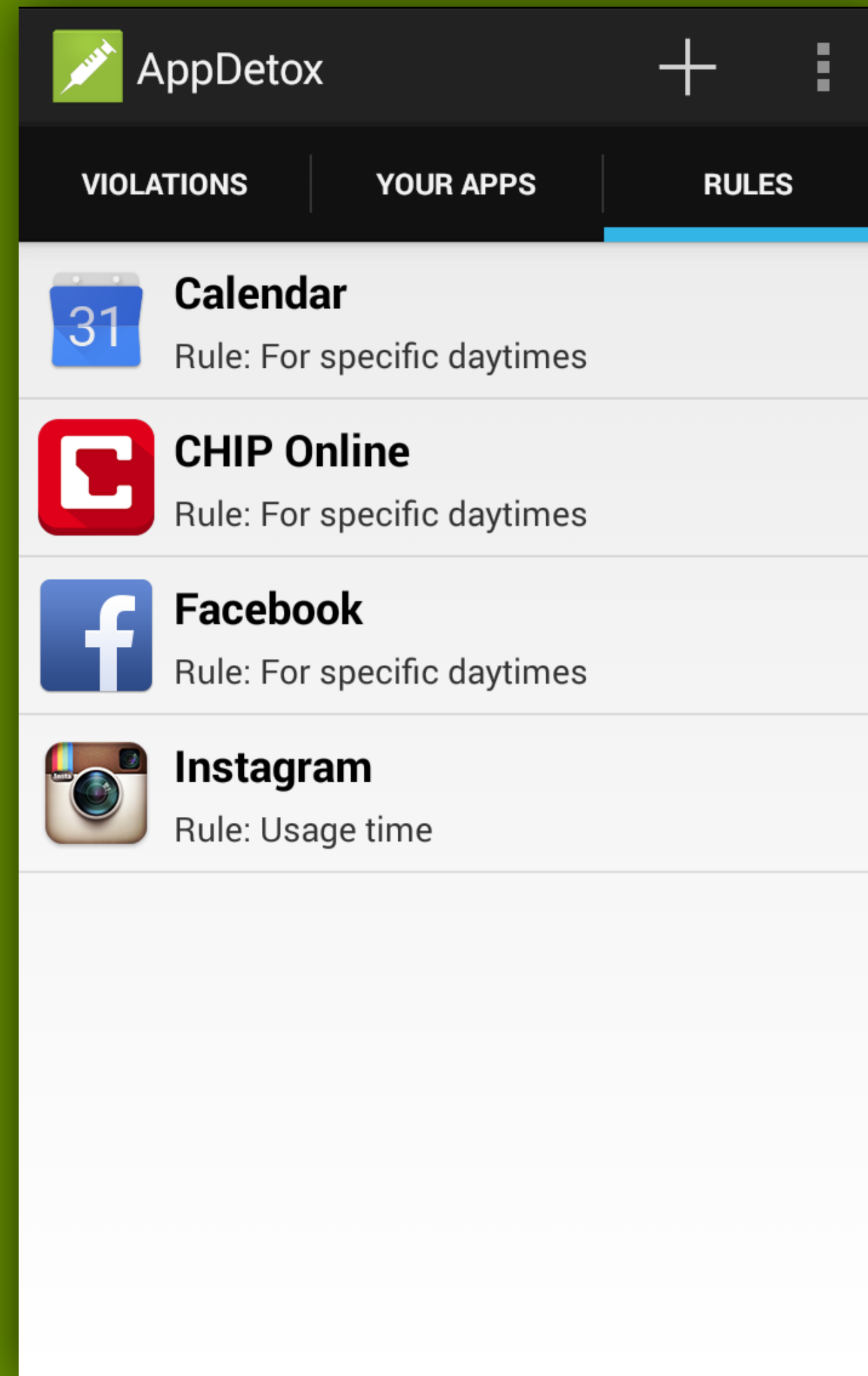
**Calendar**  
Rule: For specific daytimes

**CHIP Online**  
Rule: For specific daytimes

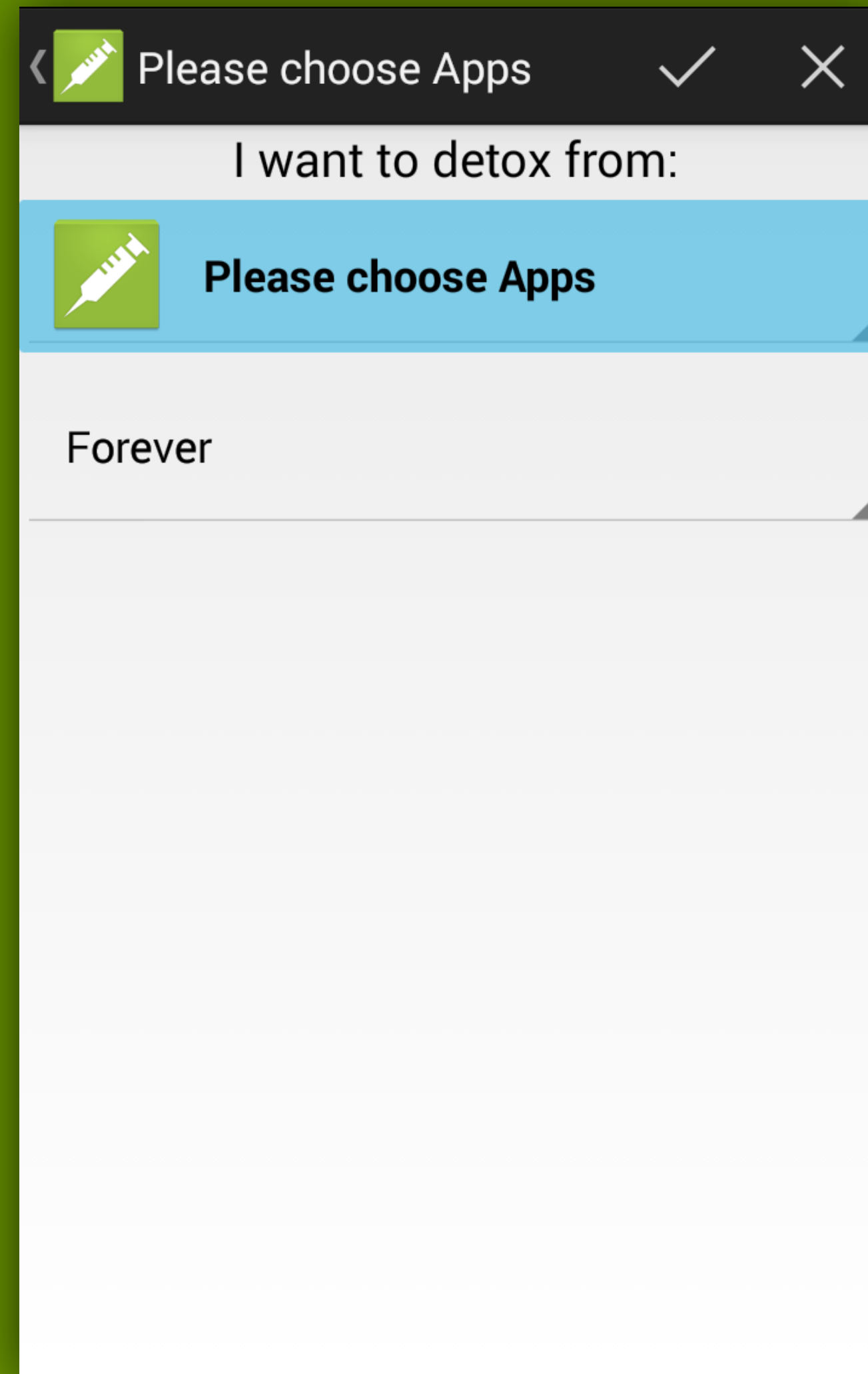
**Facebook**  
Rule: For specific daytimes

**Instagram**  
Rule: Usage time

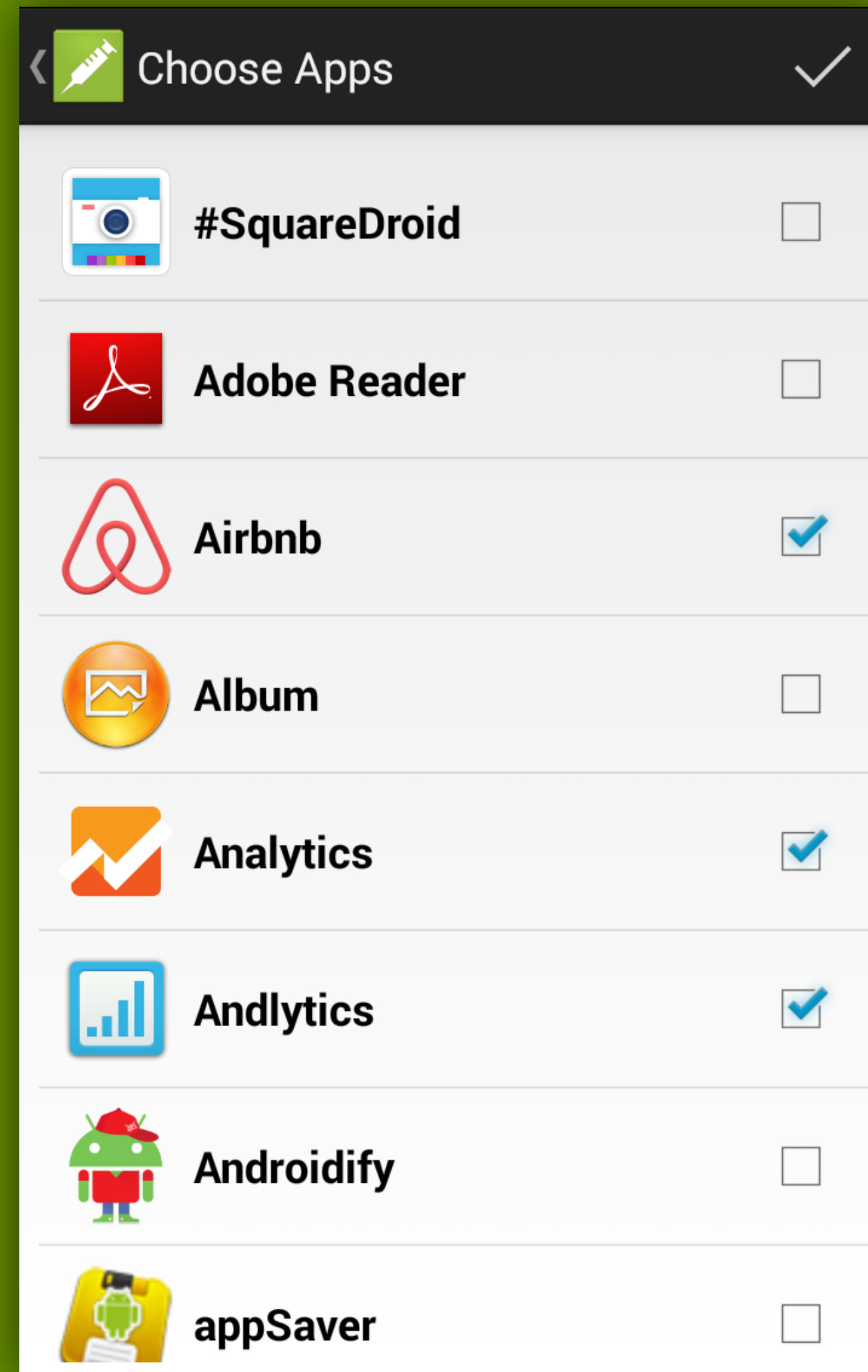
# Needs better usability



# Needs better usability

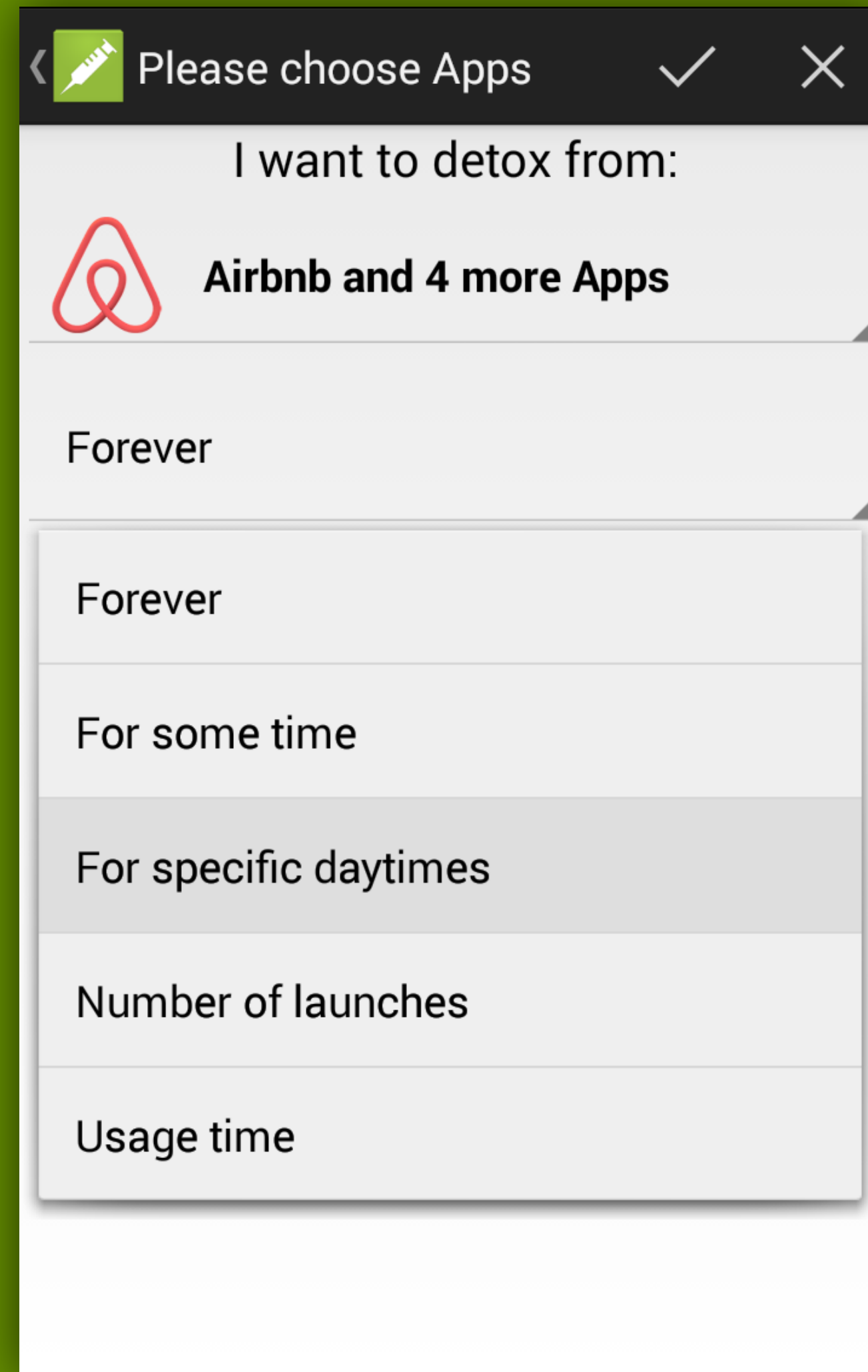


# Needs better usability










# Needs better usability



# Needs better usability

 Please choose Apps  

I want to detox from:

 Airbnb and 4 more Apps

For specific daytimes

On these days:

MON

TUE

WED


THU

FRI


SAT

SUN

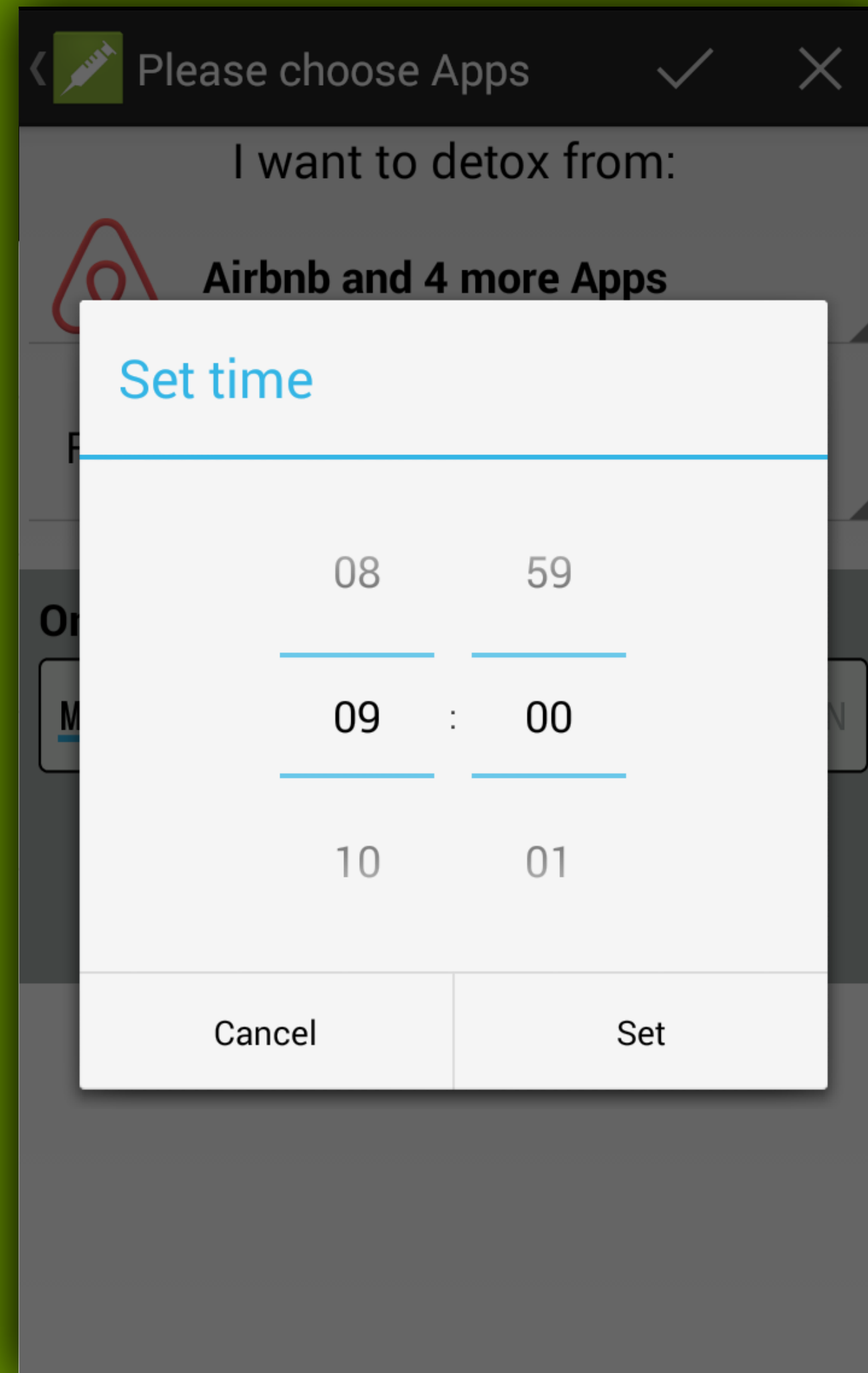
Start at:

 09:00





End at:

 17:00


# Needs better usability



# Needs better visibility

  Rule  

I want to detox from:

 **CHIP Online**

For specific daytimes

On these days:

MON

TUE

WED


THU

FRI


SAT





SUN

Start at:

 09:00

End at:


 17:00


 2 selected   


VIOLATIONS


YOUR APPS

RULES

 **Calendar**  
Rule: For specific daytimes

 **CHIP Online**  
Rule: For specific daytimes

 **Facebook**  
Rule: For specific daytimes

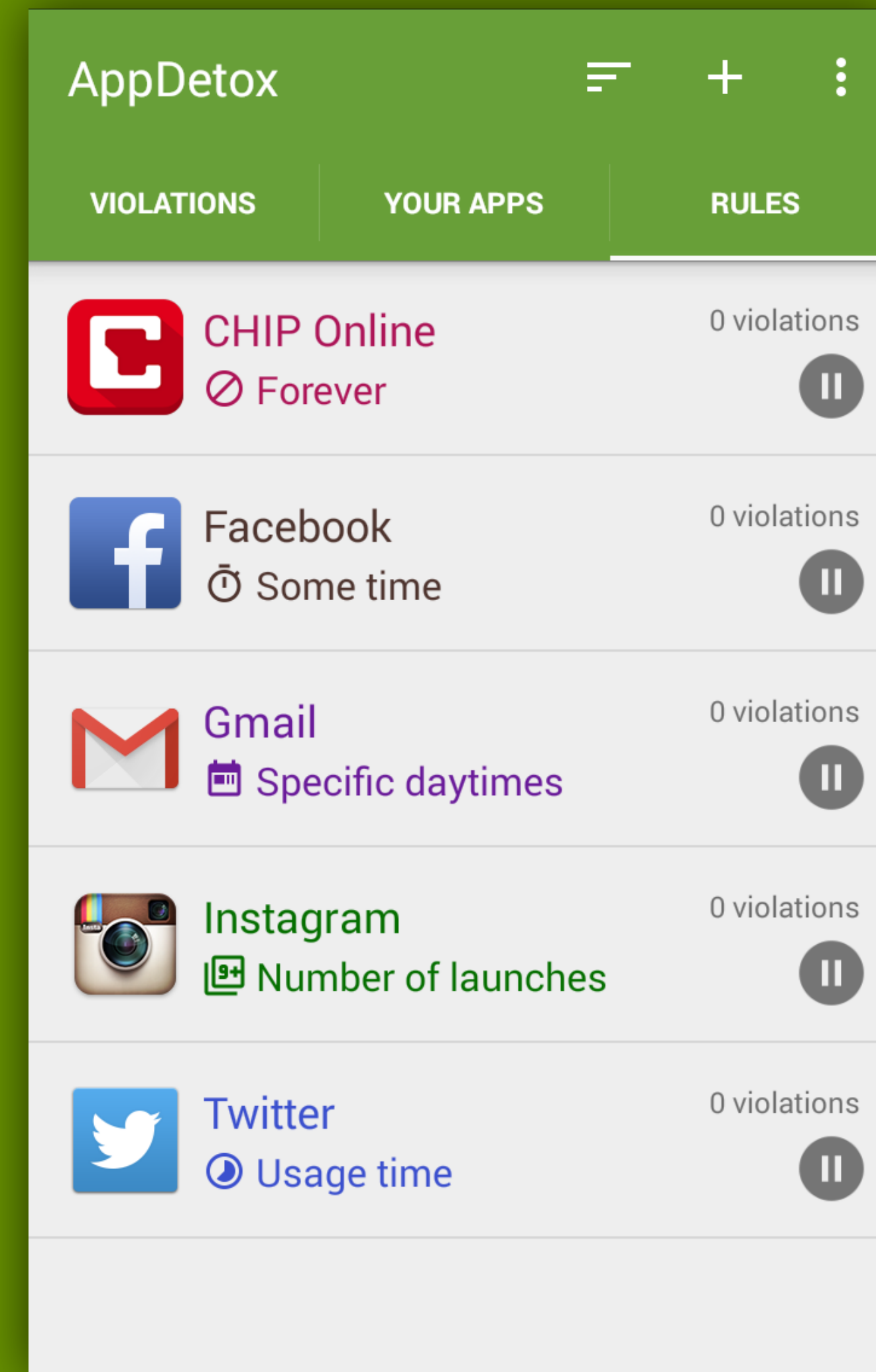
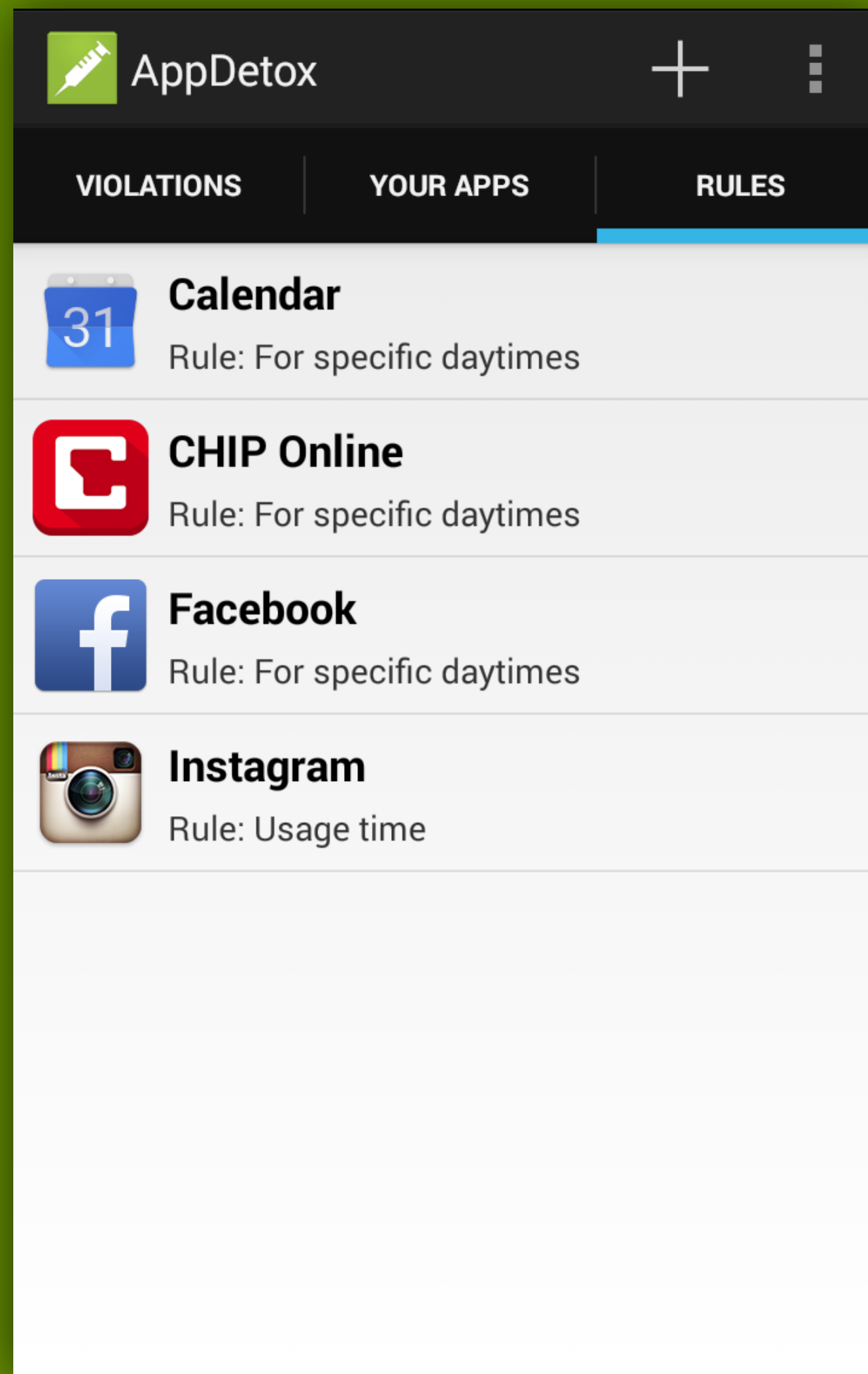
 **Instagram**  
Rule: Usage time

Does not work on Lollipop yet

But more on this later


After material treat our app  
could look like this


# Lollipop sweetness!





# More sweetness!


I want to detox from


 Email ☒

 Facebook ☒

 FM radio ☐


 Fora Dictionary ☐


 Gmail ☒


 Good intentions ☐


NEXT


Select rule

 Forever ☐  
Forever description

 Some time ☐  
Some time description

 Specific daytimes ☒  
Specific daytimes description

 Number of launches ☐  
Number of launches description

 Usage time ☐  
Usage time description

PREVIOUS

NEXT

On these days

Monday ☒

Tuesday ☒

Wednesday ☒

Thursday ☒

Friday ☒

Saturday ☐

Sunday ☐

PREVIOUS

NEXT

Review

APPS

Email, Facebook, Gmail

RULE

Specific daytimes

DAYS

MO, TU, WE, TH, FR

FROM - TILL

09:00 - 17:00

PREVIOUS

CREATE



Let's do it then!

# Learn the concepts

- read the official Material Design documentation

Link: [goo.gl/ZdrJPN](https://goo.gl/ZdrJPN)

- try to identify the changes you will need to do in your app
  - launcher icon, icons, colors, fonts, sizes, layouts, margins, paddings etc.
  - images and animations
  - specific patterns, components, behavior
- read the documentation again

# Learn from examples

- there are already enough apps with Material design to use as examples
- just look at all the Google apps



Step by step

# Launcher icon

- Android Police's launcher icons design article

Link: <http://goo.gl/DSXsFW>

- And the official Material product icons documentation

Link: <http://goo.gl/vqW09Q>



# Switching to the new support libs

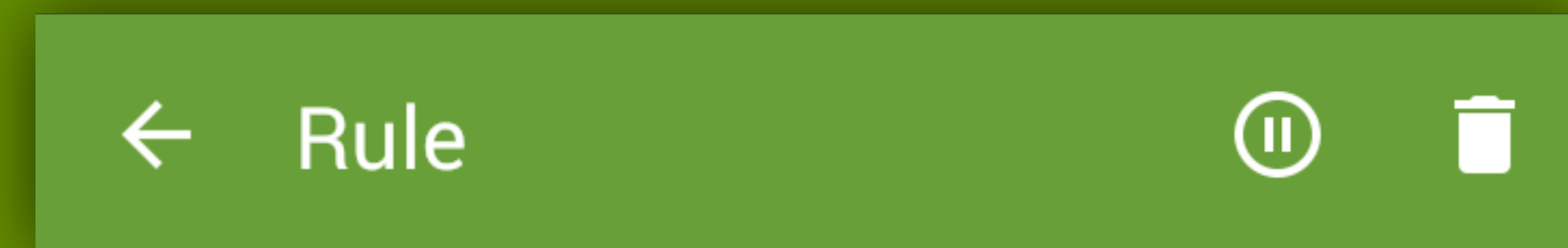
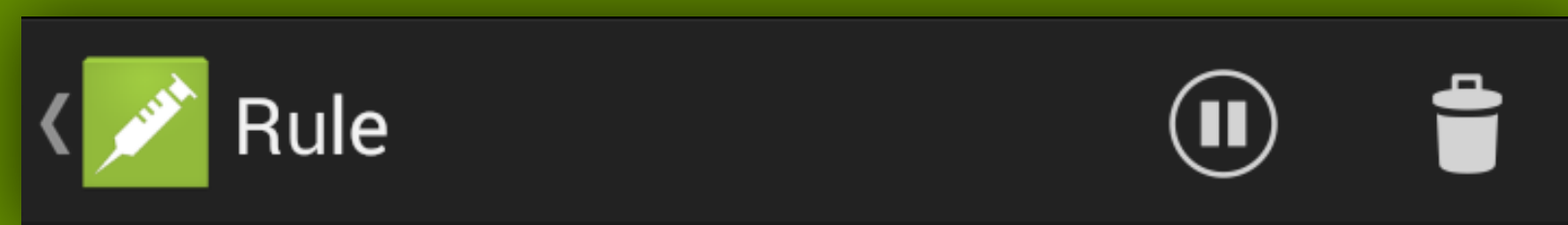
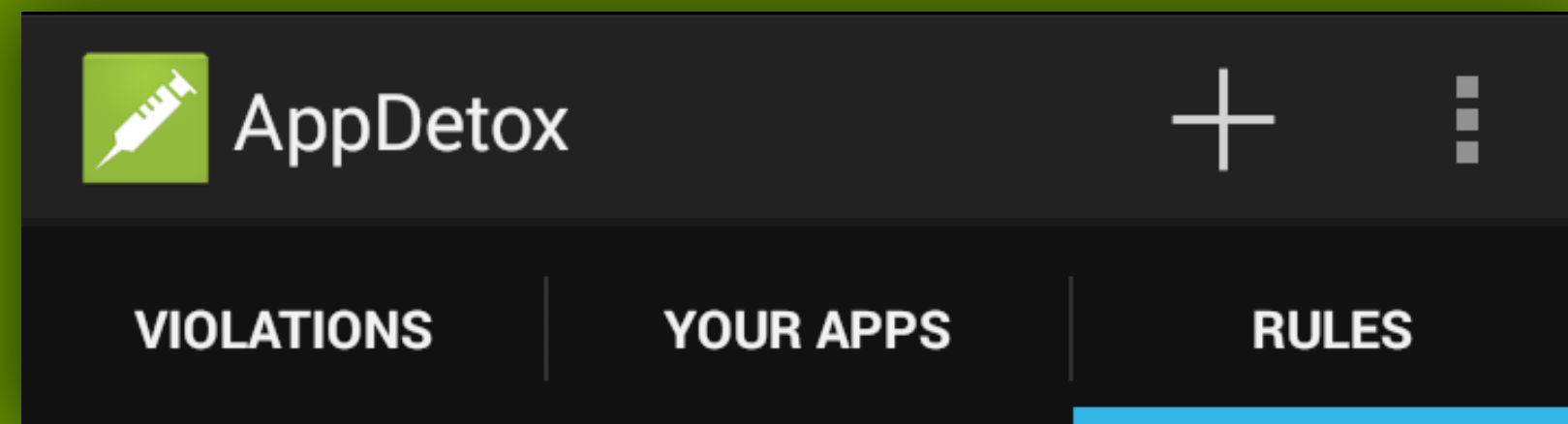
- AppDetox used ActionBarSherlock to provide Holo feel in Android 2.1+
- switching to AppCompat v21 was easy thanks to Jake Wharton's awesome work
- and thanks to the awesome blog post by Chris Banes  
Link: <http://goo.gl/SbPLOE>

# Putting some color on it

- Material design colors documentation

Link: <http://goo.gl/H0iACn>

- colorPrimary, colorAccent and colorDark are your friends



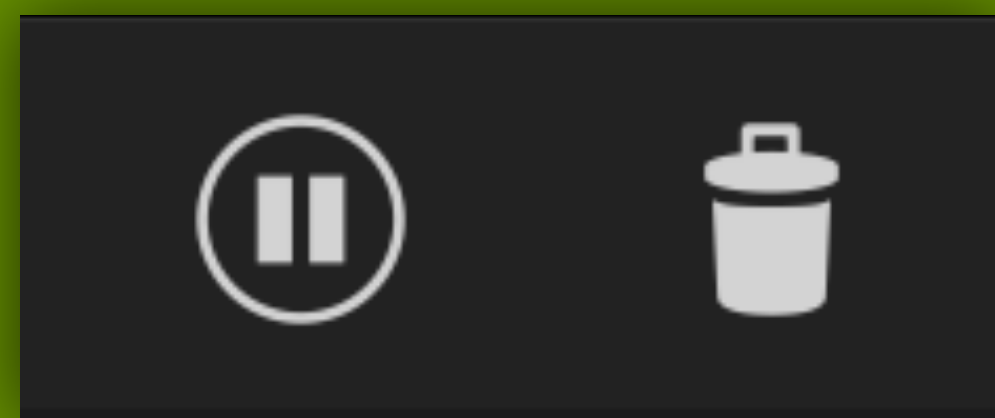
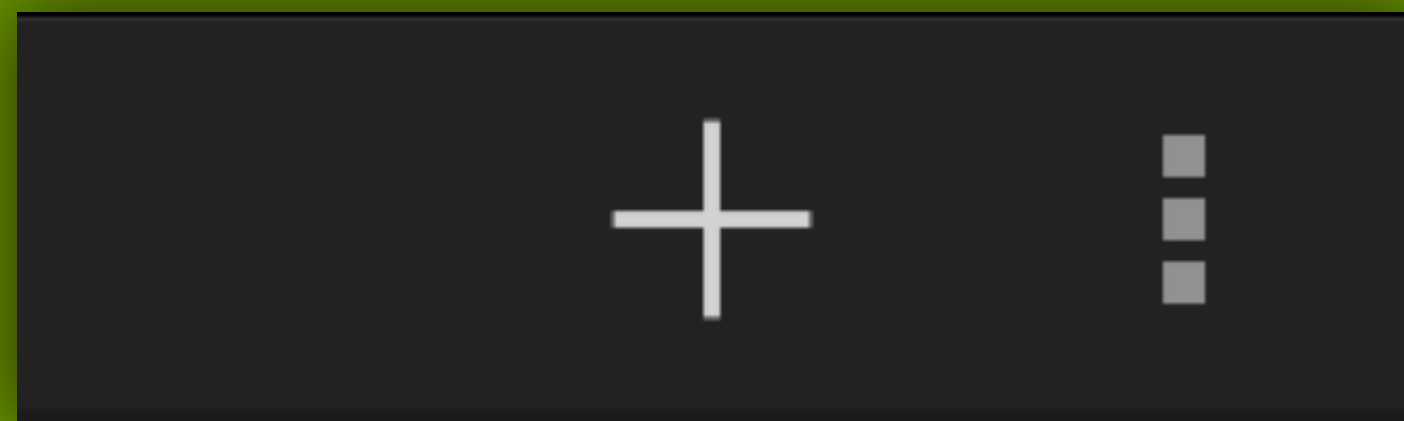
# Updating the action icons

- Material design system icons documentation

Link: <http://goo.gl/oKePF2>

- Download all system icons from GitHub

Link: <http://goo.gl/6OPxJp>

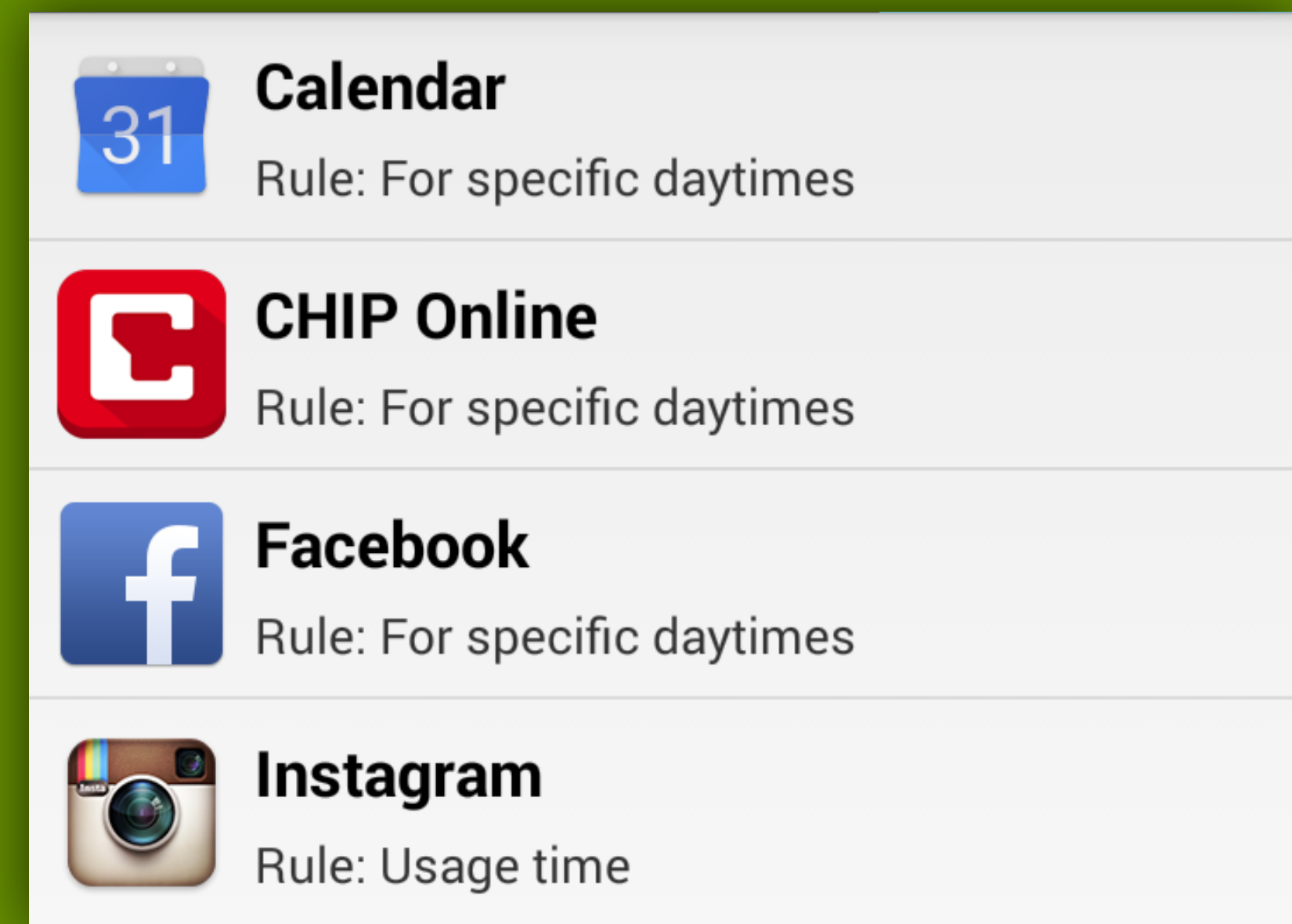
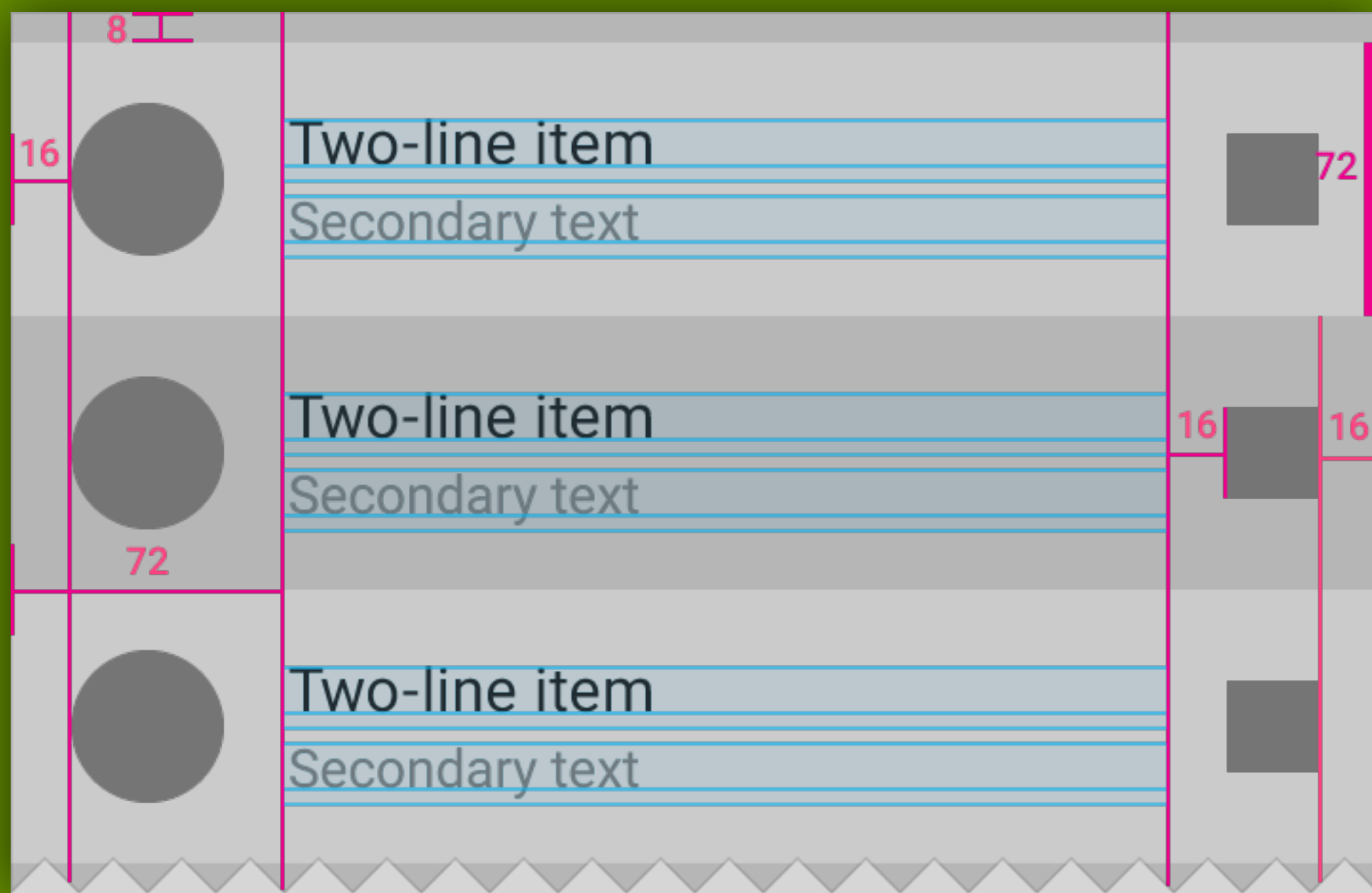




# Updating the lists' layout

- Extensive description in Material design documentation

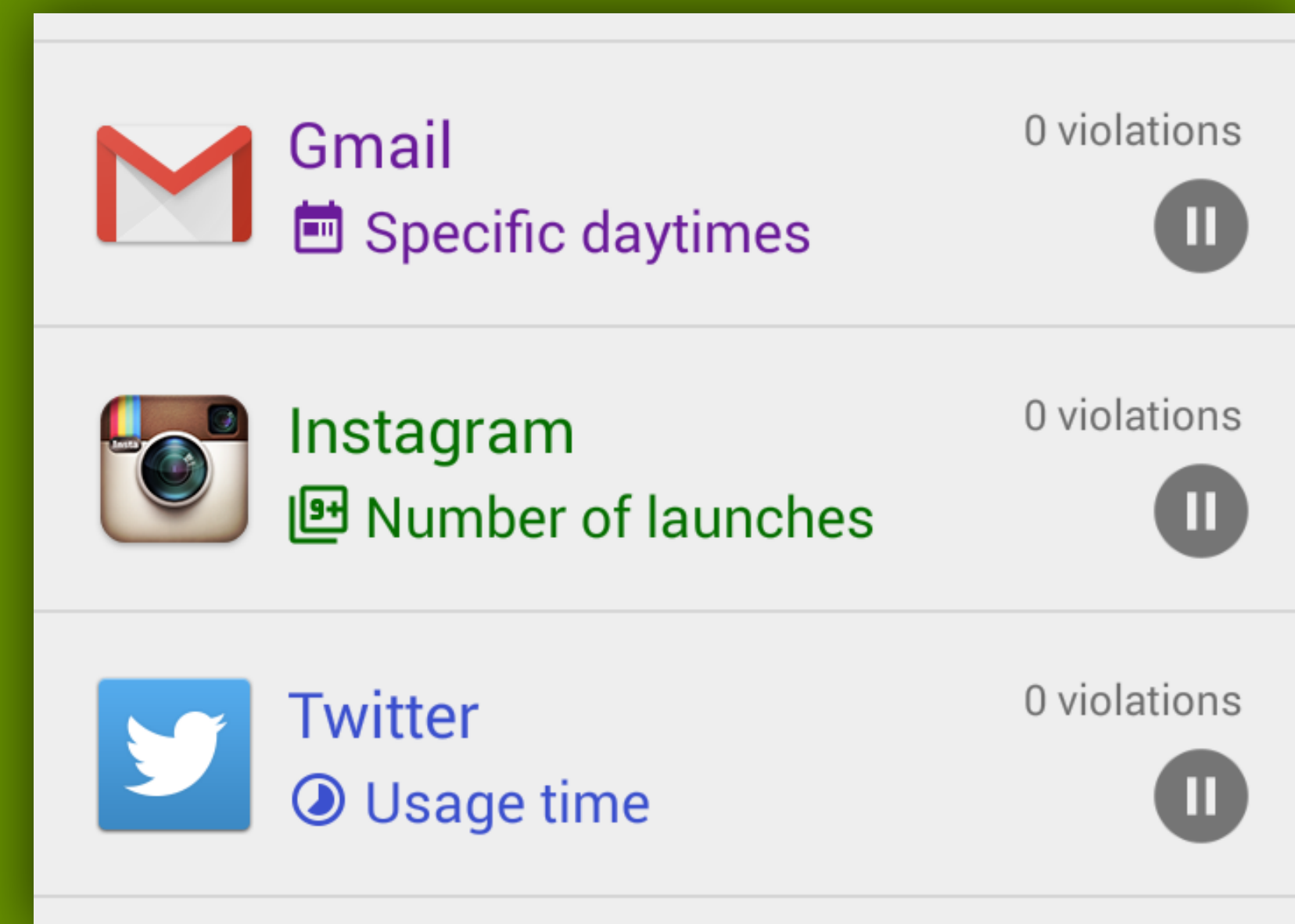
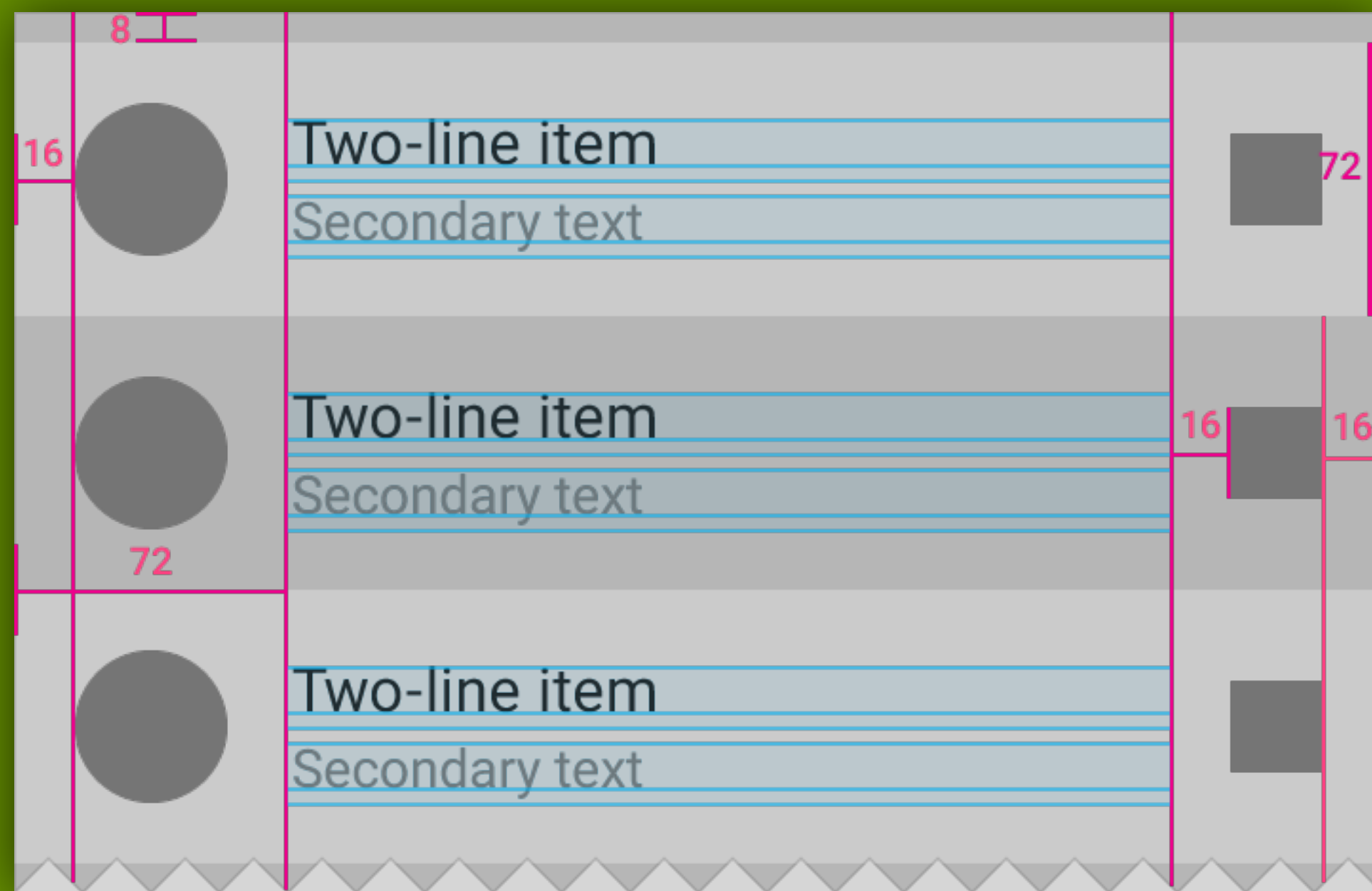
Link: <http://goo.gl/ABrjrl>



# Updating the lists' layout

- Extensive description in Material design documentation

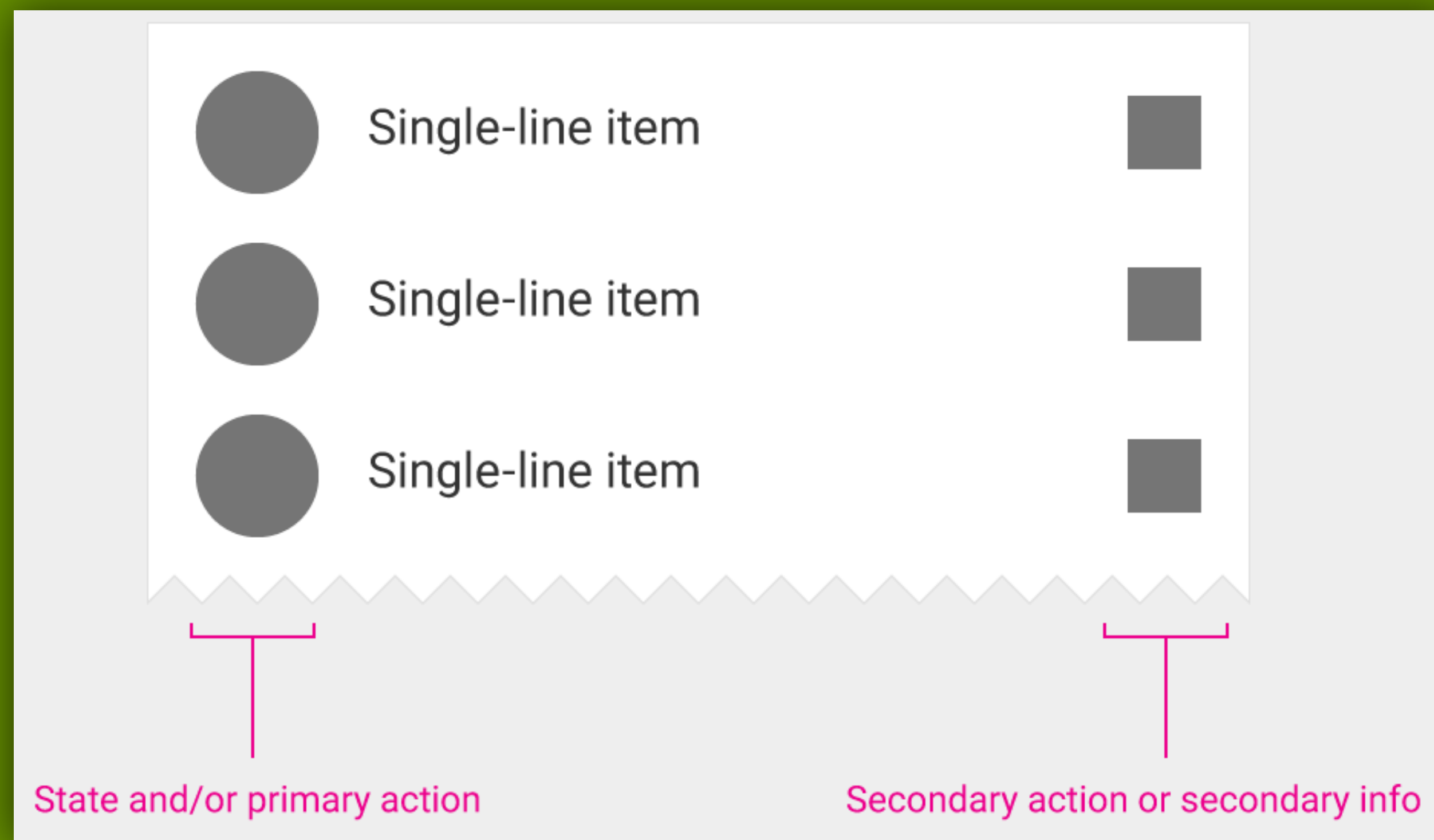
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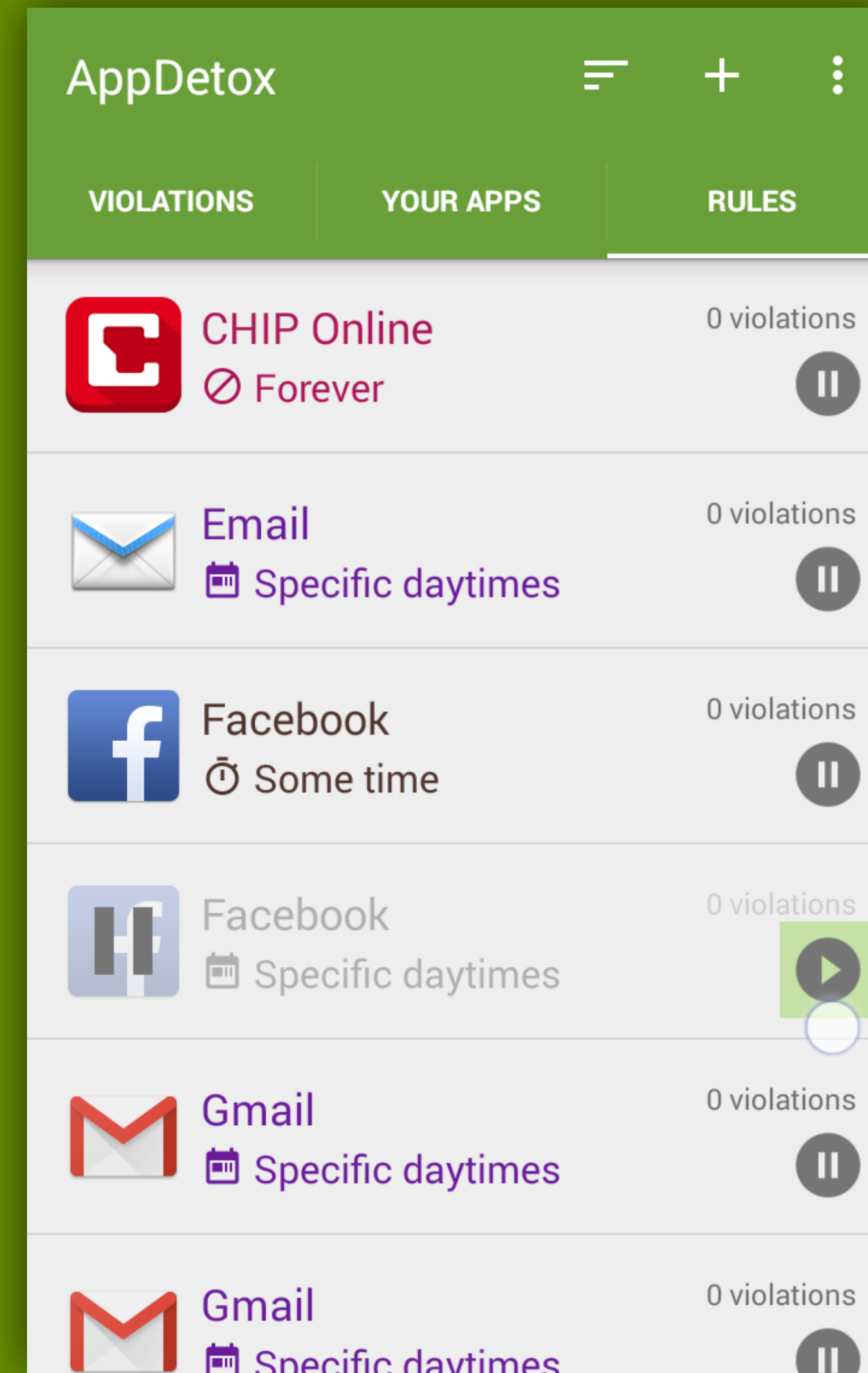
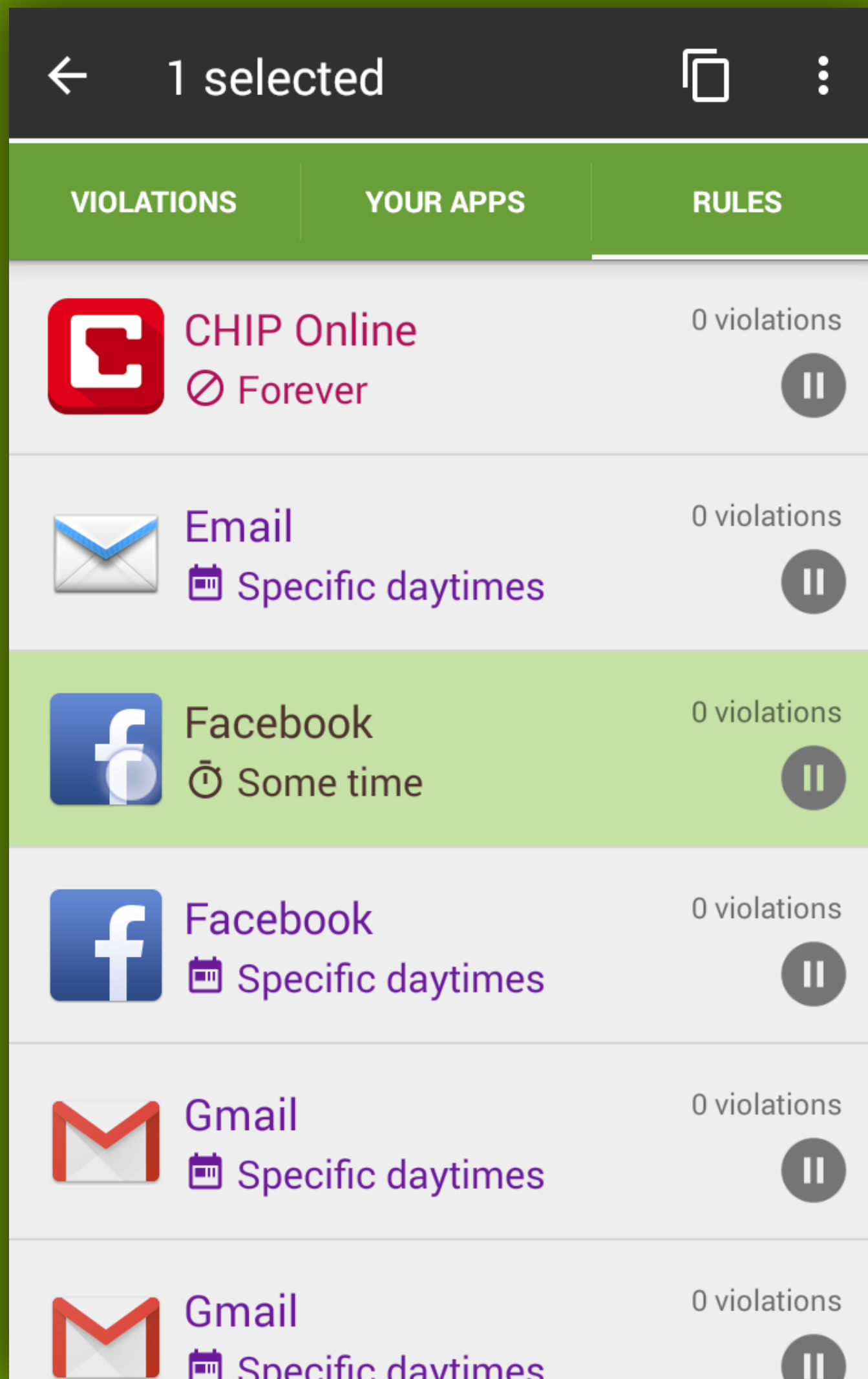
# Updating the lists' behavior

- Extensive description in Material design documentation

Link: <http://goo.gl/YJpL1w>













# Updating the lists' behaviour



# Using bold colors

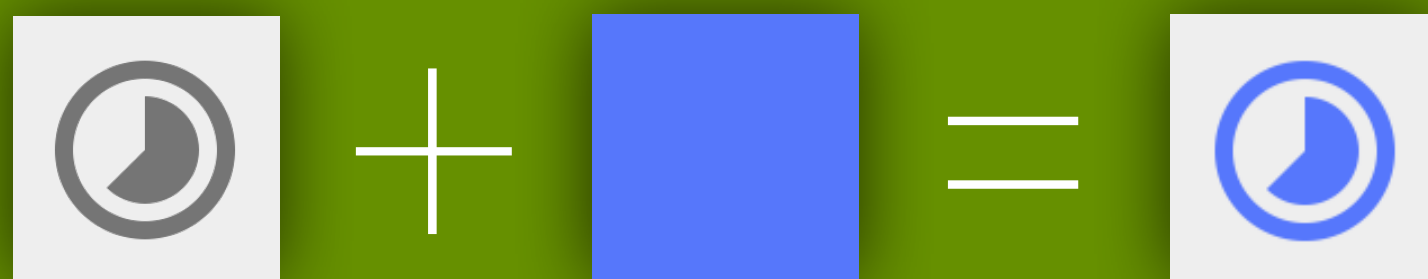
- this does not mean going totally crazy with colors
- AppDetox uses different colors to subtly highlight the different rule types

	<b>CHIP Online</b> ⌛ Forever	0 violations 
	Facebook ⌚ Some time	0 violations 
	Gmail 📅 Specific daytimes	0 violations 
	Instagram 📷 Number of launches	0 violations 
	Twitter 🕒 Usage time	0 violations 

# Backwards compatible color tinting

- you don't have to have  $10^n$  different drawables in your project
- just use the awesome TintingBitmapDrawable class by Chris Banes

Link: <http://goo.gl/MutBtT>

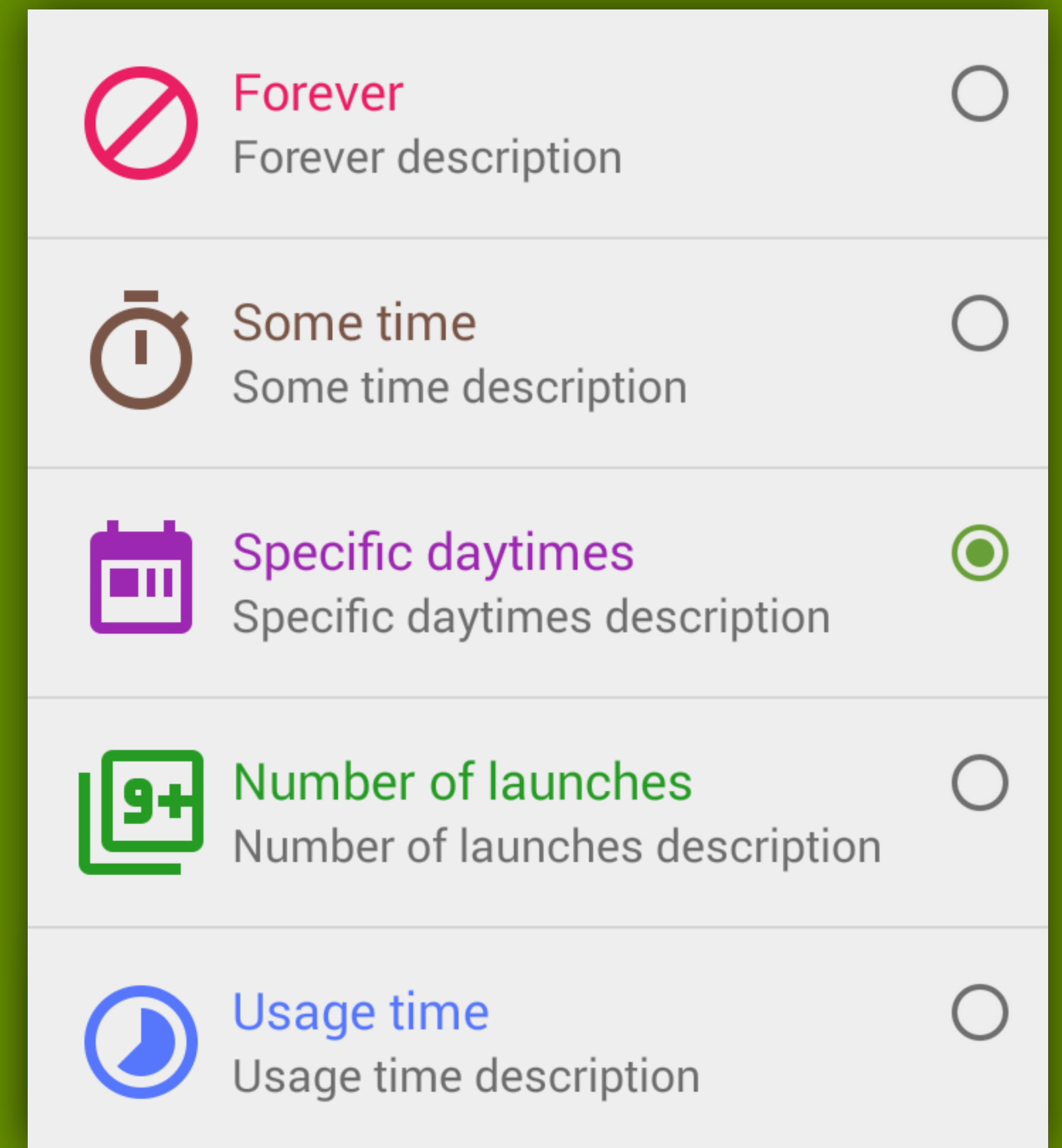




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Link: <http://goo.gl/MutBtT>



But we got a bitter Lollipop



**ONE DOES NOT SIMPLY**

**USE DEBUG OR SYSTEM APIS**

# You may be familiar with this

```
public String getRunningAppPackageName(Context context) {  
    ActivityManager am = (ActivityManager) context.getSystemService(  
                                                                    Context.ACTIVITY_SERVICE);  
  
    List<RunningTaskInfo> apps = am.getRunningTasks(1);  
    RunningTaskInfo app = apps.get(0);  
    return app.baseActivity.getPackageName();  
}
```

# As of API 21 Docs look like this

```
public List<RunningTaskInfo> getRunningTasks(int maxNum);
```

This method was **deprecated in API level 21**.

As of LOLLIPOP, this method is **no longer available to third party applications**: the introduction of document-centric recents means it can leak personal information to the caller. For backwards compatibility, **it will still return** a small subset of its data: at least **the caller's own tasks** (though see `getAppTasks()` for the correct supported way to retrieve that information), and possibly **some other tasks such as home that are known to not be sensitive**



# However, it was to be expected

because the documentation clearly stated it right from the start, i.e. API 1

Return a list of the tasks that the user has recently launched, with the most recent being first and older ones after in order.

Note: this method is only intended for debugging and presenting task management user interfaces. **This should never be used for core logic in an application, such as deciding between different behaviors based on the information found here.** Such uses are not supported, and will likely break in the future.

# Nevertheless, it got a lot of people pissed

- including us and some other people too

Link: <http://goo.gl/p3xjeU>

- Tasker, Ultimate Rotation Control, Menthal, Smart App Lock (App Protector)
- **Screen Time Parental Control:** *“Our parental control app supporting many thousands of schools and families”*, **AppLock:** *“This policy will shutdown our company”*, **MDM(Mobile Device Management):** *“The method is a core technique”*
- *“First, if you built up a company based entirely around an API that was clearly documented as not going to be supported in the future then you are dumb and I'm glad your company will close.”*

# Takeaway

- be mindful what APIs you use and always have a plan B
- so we are currently working on it

And we will be happy to hear your ideas!

# Questions?

twitter.com/ lgancho

google.com/+ LyubomirGanev

website & blog [luboganev.github.io](http://luboganev.github.io)



Relax from your apps!

# AppDetox

Get a daily dose!



<http://goo.gl/cRJBpa>