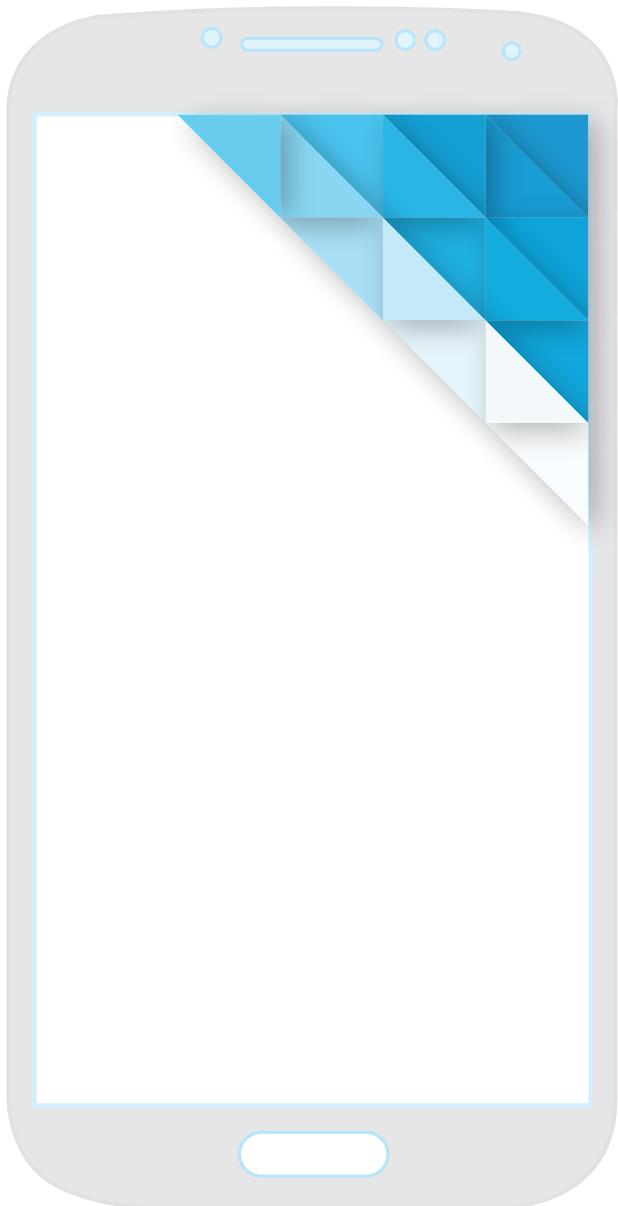


Android

UX | UI Design Guide

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Designed Feb, 2015
Last updated Feb 17, 2015

Introduction

The information within this document was taken from the Android Developers website. This is a living document and may be changed over time since Android is always changing as well. This is a guide to help with your design process, consider these principles as you apply your own creativity and design thinking to new problems within Android.

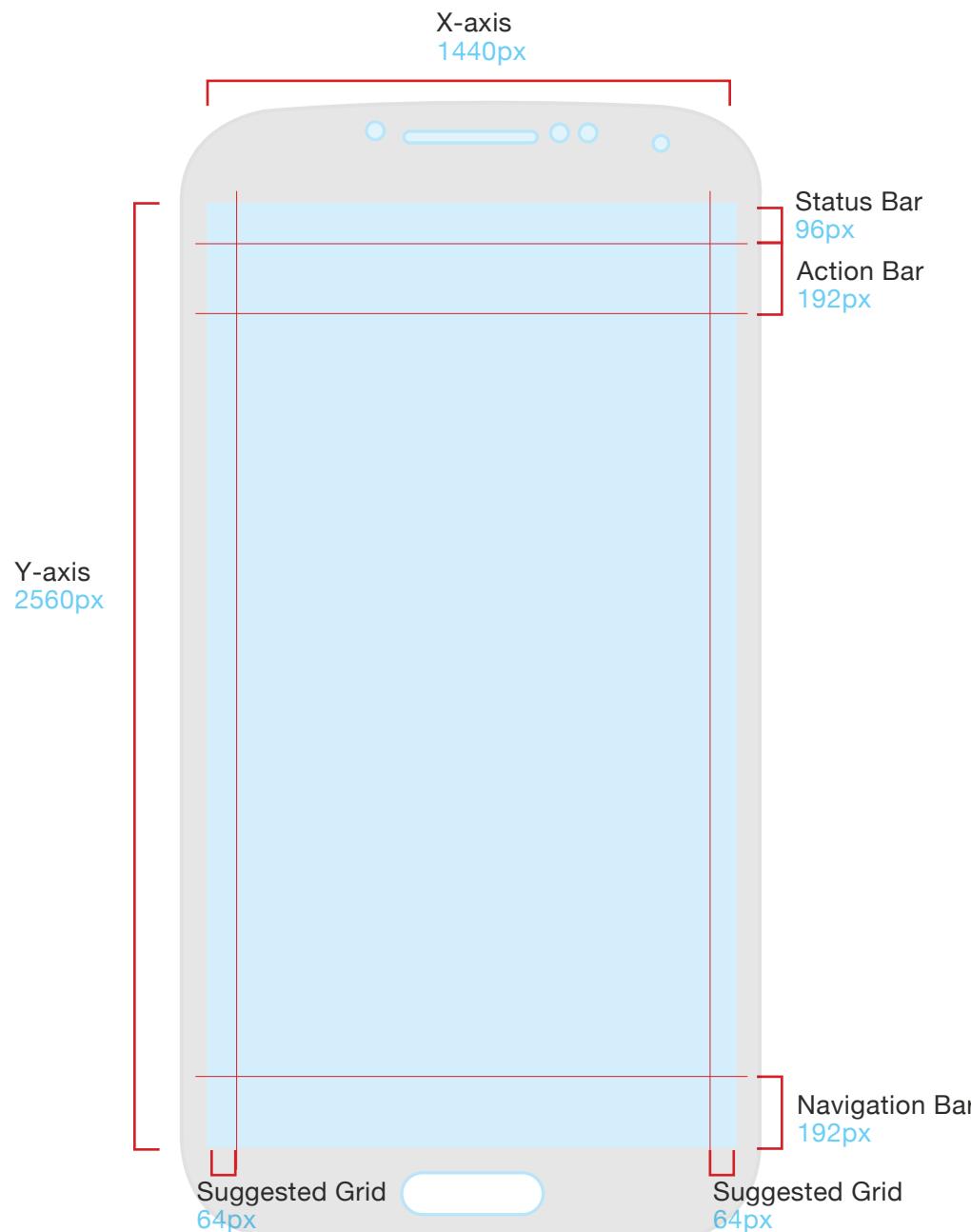
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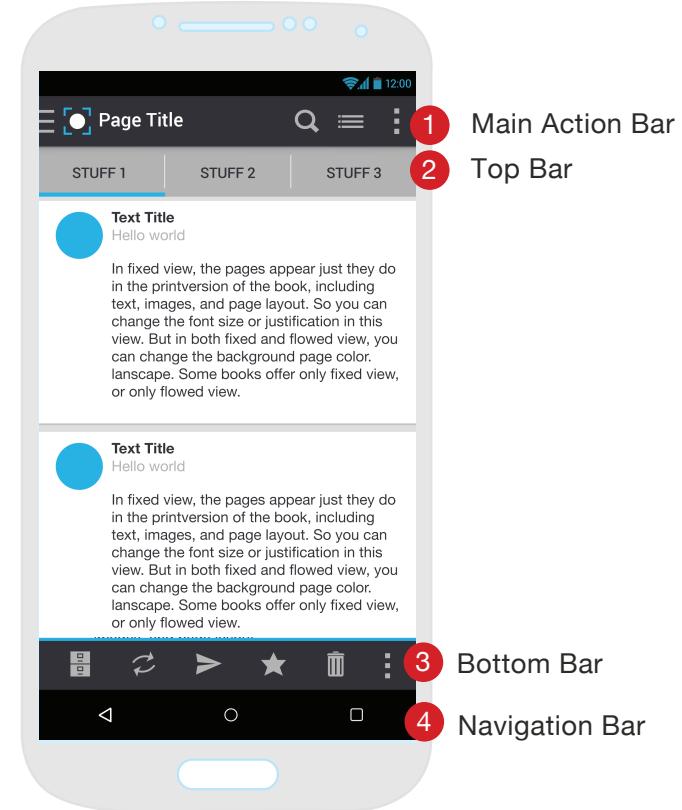
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Screen dimensions

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Technical terminology

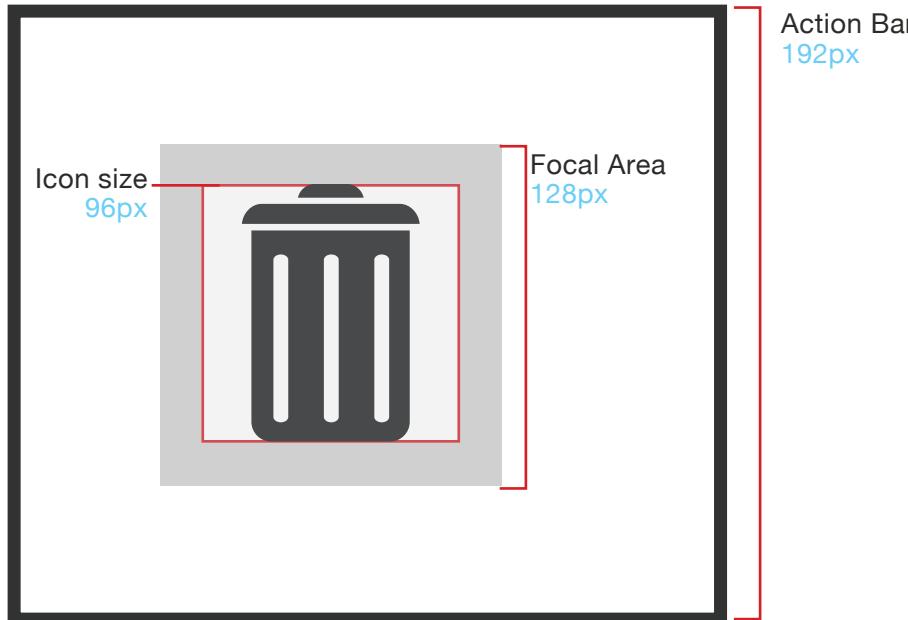


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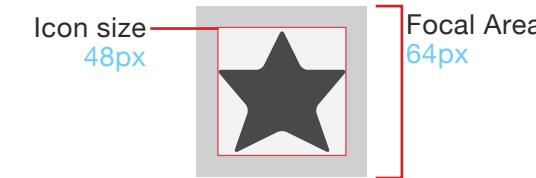
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Icons & type sizes

Icon sizes



Small / Contextual Icon sizes



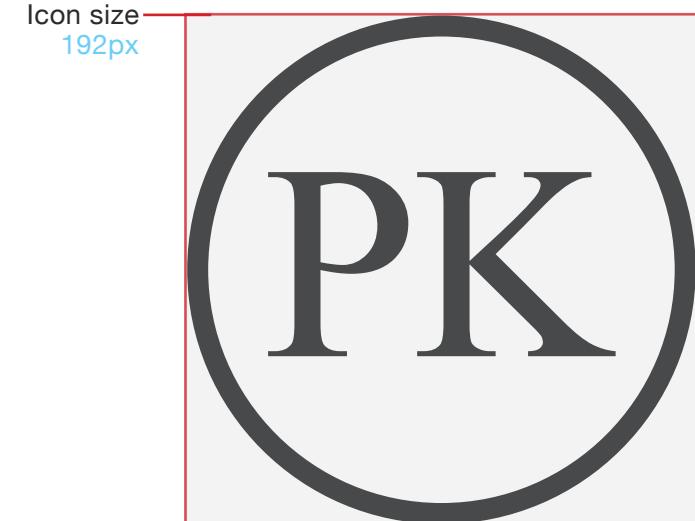
Type sizes



Notification Icon sizes



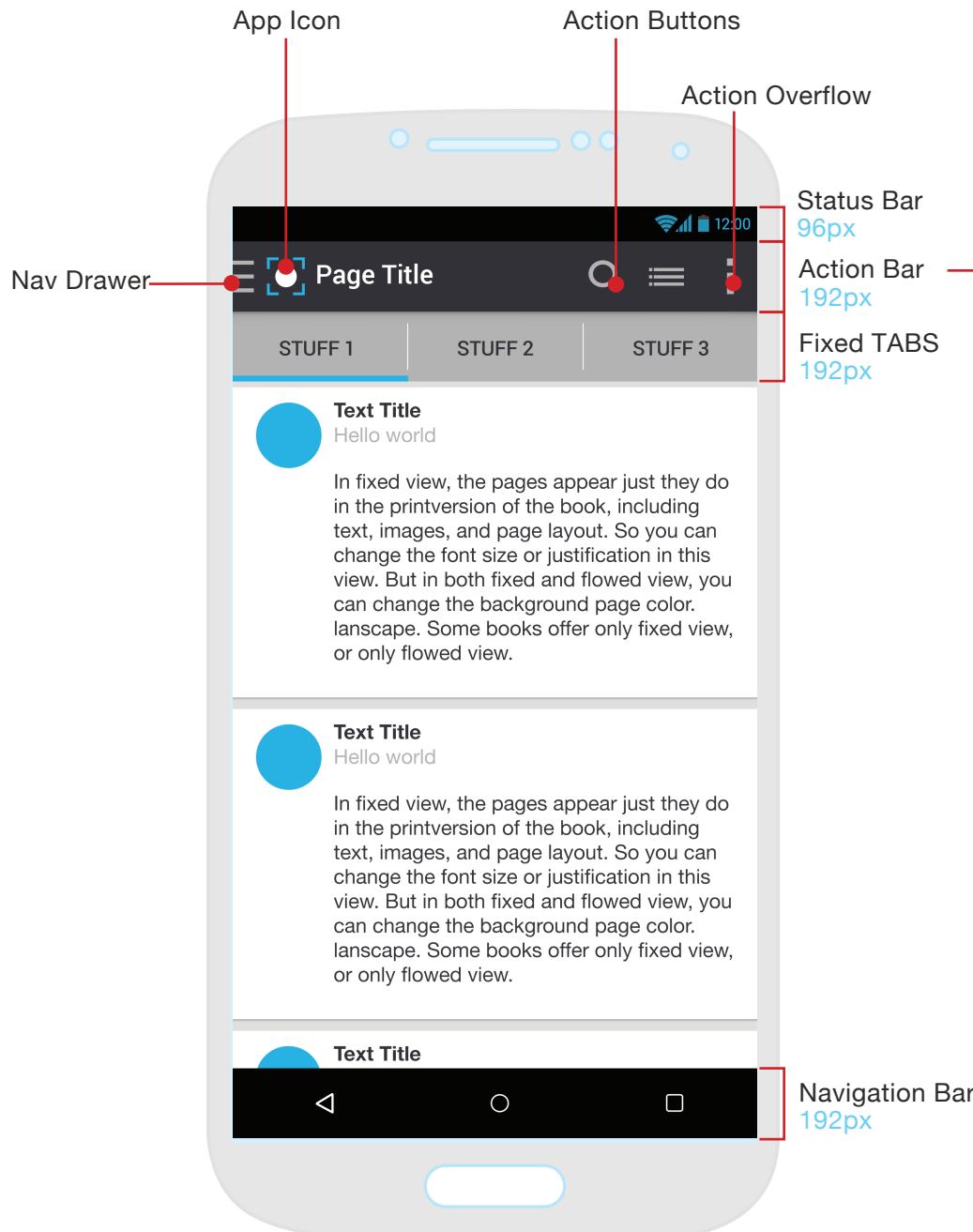
Launcher Icon sizes



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Action Bar / TABS

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Action Bar



The screen width in density-independent pixels (dp) determine the number of items that will fit in the main action bar

smaller than 360 dp = 2 icons

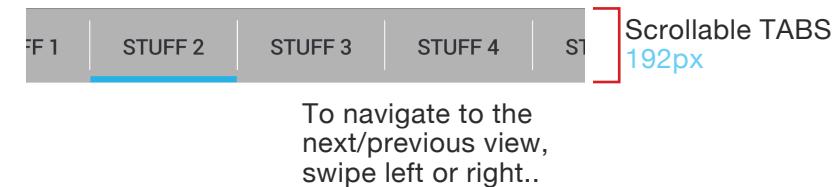
360-499 dp = 3 icons ————— mdpi-xxxhdpi

500-599 dp = 4 icons —————

600 dp and larger = 5 icons —————

Landscape view / tablets

Scalable TABS

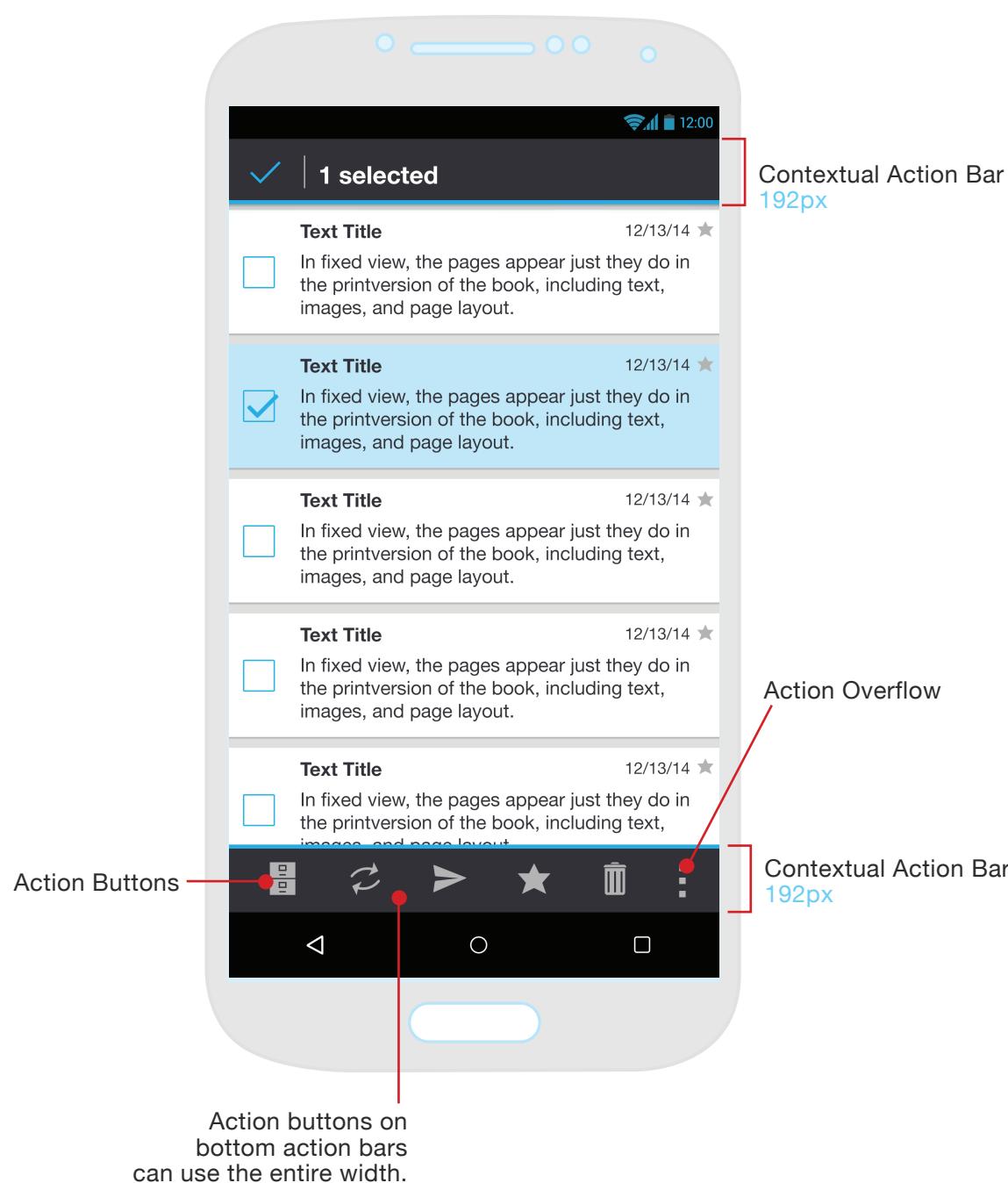


To navigate to the next/previous view, swipe left or right..

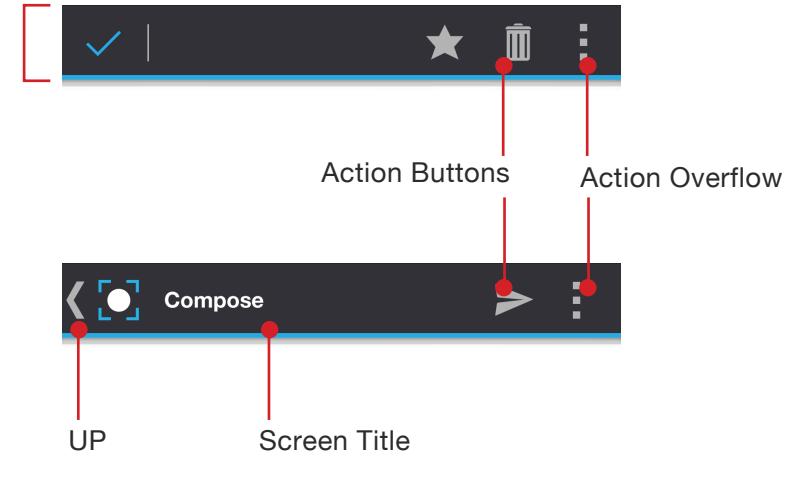
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Contextual Action Bars(CAB)

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Contextual Action Bars



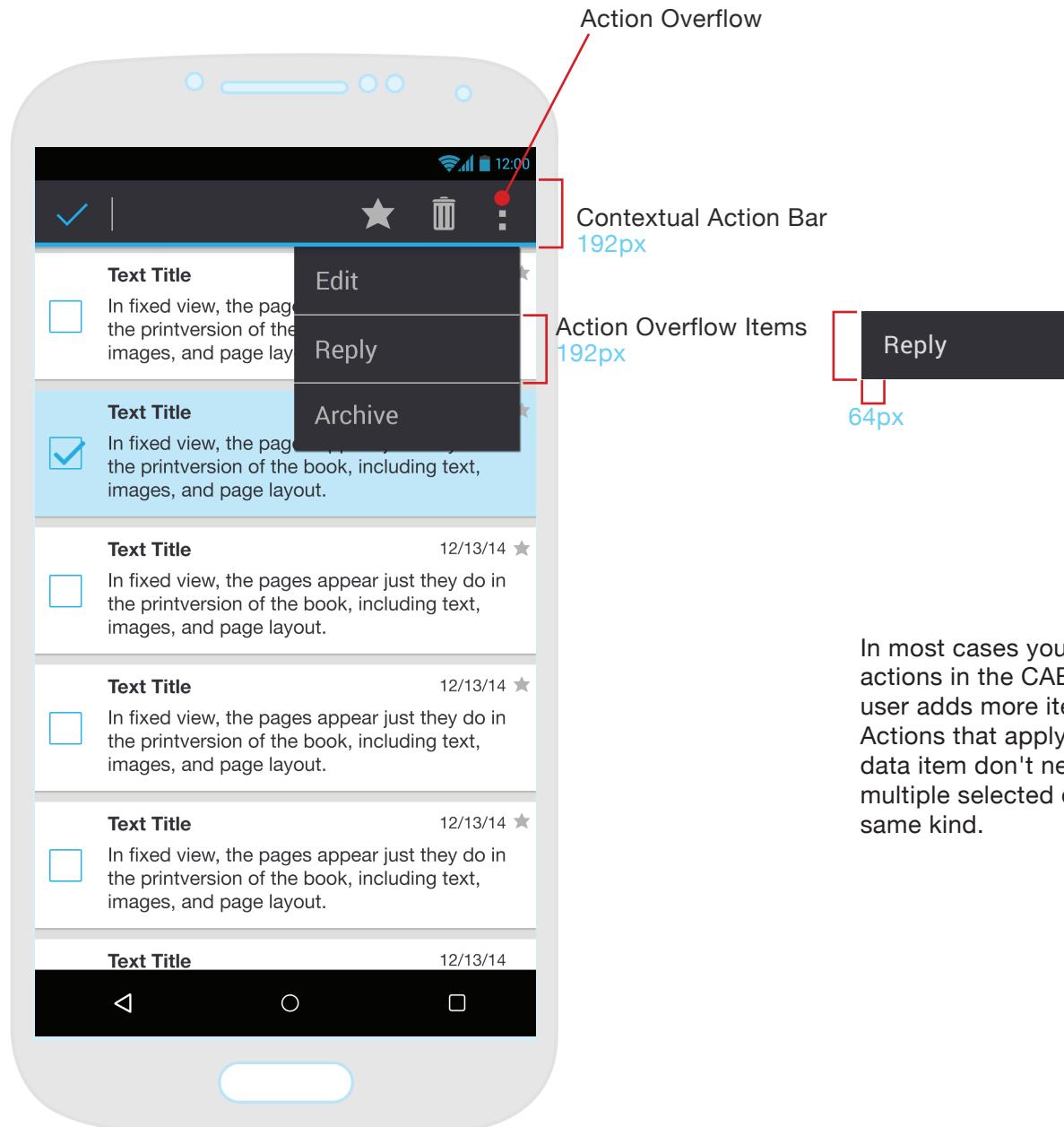
Trigger an action from the CAB that applies to all highlighted data items. The CAB then automatically dismisses itself.

Dismiss the CAB via the navigation bar's Back button or the CAB's checkmark button. This removes the CAB along with all selection highlights..

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Contextual Action Bars(CAB) Overflow

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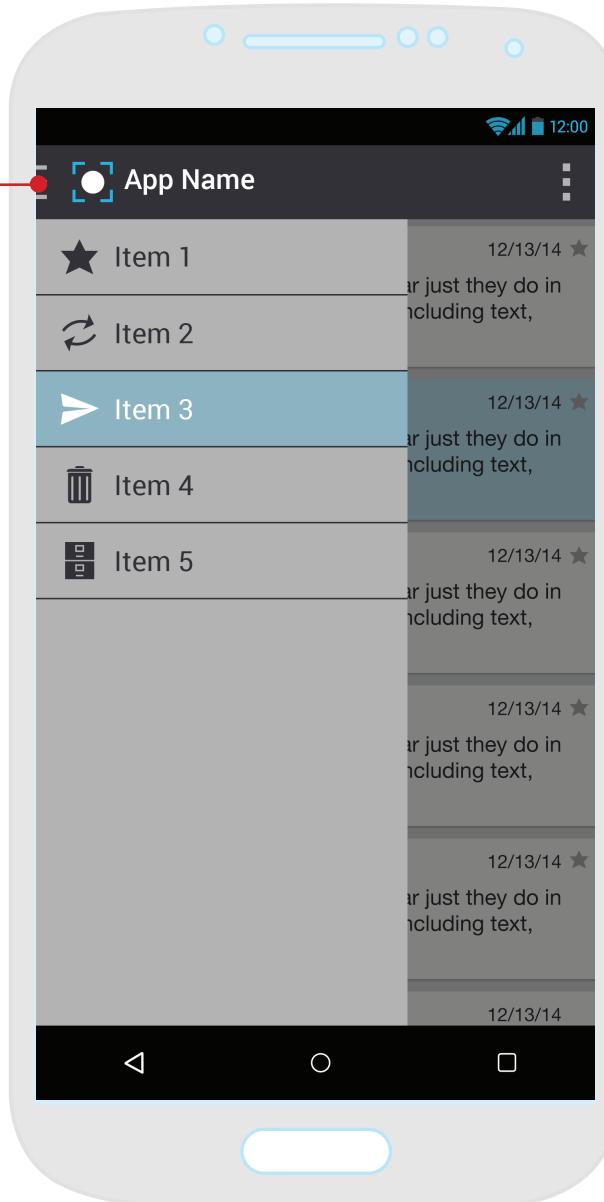
In most cases you need to adjust the actions in the CAB dynamically as the user adds more items to the selection. Actions that apply to a single selected data item don't necessarily apply to multiple selected data items of the same kind.

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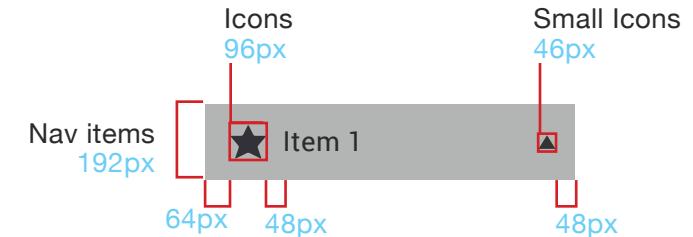
Navigation Drawer

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The user can bring the navigation drawer onto the screen by swiping from the left edge of the screen or by touching the application icon on the action bar.

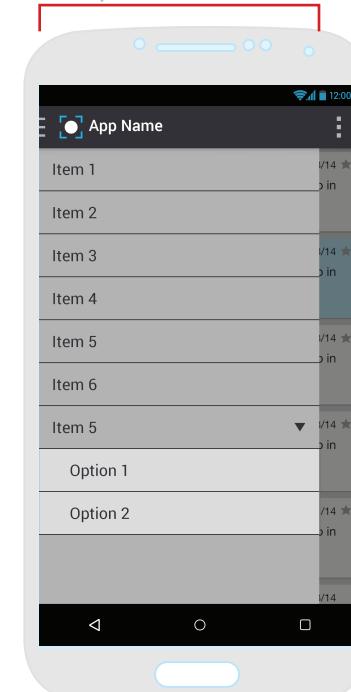


Navigation Drawer Item Dimensions

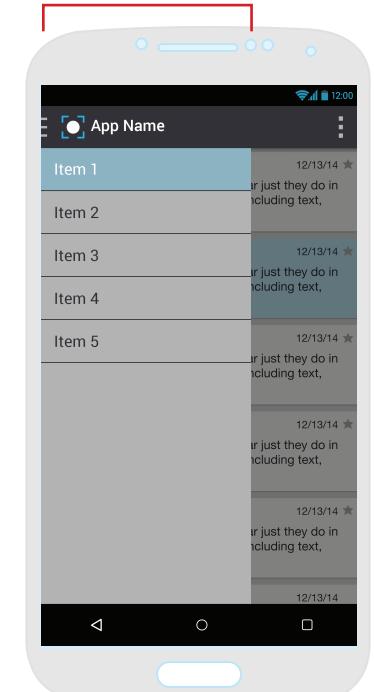


MAX vs. MIN

Nav drawer MAX
1280px



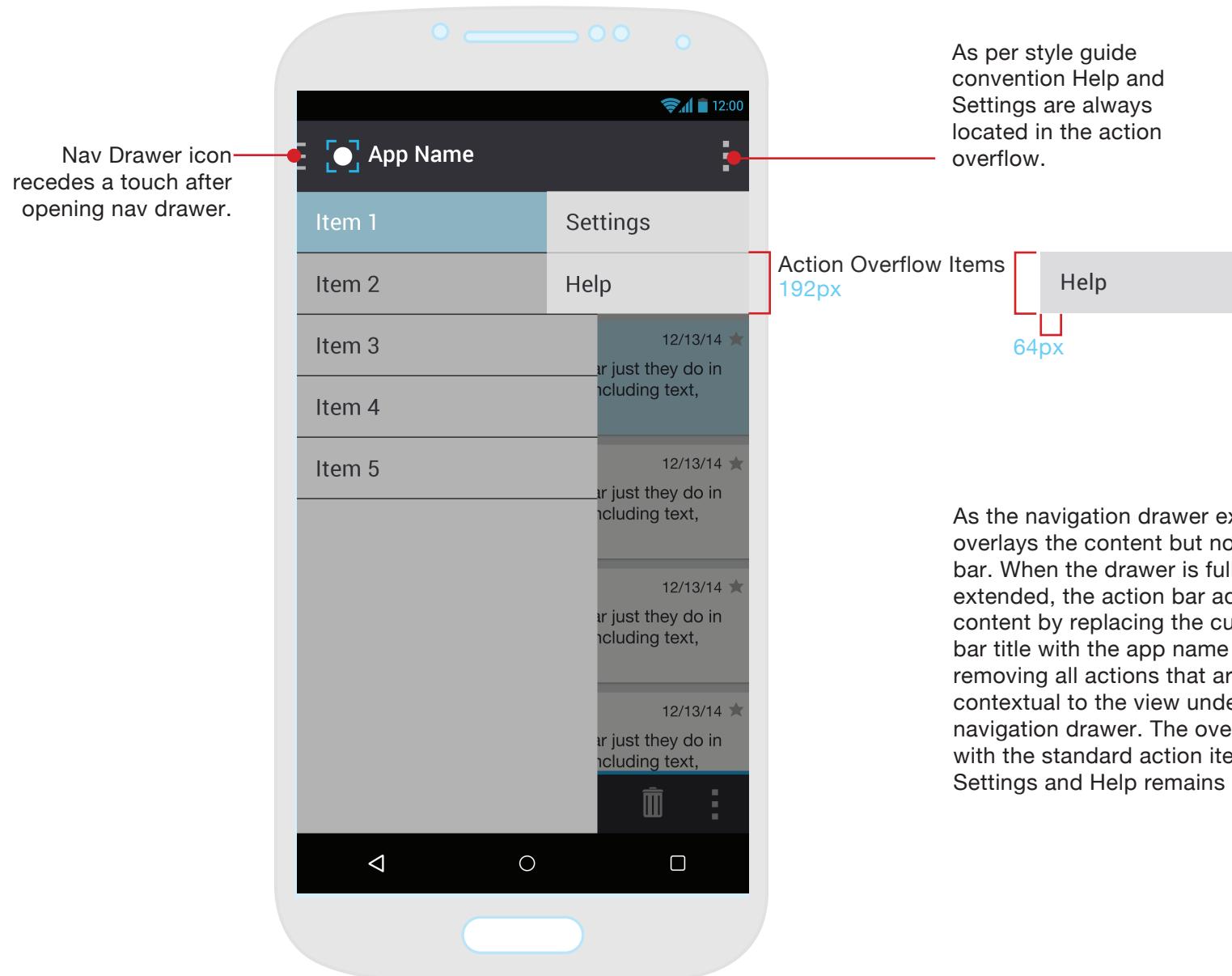
Nav drawer MIN
960px



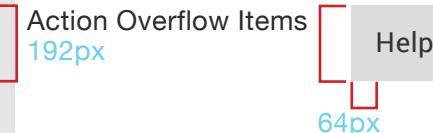
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Navigation Drawer

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As per style guide convention Help and Settings are always located in the action overflow.



As the navigation drawer expands, it overlays the content but not the action bar. When the drawer is fully extended, the action bar adjusts its content by replacing the current action bar title with the app name and removing all actions that are contextual to the view underneath the navigation drawer. The overflow menu with the standard action items for Settings and Help remains visible.

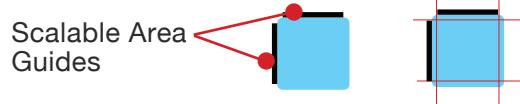
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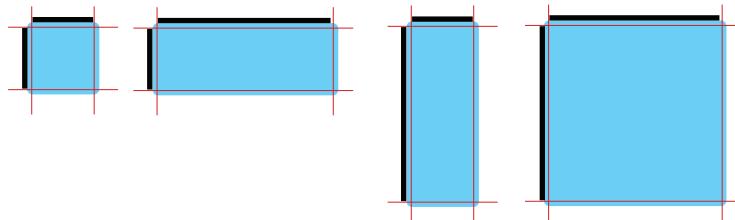
9 patch images / Buttons

9 patch images

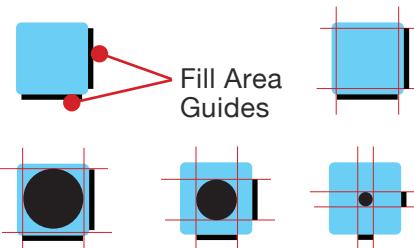
The TOP and LEFT guides are used to define the scalable portion of your image – LEFT for scaling height, TOP for scaling width.



This means the image can stretch horizontally and vertically within the black portion and everything else, such as the corners, will remain the same size. This allows you to have buttons that can scale to any size and maintain a uniform look.



Fill area guides are optional and provide a way to define the area for stuff like your text label. Fill determines how much room there is within your image to place text, or an icon, or other things. 9-patch isn't just for buttons, it works for background images as well.



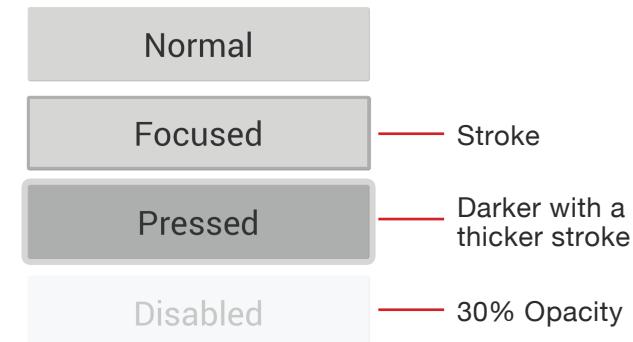
Guides must only be one pixel wide, so if you want a 48x48 button, your png will actually be 50x50. Guides must be solid black (#000000) as well. Anything thicker than one pixel will remain part of your image.

Naming 9 patch files

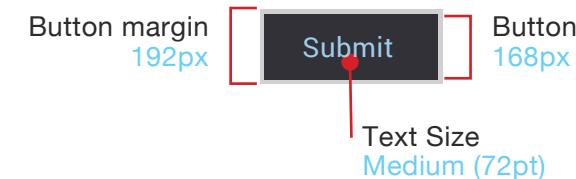
Basically, 9-patch uses png transparency to do an advanced form of 9-slice or scale9. The guides are straight, 1-pixel black lines drawn on the edge of your image that define the scaling and fill of your image. By naming your image file name.9.png, Android will recognize the 9.png format and use the black guides to scale and fill your bitmaps.

NAME.9.png

Button states



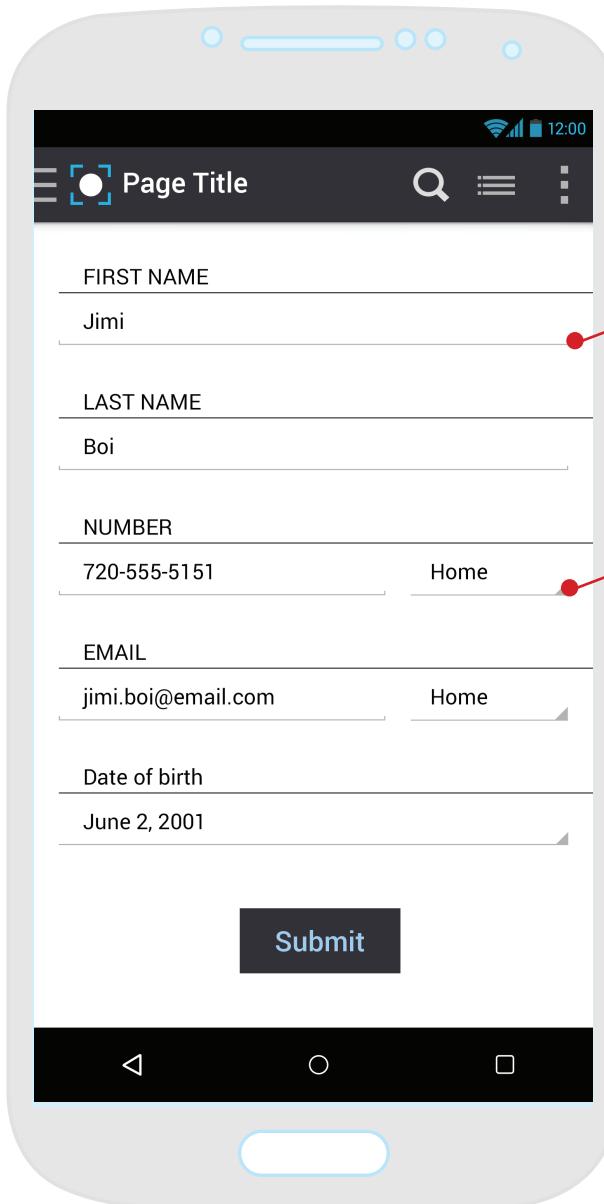
Button Dimensions



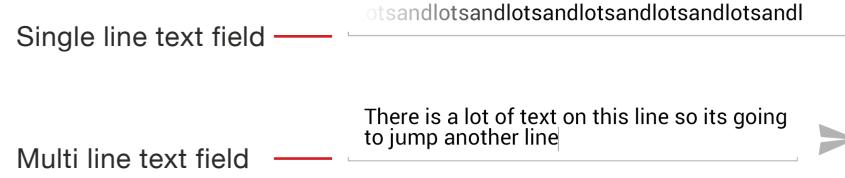
Android Guide

Text Entry Fields / Spinner

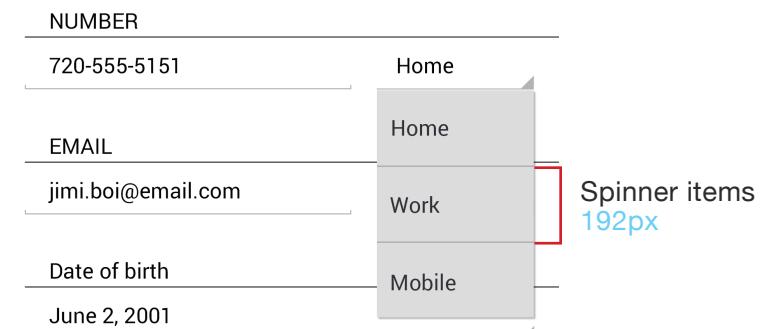
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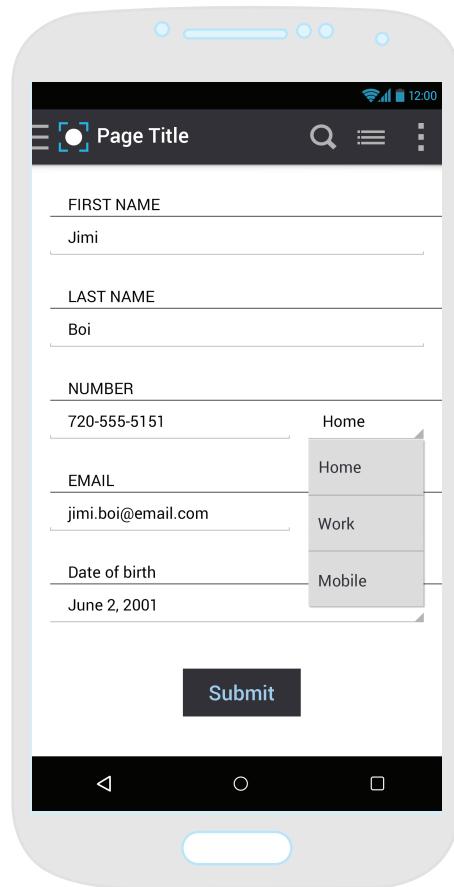
Text fields



Spinner open

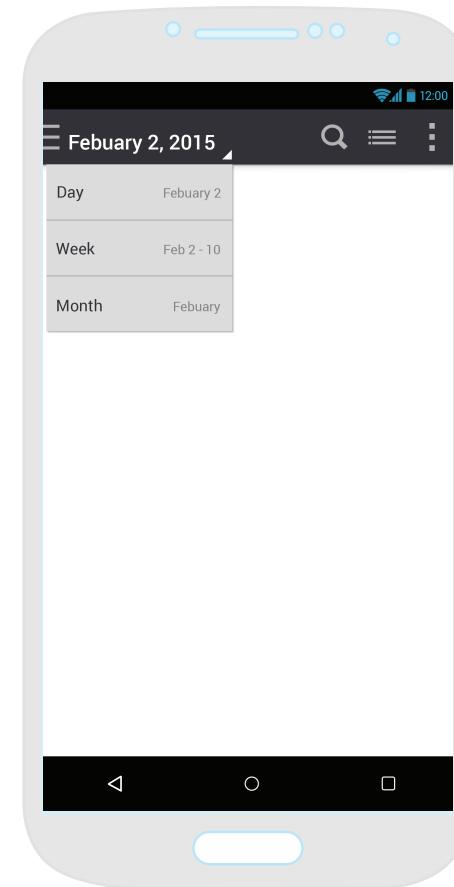


Spinners in forms



Use spinners in forms for both simple data input and in combination with other input fields. For example, a text field might let you edit an email address for a contact, while its associated spinner allows you to select whether it's a Home or Work address.

Spinners in action bars



Use spinners in action bars to switch views. For example, Gmail uses a spinner to permit switching between accounts or commonly used labels. Spinners are useful when changing the view is important to your app, but not necessarily a frequent occurrence. In cases where view switching is frequent, use tabs.

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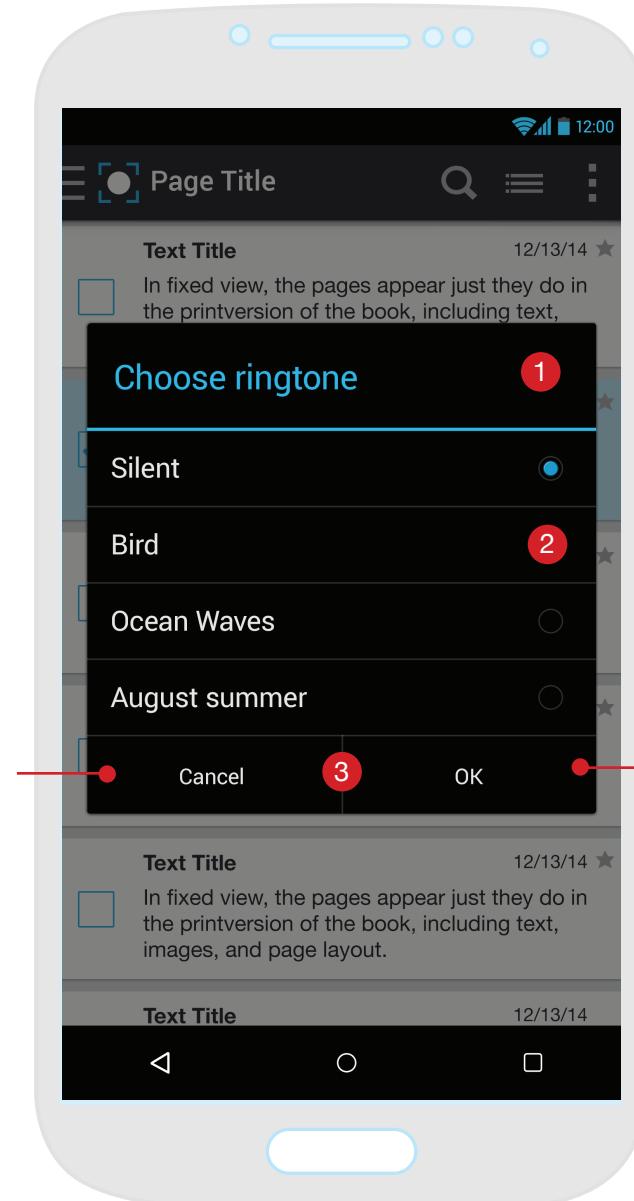
Dialogs

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Dialog

Dialogs prompt the user for decisions or additional information required by the app to continue a task. Such requests can range from simple Cancel/OK decisions to more complex layouts asking the user to adjust settings or enter text.

The dismissive action of a dialog is always on the left. Dismissive actions return to the user to the previous state.



Action buttons are typically Cancel and/or OK, with OK indicating the preferred or most likely action. However, if the options consist of specific actions such as Close or Wait rather than a confirmation or cancellation of the action described in the content, then all the buttons should be active verbs.

- 1 Optional Title region
- 2 Content area
- 3 Action buttons

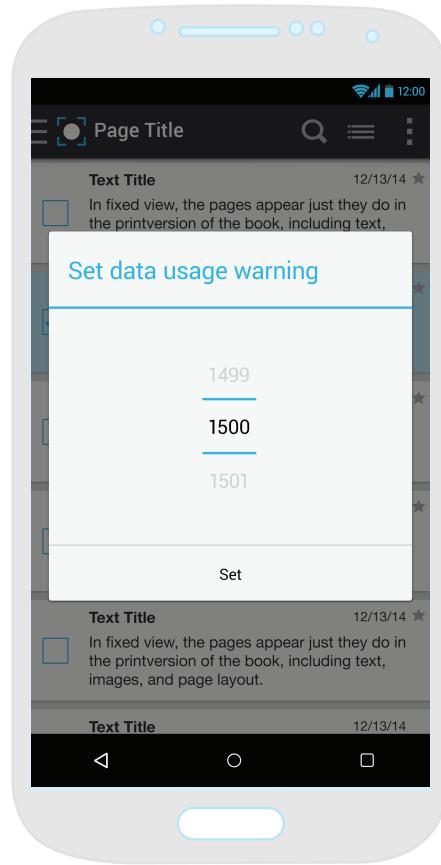
The affirmative actions are on the right. Affirmative actions continue progress toward the user goal that triggered the dialog.

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Pickers

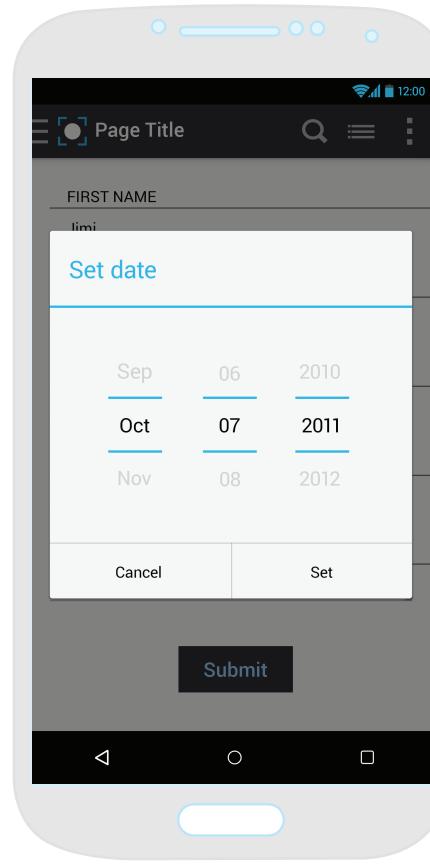
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Picker



Pickers provide a simple way to select a single value from a set. In addition to touching the up/down arrow buttons, it's possible to set the desired value from the keyboard or via a swipe gesture.

Date and time Picker



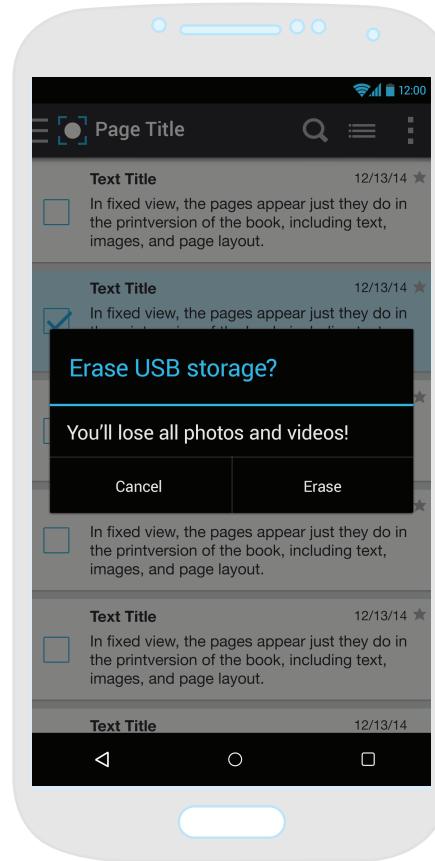
Android provides these as ready-to-use dialogs. Each picker is a dialog with a set of controls for entering the parts of the date (month, day, year) or time (hour, minute, AM/PM). Using these in your app helps ensure that a user's specification of a data or time input is valid and formatted correctly. The format of a time and date picker adjusts automatically to the locale.

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Alerts

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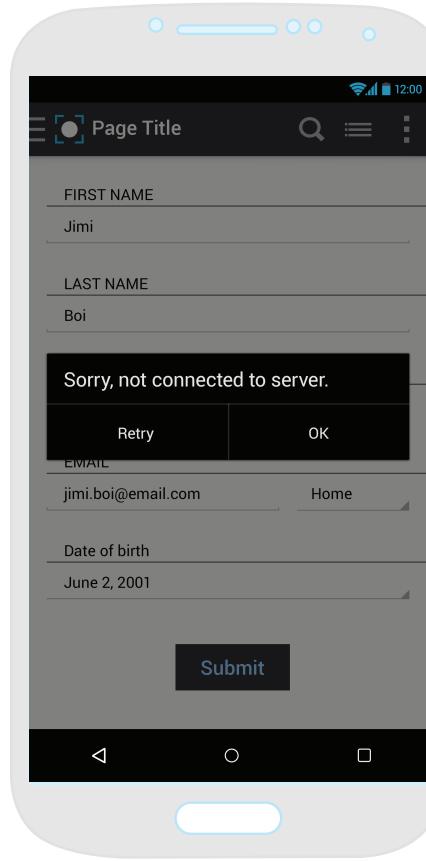
Alerts with title bars



Alerts inform the user about a situation that requires their confirmation or acknowledgement before proceeding. They differ slightly in appearance based upon the severity and impact of the message conveyed.

Use alerts with title bars sparingly. They are appropriate only when a high-risk operation involving potential loss of data, connectivity, extra charges, and so on requires a clear question or statement (the title) and some additional explanation (in the content area).

Alerts without title bars



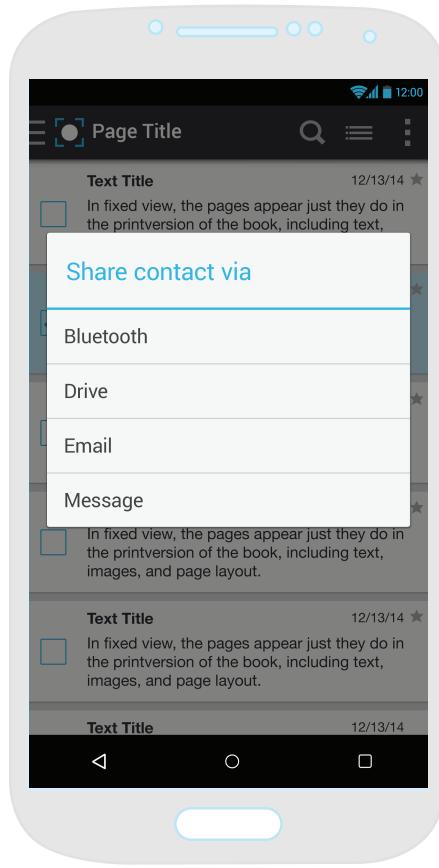
Most alerts don't need titles. Usually the decision doesn't have a severe impact and can be summed up succinctly in a sentence or two. The content area should either ask a question (such as "Delete this conversation?") or make a clear statement whose relationship to the action buttons is obvious.

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Popups and Toasts

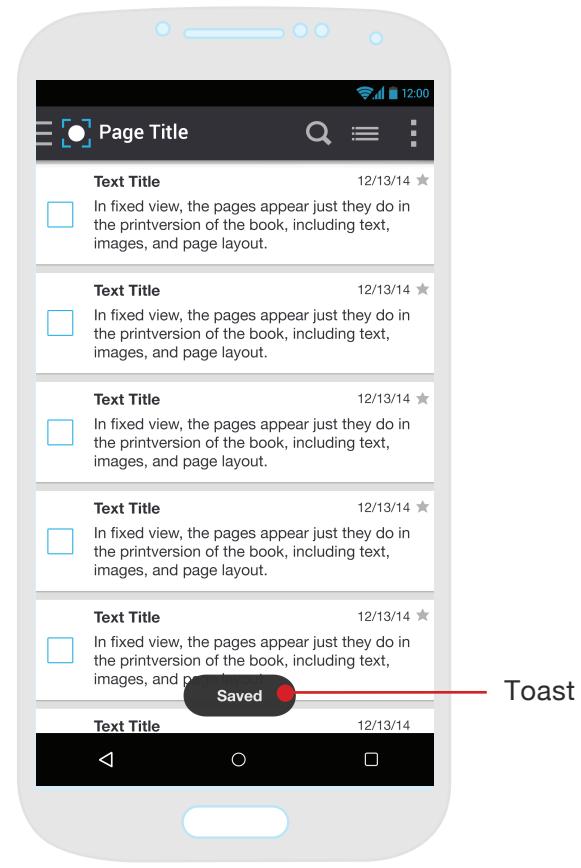
@xxxhdpi

Popups



Popups are lightweight version of dialogs that require a single selection from the user. Popups don't have explicit buttons that accept or cancel the operation. Instead, making a selection advances the workflow, and simply touching outside the popup dismisses it.

Toasts

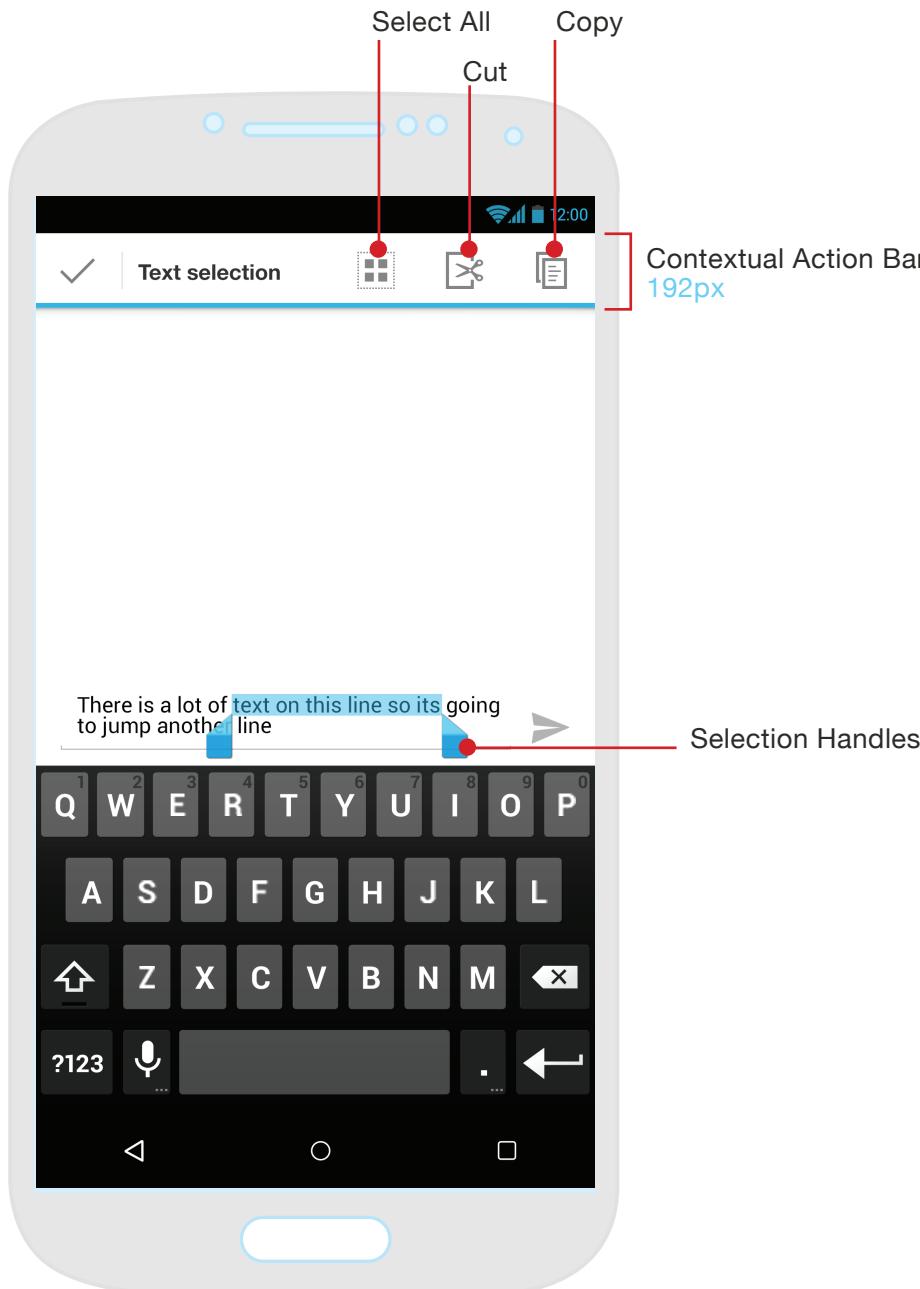


Toasts provide lightweight feedback about an operation in a small popup. For example, navigating away from an email before you send it triggers a "Draft saved" toast to let you know that you can continue editing later. Toasts automatically disappear after a timeout.

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Text selection



Selection Mode

Users can select any word in a text field with a long press. This action triggers a text selection mode that facilitates extending the selection or choosing an action to perform on the selected text.

CAB

A contextual action bar (CAB) displays the actions available to perform on the selection: typically cut, copy, and paste, but apps can insert additional commands as needed.

Selection Handles

Selection handles can be dragged to select more or less text while remaining in selection mode.

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More Production Stuff

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Size	Ratio	Percentage(%)
xxxhdpi	8	100%
xxhdpi	6	75%
xhdpi	4	50%
hdpi	3	37.5%
mdpi	2	25%

Sources

Icons & Type sizes

<https://developer.android.com/design/style/typography.html>

<https://developer.android.com/design/style/iconography.html>

Action Bar / Tabs

<https://developer.android.com/design/patterns/actionbar.html>

<https://developer.android.com/design/building-blocks/tabs.html>

Contextual Action Bars(CAB)

<https://developer.android.com/design/patterns/actionbar.html>

Navigation Drawer

<https://developer.android.com/design/patterns/navigation.html>

Text Entry Fields / Spinners

<https://developer.android.com/design/building-blocks/text-fields.html>

More on Spinners

<https://developer.android.com/design/building-blocks/spinners.html>

Dialogs

<https://developer.android.com/design/building-blocks/dialogs.html>

Pickers

<https://developer.android.com/design/building-blocks/pickers.html>

Alerts

<https://developer.android.com/design/building-blocks/dialogs.html>

Popups and Toasts

<https://developer.android.com/design/building-blocks/dialogs.html>

Text selection

<https://developer.android.com/design/building-blocks/text-fields.html>

9 patching

<http://radleymarx.com/blog/simple-guide-to-9-patch/>