Errors

Errors occur when an app fails to complete an expected action.

Usage

Errors occur when an app fails to complete an action, such as:

- The app does not understand user input
- The system or app fails
- A user intends to run incompatible operations concurrently

Minimize errors by designing apps that make it easy for users to input information flexibly. Apps should accept com formats that use affordances to improve user understanding.

To address errors:

- Clearly communicate what is happening
- Describe how a user can resolve it
- Preserve as much user-entered input as possible

User input errors

Help users fix input errors as soon as they are detected. Disable the submission of a form if errors are detected, anc only after form submission, clearly explain the error and how to fix it.

Text field input

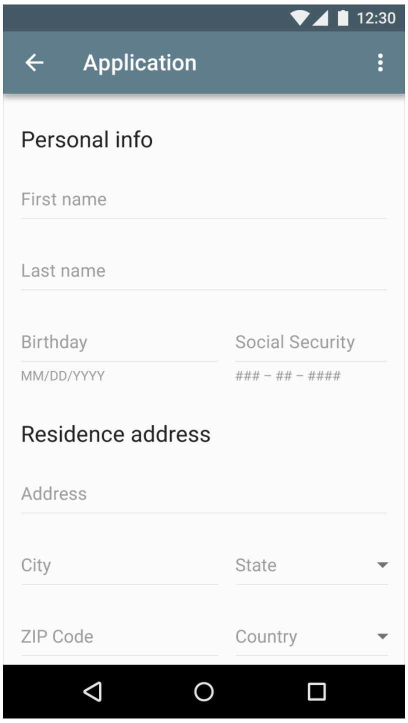
Helper text may be included before, during, or after a user interacts with each field on a form.

Show **error text** only after user interaction with a field. If the user inputs incorrect data, helper text may transform into error text.

Minimize form text to the essentials. Not every text field needs helper and/or error text.

Specification:

Place 16dp of vertical space between text fields and the below error text.



12:30

Application

Personal info

First name

Last name

Birthday MM/DD/YYYY

Social Security ### – ## – ####

Residence address

Address

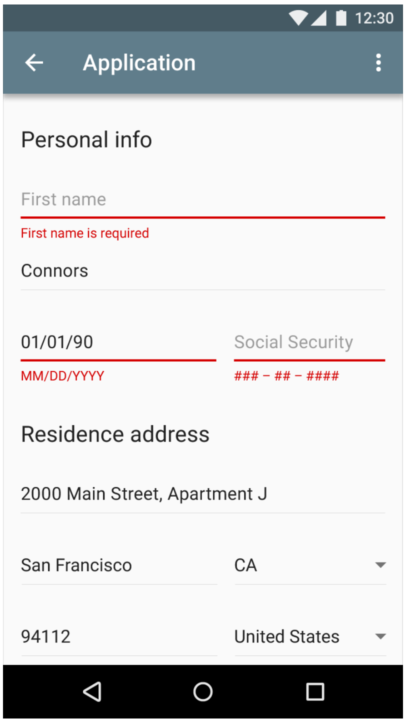
City

State

ZIP Code

Country

Example of a text field input



12:30

Application

Personal info

First name

First name is required

Connors

01/01/90 MM/DD/YYYY

Social Security ### – ## – ####

Residence address

2000 Main Street, Apartment J

San Francisco

CA

94112

United States

Example of a text field input with error text

Color

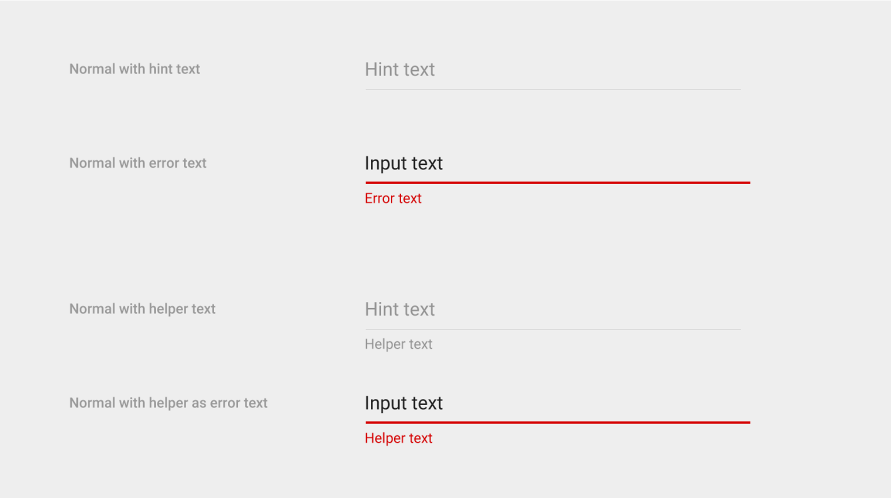
Error text should reflect your product's color palette. It's recommended that you use a contrasting color for error states, such as a warmer hue like red or orange.

Error text should be legible, with noticeable contrast against its background color.

Sites such as webaim.org offer color contrast checking tools.

Fonts for light backgrounds

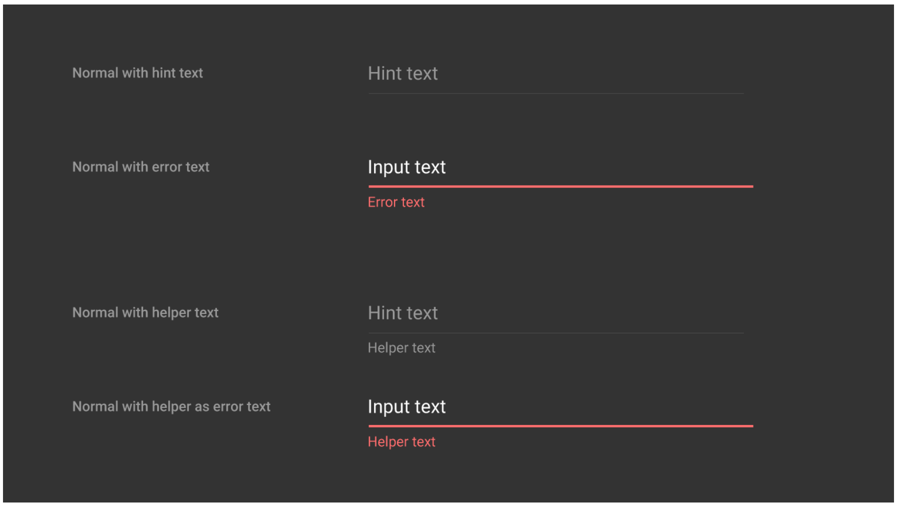
- Errors: Roboto Regular 12sp
- Hint and helper text: #000000 with 38% opacity



Light theme shown here for these states: normal with hint text, normal wi with helper text, and normal with helper as error text

Fonts for dark backgrounds

- Errors: Roboto Regular 12sp
- Hint and helper text: #FFFFFF with 50% opacity



Normal with hint text — Hint text

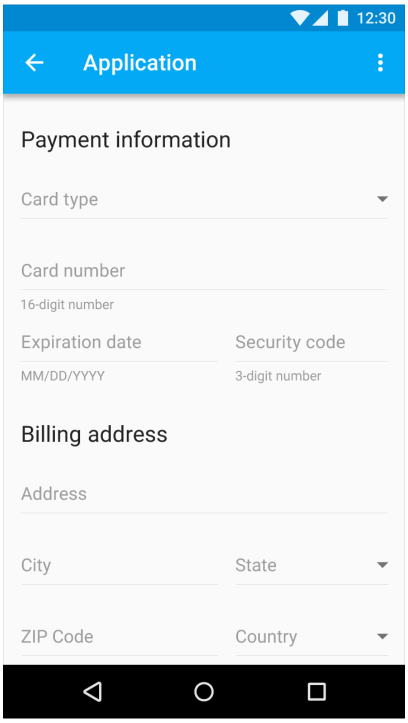
Normal with error text — Input text — Error text

Normal with helper text — Hint text — Helper text

Normal with helper as error text — Input text — Helper text

Dark theme shown here for these states: normal with hint text, normal wi helper text, and normal with helper as error text

Helper and error text



12:30

Application

Payment information

Card type

Card number
16-digit number

Expiration date
MM/DD/YYYY

Security code
3-digit number

Billing address

Address

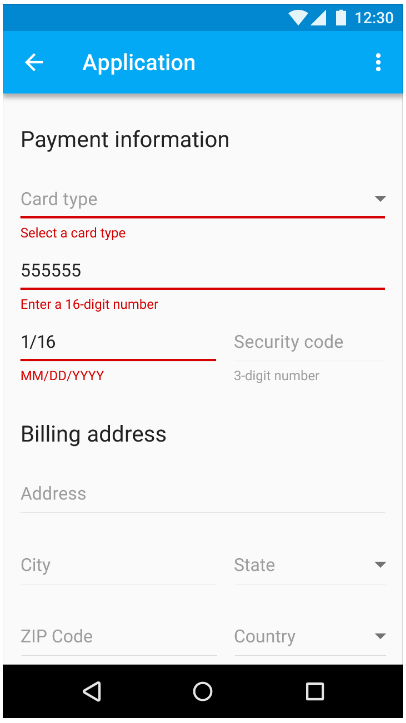
City

State

ZIP Code

Country

Example with helper text



12:30

Application

Payment information

Card type
Select a card type

555555
Enter a 16-digit number

1/16
MM/DD/YYYY

Security code
3-digit number

Billing address

Address

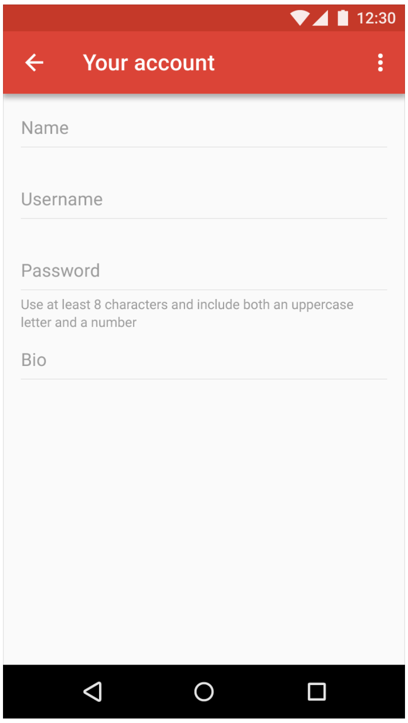
City

State

ZIP Code

Country

Example with error text



12:30

Your account

Name

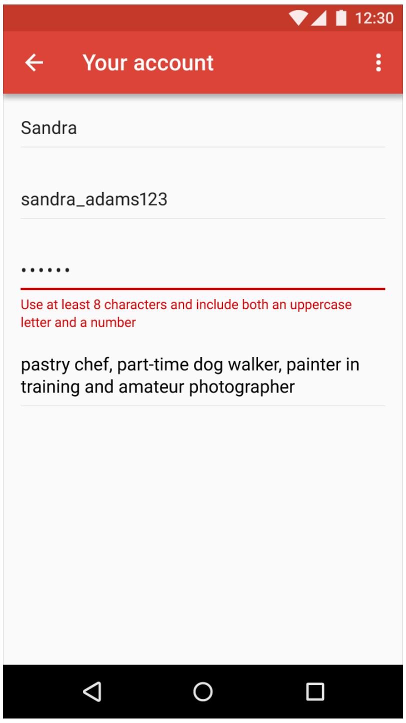
Username

Password

Use at least 8 characters and include both an uppercase letter and a number

Bio

Example with helper text



12:30

Your account

Sandra

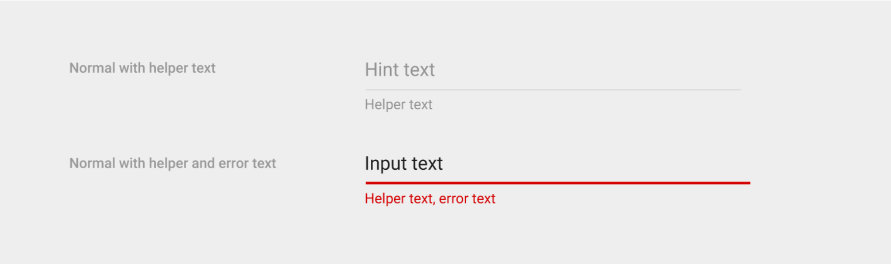
sandra_adams123

••••••

Use at least 8 characters and include both an uppercase letter and a number

pastry chef, part-time dog walker, painter in training and amateur photographer

Example with error text



Normal with helper text

Hint text

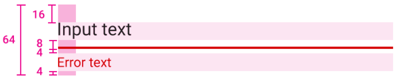
Helper text

Normal with helper and error text

Input text

Helper text, error text

Examples of normal with helper text and normal with helper and error tex



Input and error text

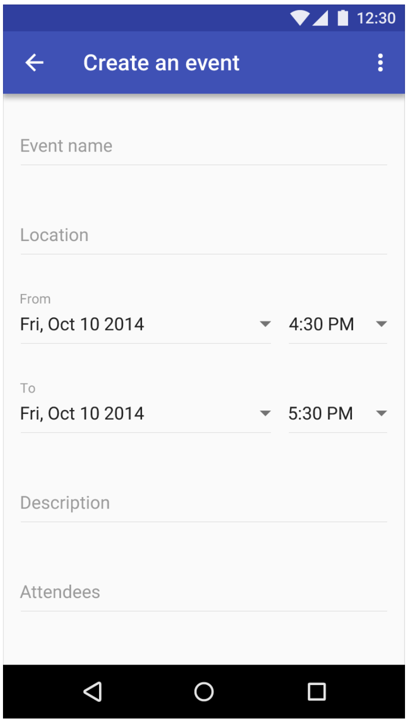
Tile height: 64dp

Padding above input text: 16dp

Padding below input text: 8dp

Padding above and below error text: 4dp

Error with floating text label



Event name

Location

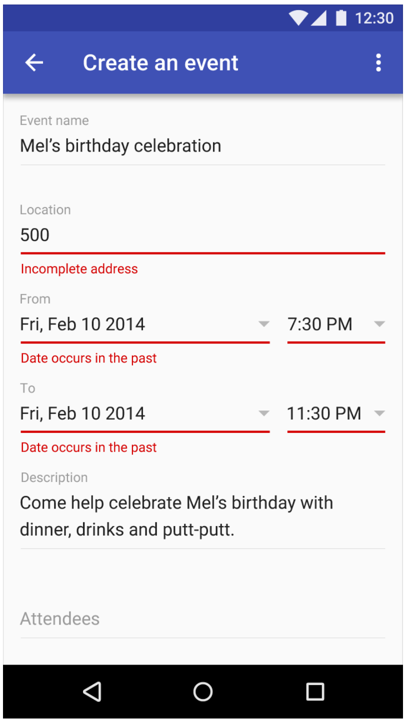
From
Fri, Oct 10 2014 4:30 PM

To
Fri, Oct 10 2014 5:30 PM

Description

Attendees

Example of floating text label with input text



Event name
Mel's birthday celebration

Location
500
Incomplete address

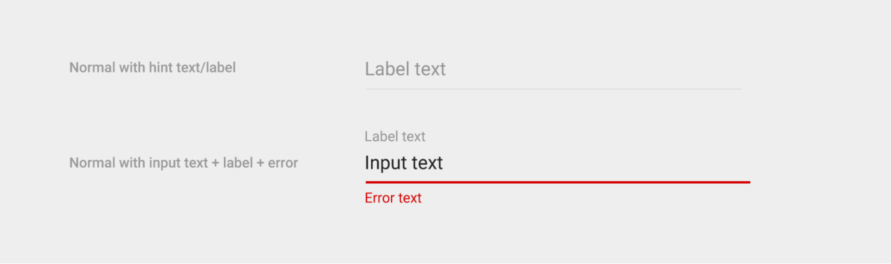
From
Fri, Feb 10 2014 7:30 PM
Date occurs in the past

To
Fri, Feb 10 2014 11:30 PM
Date occurs in the past

Description
Come help celebrate Mel's birthday with dinner, drinks and putt-putt.

Attendees

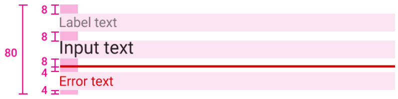
Example of floating text label with error text



Normal with hint text/label
Label text

Normal with input text + label + error
Label text
Input text
Error text

Examples of normal with hint text/label and normal with input text, label



Specs for floating text label

Tile height: 80dp

Padding above label text: 8dp

Padding above and below input text: 8dp

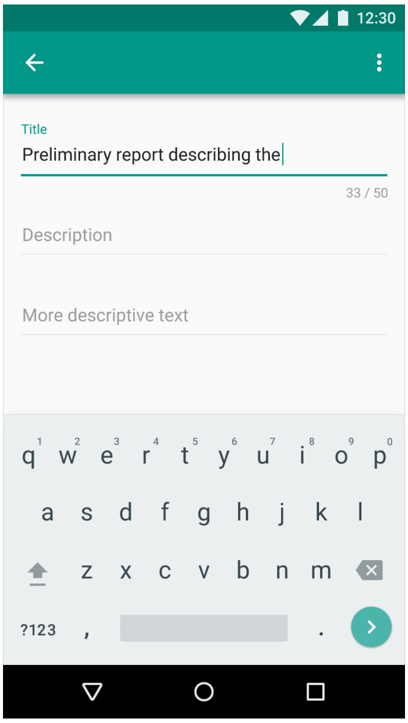
Padding above and below error text: 4dp

Text field input - Over/under character or word count

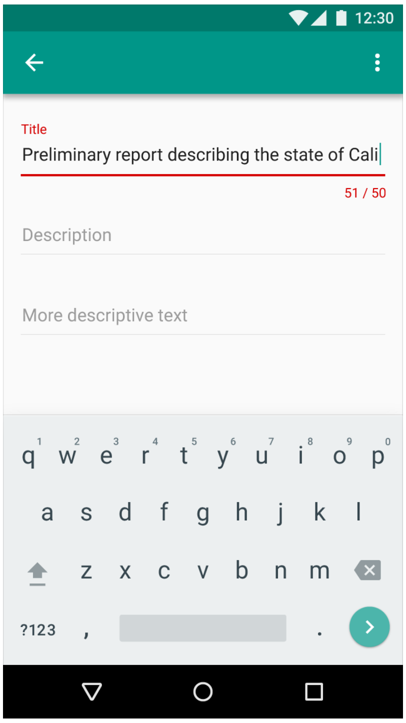
A character counter may be displayed before, during, and after user interaction with a field. Consider not displaying until the user approaches the character limit.

- Counter font is Roboto Regular 12sp
- Counter fields have 16dp of additional bottom padding

Single-line with character counter

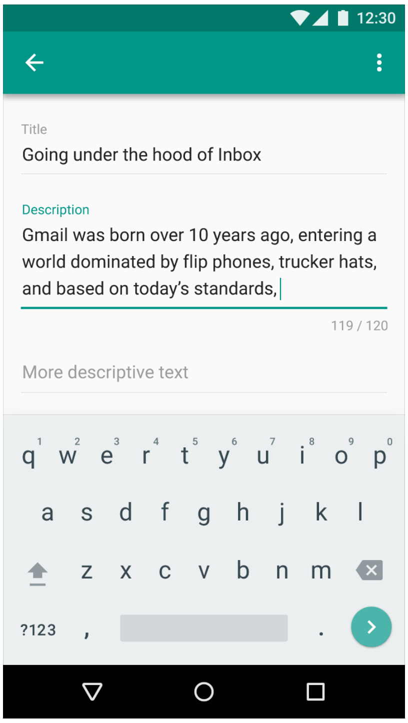


Example of a single-line with character counter with user input text



Example of a single-line with character counter with error text

Multi-line with character counter



Title

Going under the hood of Inbox

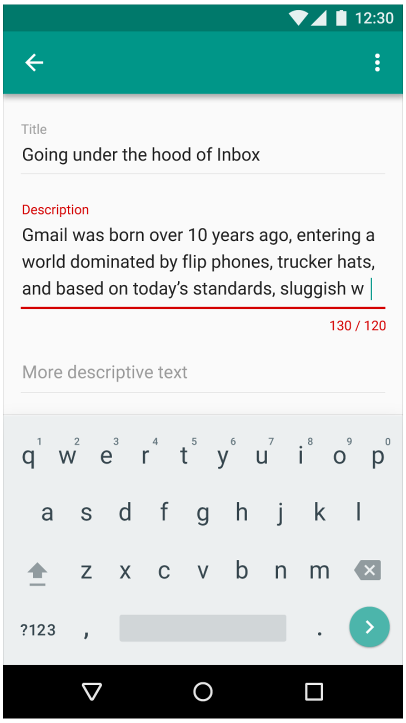
Description

Gmail was born over 10 years ago, entering a world dominated by flip phones, trucker hats, and based on today's standards,

119 / 120

More descriptive text

Example of a multi-line with character counter with user input text



Title

Going under the hood of Inbox

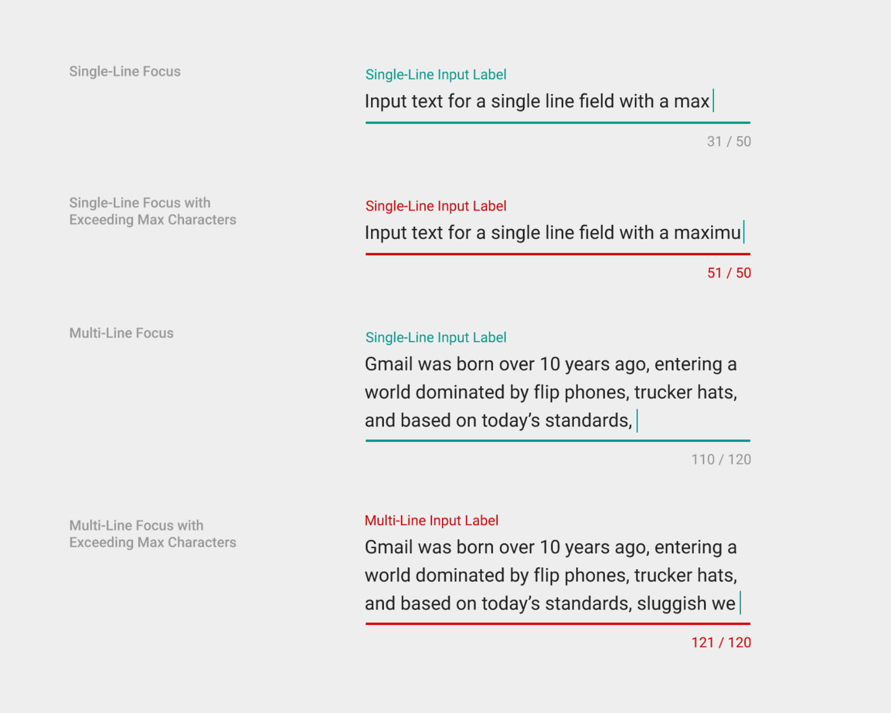
Description

Gmail was born over 10 years ago, entering a world dominated by flip phones, trucker hats, and based on today's standards, sluggish w

130 / 120

More descriptive text

Example of a multi-line with character counter with error text



Single-Line Focus

Single-Line Input Label

Input text for a single line field with a max

31 / 50

Single-Line Focus with Exceeding Max Characters

Single-Line Input Label

Input text for a single line field with a maximu

51 / 50

Multi-Line Focus

Single-Line Input Label

Gmail was born over 10 years ago, entering a world dominated by flip phones, trucker hats, and based on today's standards,

110 / 120

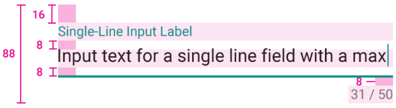
Multi-Line Focus with Exceeding Max Characters

Multi-Line Input Label

Gmail was born over 10 years ago, entering a world dominated by flip phones, trucker hats, and based on today's standards, sluggish we

121 / 120

Examples of these states: single-line input label with user input text, sing error text, single-line input label with user input text, and multi-line input l



Text field input

Single-line input label top padding: 16dp

Top and bottom padding for input text for a single-line field: 8dp

Height of entire input area: 88dp

Incompatible values

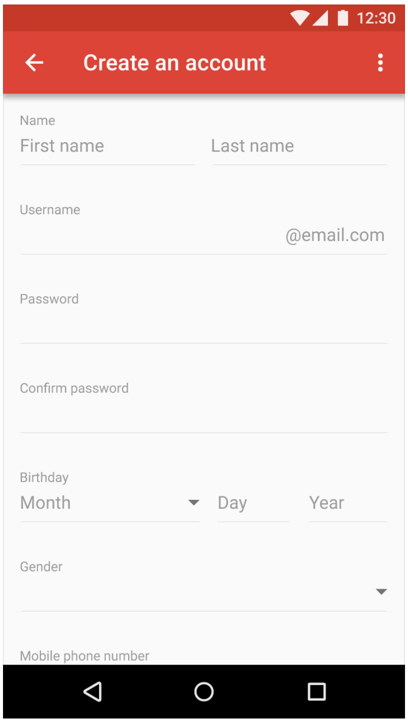
Show errors for incompatible values during or after a user interacts with a text field.

If two or more fields have incompatible inputs:

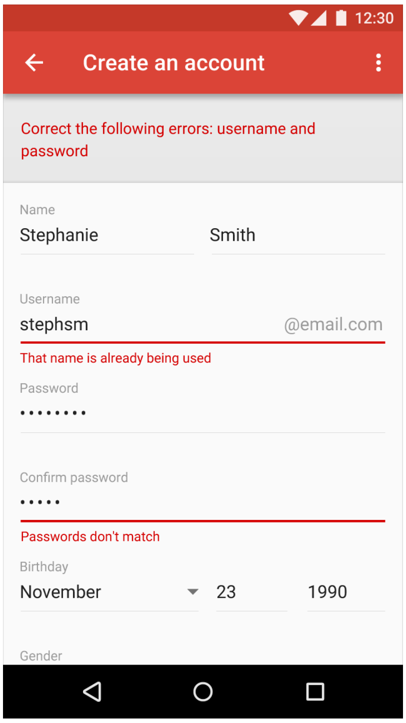
- In the text field, indicate a fix is needed. Add an error message below.
- Display a message at the top of the form, or screen, summarizing the fixes needed and any additional explanation.

Errors detected upon form submission

Reload the form with consolidated error messages and scroll position at the top. Error messages for individual fields may be resolved as the user works through the form.



Example of form



Correct the following errors: username and password

Name: Stephanie Smith

Username: stephsm @email.com

That name is already being used

Password: •••••••••

Confirm password: •••••

Passwords don't match

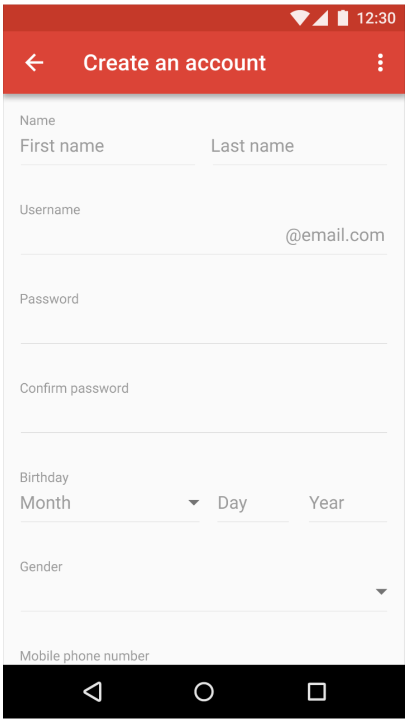
Birthday: November 23 1990

Example of errors detected after attempted form submission

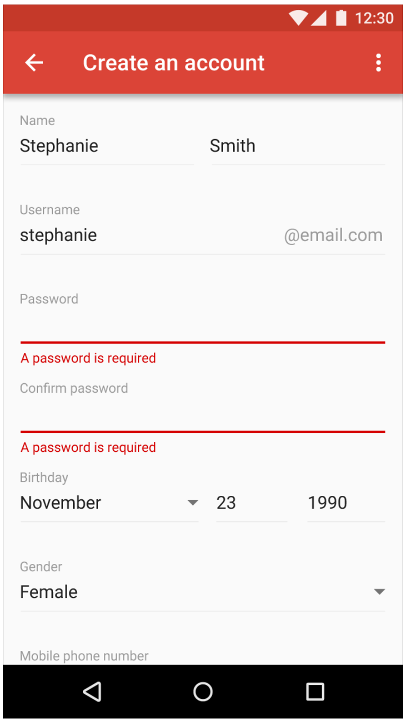
Incomplete form

Empty form fields should be indicated by both the text field and error message below.

Display incomplete form errors to indicate a user has skipped a field after they have advanced through a form. If unable to detect user progress through the form, display an error after the user has attempted to submit the form.



Example of form

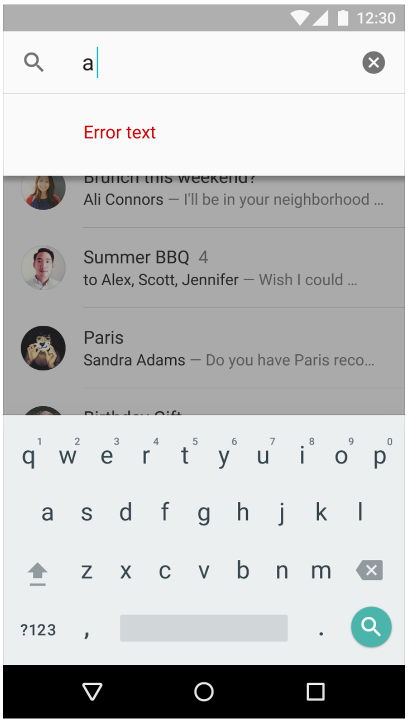


Example of incomplete form

Multiple errors before form submission

Individually label error messages as the user works through the form.

Single-line list error



12:30
a
Error text
Brunch this weekend?
Ali Connors — I'll be in your neighborhood ...
Summer BBQ 4
to Alex, Scott, Jennifer — Wish I could ...
Paris
Sandra Adams — Do you have Paris reco...
Birthday Gift

Example of single-line list error

App errors

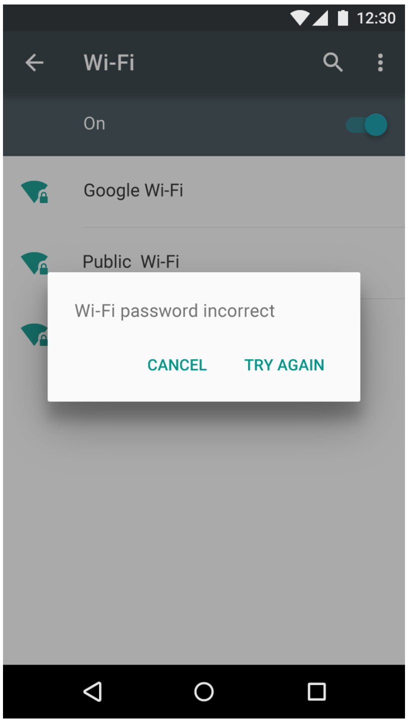
App errors occur independent of user input.

General app error

When an error occurs, an app should display loading indicators until the error message appears.

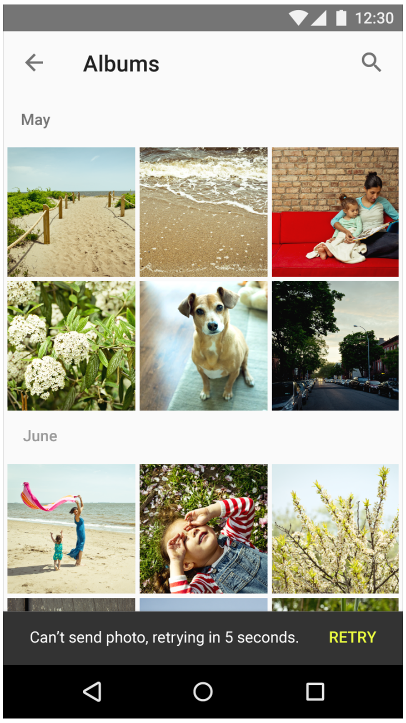
Features not available may be indicated as disabled in the UI. For example, a button not may be displayed in a disabled state, paired with text explaining it is not available. Not every error requires a new component to pop up.

If possible, give your user an action that will help them address the error.



Wi-Fi password incorrect

Alert dialog: app feedback about an error that is blocking normal operation

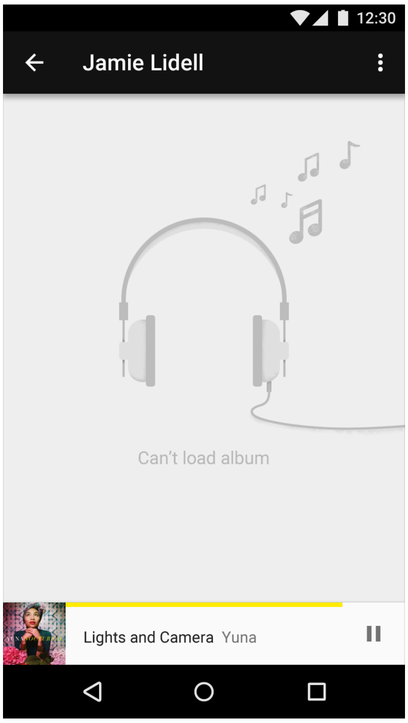


Can't send photo, retrying in 5 seconds.

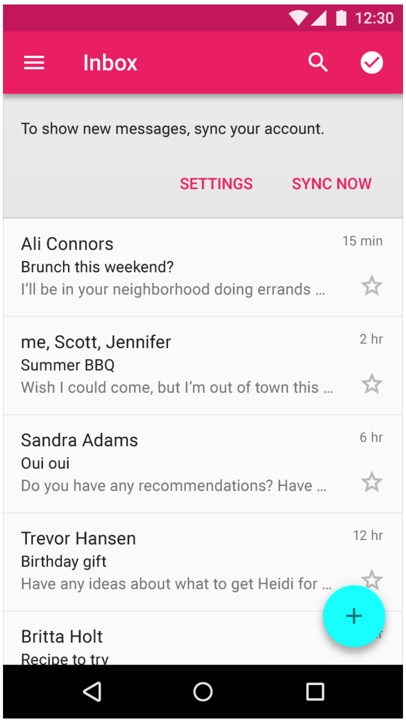
Snackbar: app feedback about a peripheral error. Snackbars are transient, don't use them for critical, persistent, or bulk errors.

Sync error/failure to load

When sync is down or content has failed to load, the user should be able to interact with as much of the rest of the app as possible.



Empty state for the screen/content failing to load



To show new messages, sync your account.

Ali Connors
Brunch this weekend?
I'll be in your neighborhood doing errands ...

me, Scott, Jennifer
Summer BBQ
Wish I could come, but I'm out of town this ...

Sandra Adams
Oui oui
Do you have any recommendations? Have ...

Trevor Hansen
Birthday gift
Have any ideas about what to get Heidi for ...

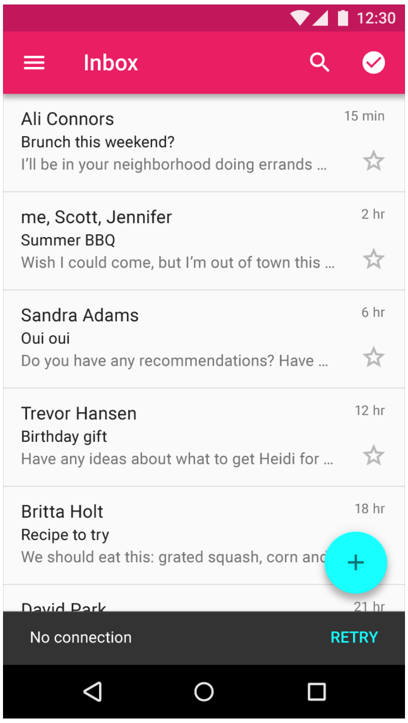
Britta Holt
Recipe to try

Container/component specific error with action

Connectivity

When connectivity is down, the user should be able to interact with as much of the rest of the app as possible.

If appropriate, present a link to help a user accomplish their task. Only offer links that you can actually support. For example, don't offer an option like "Try again" in cases where you can detect that the operation will fail.



12:30

Inbox

Ali Connors 15 min
Brunch this weekend?
I'll be in your neighborhood doing errands ...

me, Scott, Jennifer 2 hr
Summer BBQ
Wish I could come, but I'm out of town this ...

Sandra Adams 6 hr
Oui oui
Do you have any recommendations? Have ...

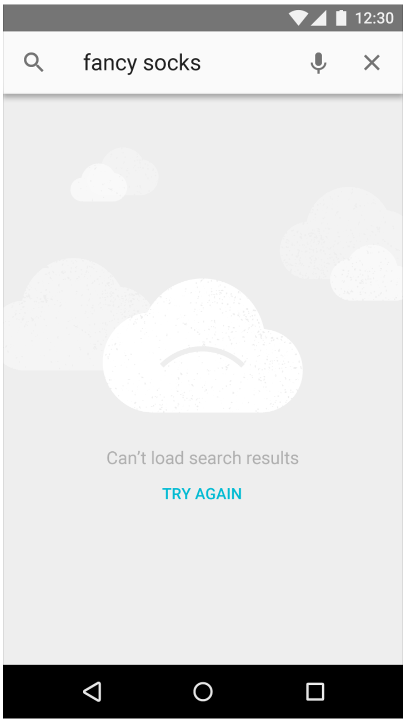
Trevor Hansen 12 hr
Birthday gift
Have any ideas about what to get Heidi for ...

Britta Holt 18 hr
Recipe to try
We should eat this: grated squash, corn and

David Park 21 hr

No connection RETRY

Snackbar with action to retry



12:30

fancy socks

Can't load search results

TRY AGAIN

Empty state for a screen only available online

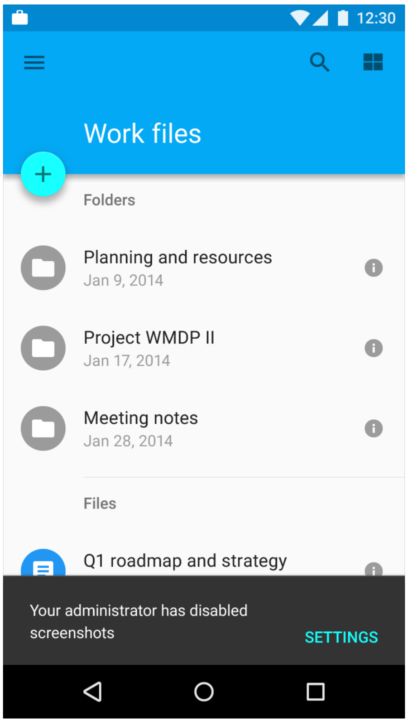
Incompatible state errors

Incompatible state errors occur when users attempt to run operations that conflict, such as making a call while in ai or taking a screenshot from a restricted work account. Help prevent users from putting themselves into these situat communicating the states they are selecting and the implications for the rest of their experience. When these errors do not imply that they are the user's fault.

General incompatibility

Clarify the reason for and origination of the error.

For example, screenshots and premium features are not allowed while in a restricted mode.



Work files

Folders

Planning and resources
Jan 9, 2014

Project WMDP II
Jan 17, 2014

Meeting notes
Jan 28, 2014

Files

Q1 roadmap and strategy

Your administrator has disabled screenshots

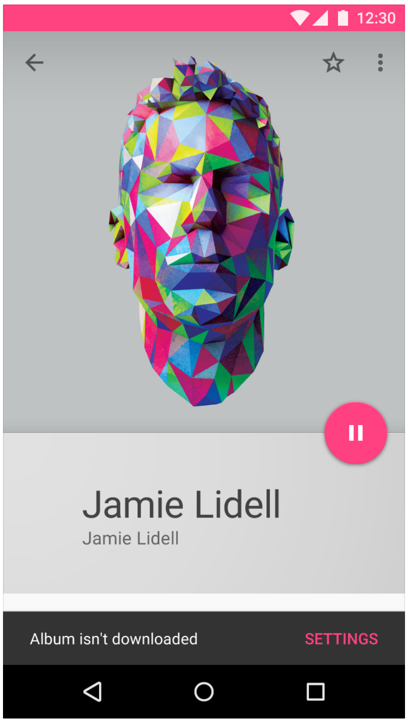
Snackbar + Special mode indicator

Offline by choice

Display an unobtrusive, persistent indicator when users are offline but try to do tasks that require being online.

Examples:

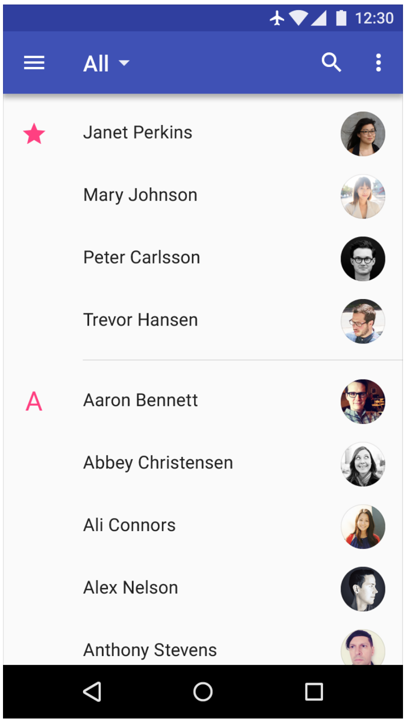
- Placing a call while in airplane mode
- Music availability while offline



Jamie Lidell
Jamie Lidell

Album isn't downloaded

Snackbar



Janet Perkins
Mary Johnson
Peter Carlsson
Trevor Hansen
Aaron Bennett
Abbey Christensen
Ali Connors
Alex Nelson
Anthony Stevens

Indicator that the device has been placed into airplane mode.

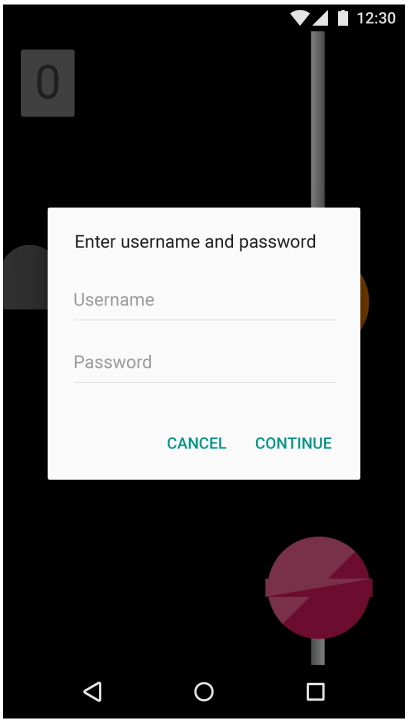
Permission requested

If your app requires user permission before proceeding with an action, include the permission request in the app flow instead of treating it as an error.

If permissions are necessary before the first run of an app, consider including them into your app's first-run experience.

Examples:

- An app's permissions have changed.
- In-app purchases have been disabled.



Enter username and password

Username

Password

Dialog