

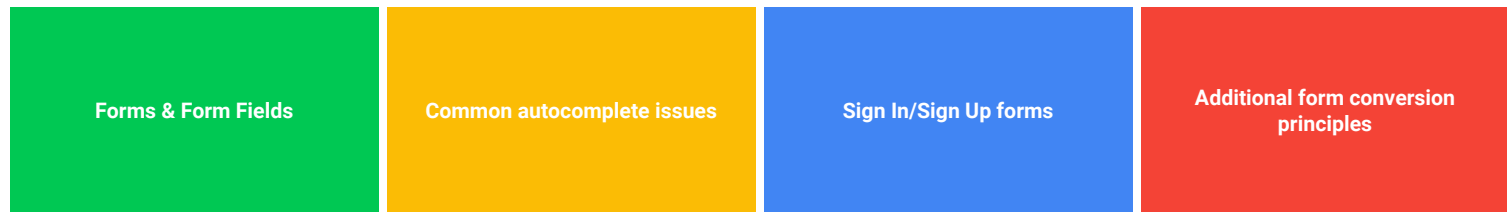
UX Playbook for Form Optimization

Collection of best practices to delight your users



Creating frictionless experiences across the funnel

After looking at several hundred sites, we realized that there were certain universal UX elements that helped create a frictionless form experience, whether e-commerce or finance. This list aims to expand on the [25 Retail Principles](#) and provide a checklist for improving your mobile site experience across 4 key site areas:



Creating frictionless experiences across the funnel

Forms & Form Fields	Common Autofill Issues	Sign-In/Sign-Up	General Conversion Principles
Reduce the number of fields	Fake placeholders	Add value prop around why create an account	Display a value prop at every stage of the funnel
Label and name inputs properly	CVC vs CSC	Don't make the user confirm account info	If calls are important, prompt in your forms
Use placeholders		Give password hints, view password	Show progress bar to guide the user
Use autofill		Sign up with social	Limit exit points, or consider limiting to calls, FAQ, how it works
Name & autocomplete attributes		Consider one-tap sign-up/sign-in	Use descriptive CTAs
Use in-line validation			Show the security of your site to build user trust
Make location entry easy			Clarify why personal info is needed
Don't use dropdowns for > 3 options			Facilitate x-device
Use the correct keypad			
Use the easiest date input			
Forms can be fun			

What can we learn from “Best-In-Class”

Ecommerce: Warby Parker

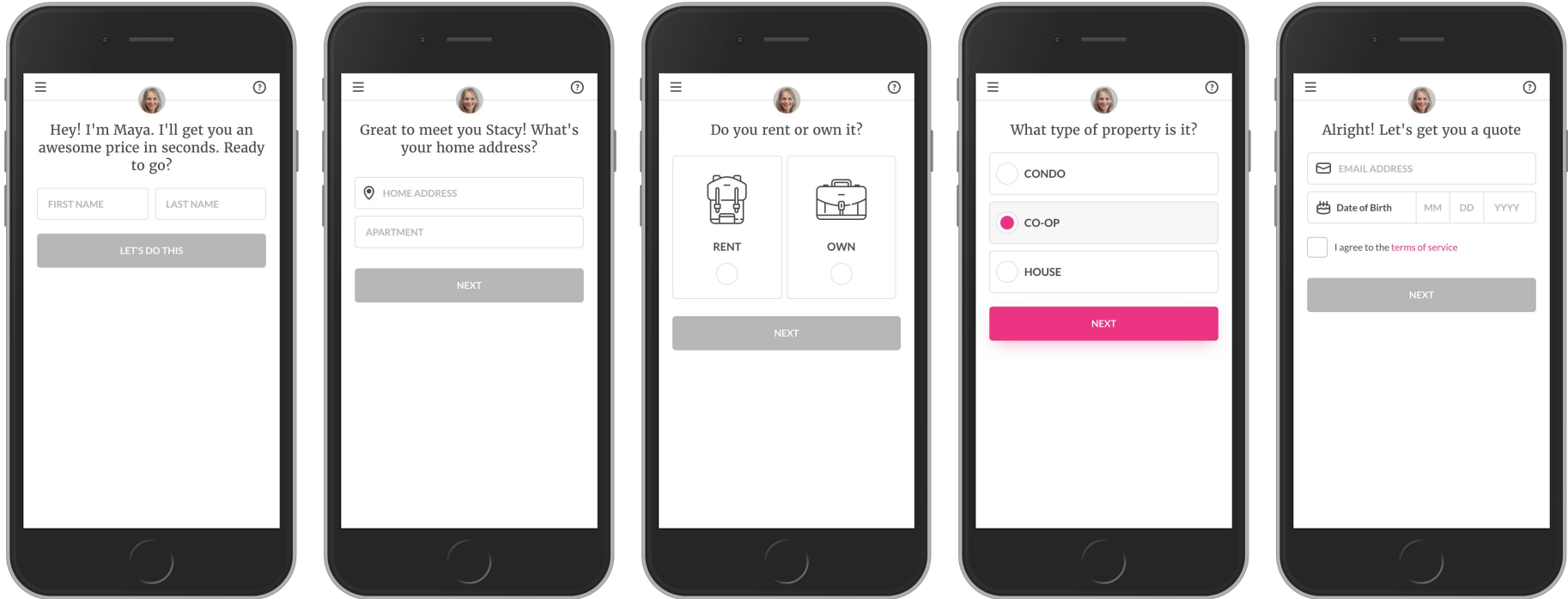
The screenshot shows a mobile app interface for Warby Parker. At the top, the status bar displays signal strength, Wi-Fi, and the time 07:00. Below the status bar, the app header shows 'WARBY PARKER' with three tabs: 'Information' (selected), 'Prescription', and 'Review'. The main content area is titled 'Your details' and contains several input fields: 'First and Last Name', 'Email', 'Password', and 'Phone'. Below these fields is a checkbox for 'Text me updates about my order! And yes, I agree to these terms.' with an information icon. At the bottom, there is a 'Ship to' section with a 'First and Last Name' input field.

Problem to solve:

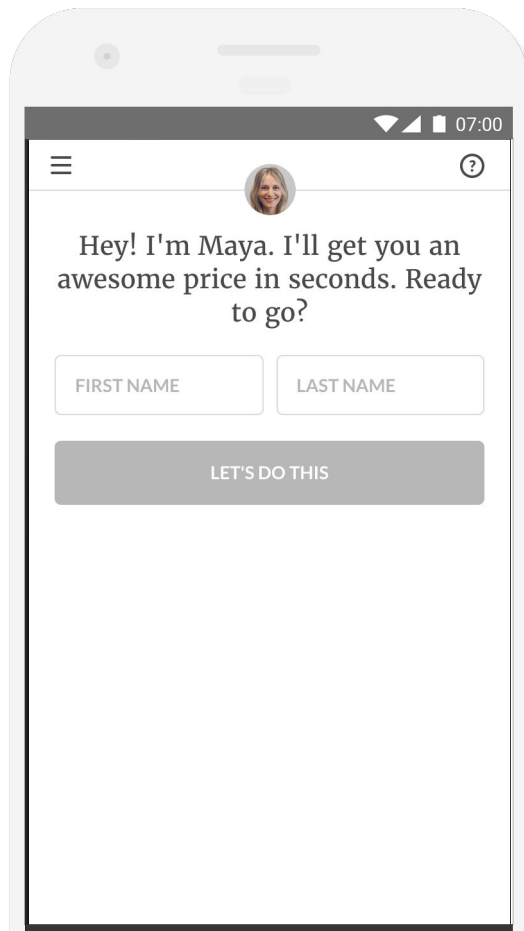
1) How do I help users pay quickly and easily?

- Reduced number of fields -- First and last name consolidated, no second address line
- Don't make user input password twice
- In-line validation (green dots)
- Notification if a field is skipped
- Auto-fill used
- Address info uses Google Places API to autofill 5 shipping fields
- Credit card field doesn't expand until clicked into
- Billing is shipping by default
- Customer service contact capabilities at the bottom

Finance: Lemonade



Finance: Lemonade

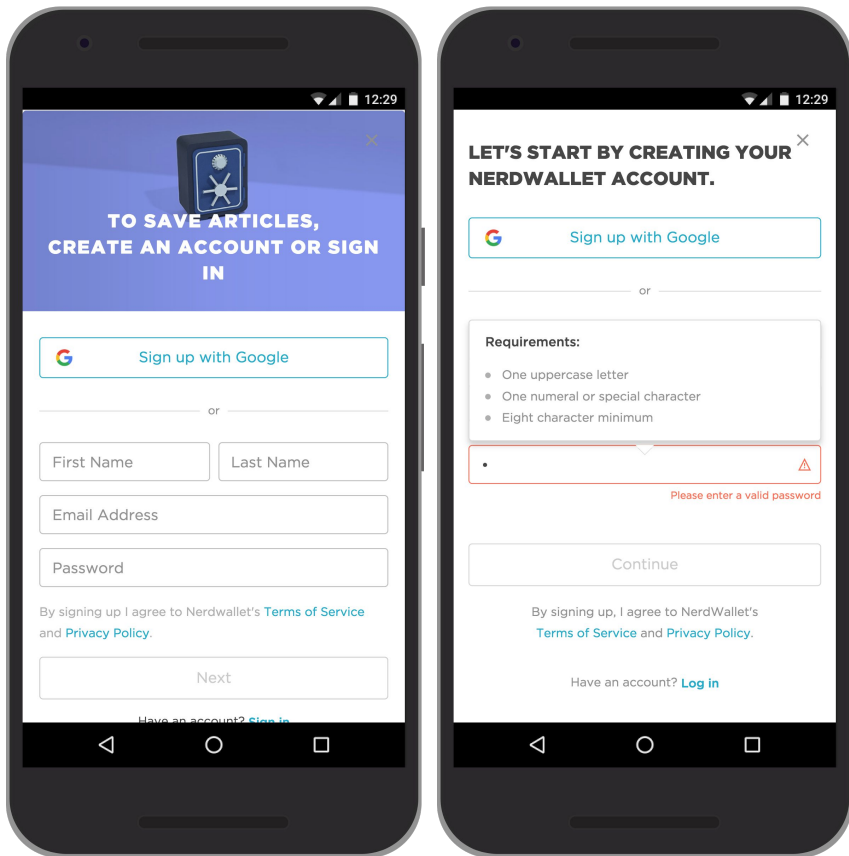


Problem to solve:

1) How do I help users pay quickly and easily?

- ❑ Makes form conversational by breaking up into single questions, personalization, and adding an avatar
- ❑ Uses address validation
- ❑ Limits exit points except “how it works”
- ❑ Uses correct input method (buttons for less than 3 options)
- ❑ Uses numeric keypad for birthday input

Finance: Nerdwallet



Problem to solve:

How do I reduce friction at point of sign in or sign up?

- Value prop around why sign up
- Sign in/sign up with social
- Don't make users repeat personal info
- Give password hints
- Clear option to also Log In
- Only use information absolutely necessary (reduced fields)

Auto: Toyota

Reduce fields w/full name on single line

Uses labels, placeholders and animation correctly

Real-time validation

Auto-fill available

Correct Keypads x2

Labelling inside field saves space (minimizes, remains visible)

Pre-populates closest dealer using previously entered zipcode

YOUR CONTACT INFORMATION

FIRST NAME LAST NAME

EMAIL (REQUIRED) !

PHONE

ADDRESS

YOUR CONTACT INFORMATION

NAME (REQUIRED) Elizabeth Pingle ✓

EMAIL (REQUIRED) beth

PHONE

ADDRESS

CITY

YOUR CONTACT INFORMATION

NAME (REQUIRED)

EMAIL (REQUIRED)

PHONE

ADDRESS

CITY

YOUR CONTACT INFORMATION

NAME (REQUIRED) Elizabeth Pingle ✓

EMAIL (REQUIRED) bethpingle@gmail.com ✓

PHONE

ADDRESS

CITY

Elizabeth Pingle

ya I Hey

Q W E R T Y U I O P

A S D F G H J K L

↑ Z X C V B N M ↵

123 🌐 🎤 space return

bethpingle@gmail.com

q w e r t y u i o p

a s d f g h j k l

↑ z x c v b n m ↵

123 🌐 space @ . return

6504

1 2 3
ABC DEF

4 5 6
GHI JKL MNO

7 8 9
PQRS TUV WXYZ

+ * # 0 ↵

+ ADD COMMENTS

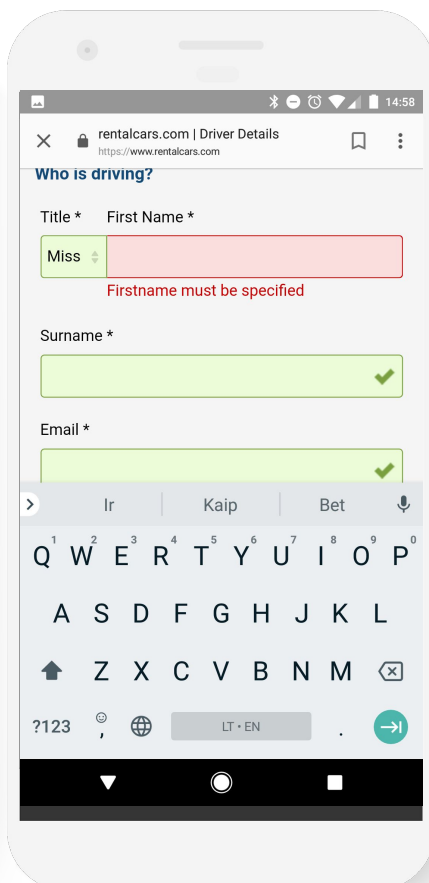
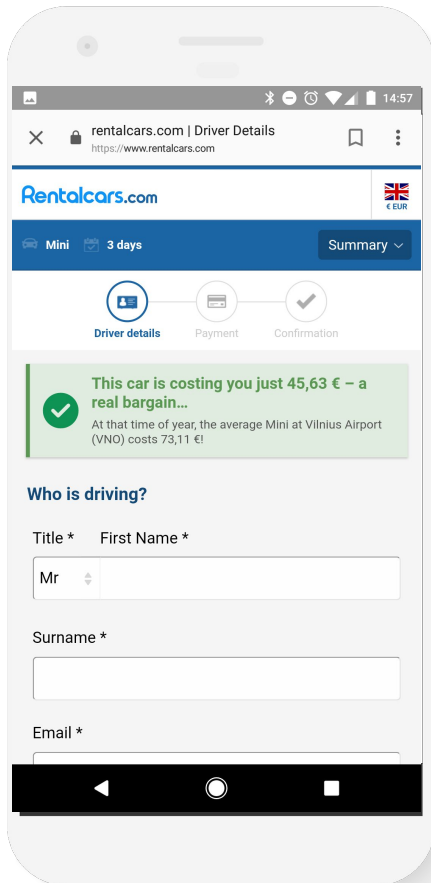
SELECT A DEALER 90291 📍

● Marina Del Rey Toyota

VIEW MORE DEALERS ▾

SUBMIT

Travel: Rentalcars.com



Problem to solve:

How do I help users book quickly?

- ❑ Order summary, ability to change currency
- ❑ Pagination
- ❑ Forms with labels
- ❑ Uses autofill
- ❑ Uses in-line validation
- ❑ Gives descriptive validation prompts
- ❑ Mark required forms with asterisk
- ❑ Uses correct keypads



All recommendations
should be A/B tested!



Forms & form fields

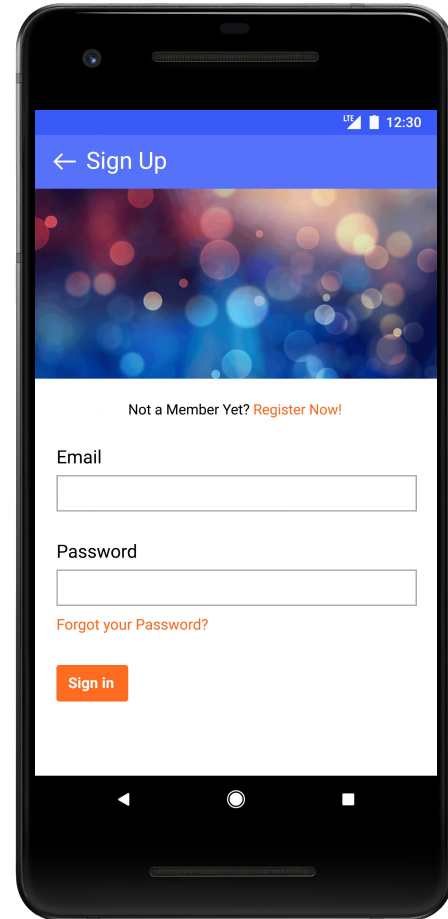
Typing on mobile **is hard**

Proprietary + Confidential

28%

of cart abandonments
due to “too long/complicated
checkout process”

Source: Baymard Institute:
<https://baymard.com/lists/cart-abandonment-rate>



Reduce the number of fields

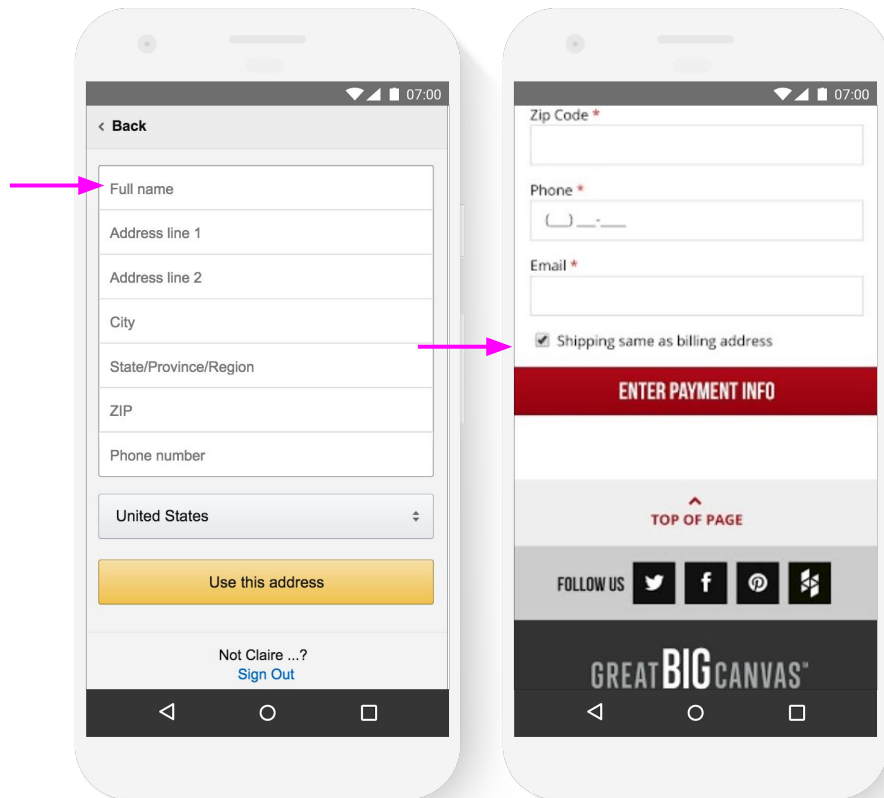
WHY:

27% of ecommerce users abandon orders due to a “too long / complicated checkout process”.

Best performing e-commerce sites have 6-8 fields, total of 12 form elements. Average retail checkout flow has 14.88 form fields.

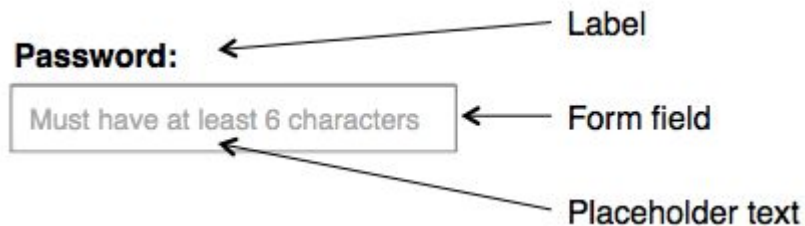
TRY:

- Remove all optional fields
- Consider using full name instead of first and last
- If collecting shipping information, have billing as shipping checked by default and hide fields



Label and name inputs properly

- Always use labels on form inputs, and ensure they're visible when the field is in focus.
- Use placeholders to provide guidance about what you expect.
- To help the browser auto-complete the form, use established **name's** for elements and include the **autocomplete** attribute.

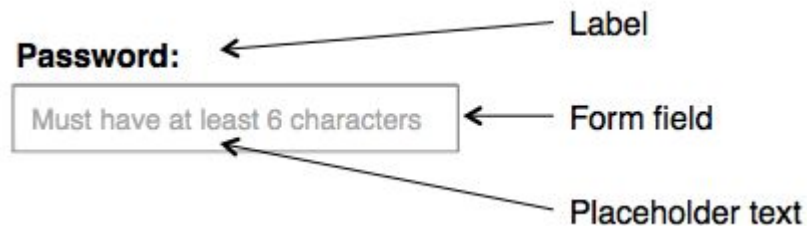


Use placeholders

The placeholder attribute provides a hint to the user about what's expected in the input, typically by displaying the value as light text until the user starts typing in the element.

```
<input type="text" placeholder="MM-YYYY" ...>
```

Caution: Placeholders disappear as soon as the user starts typing in an element, thus they are not a replacement for labels. They should be used as an aid to help guide users on the required format and content.

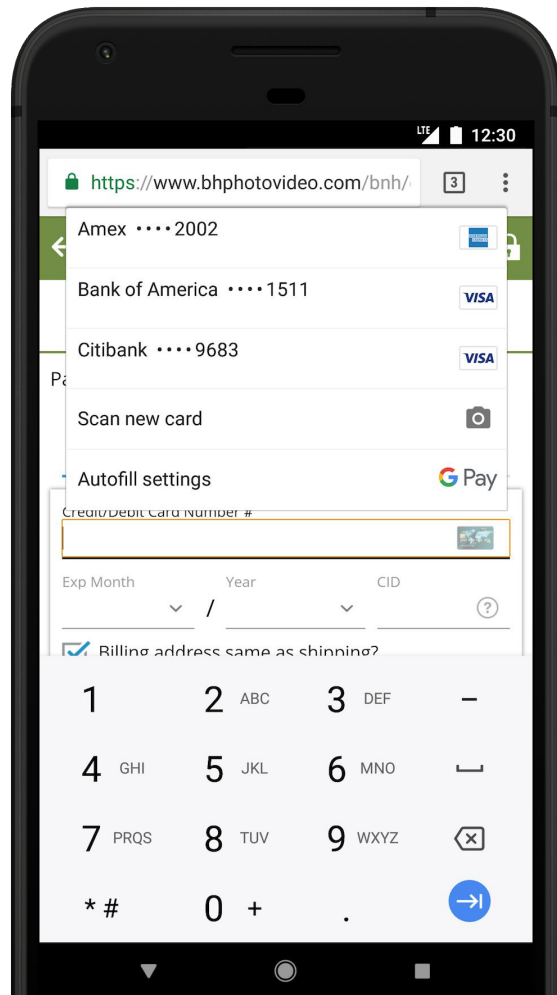


Use autofill

Users appreciate when websites save them time by automatically filling common fields like names, email addresses and other frequently used fields, plus it helps to reduce potential input errors.

Browsers use many heuristics to determine which fields they can [auto-populate based on previously specified data by the user](#), and you can give hints to the browser by providing both the `name` attribute and the `autocomplete` attribute on each input element.

Note: Chrome requires `input` elements to be wrapped in a `<form>` tag to enable auto-complete. If they're not wrapped in a `form` tag, Chrome will offer suggestions, but will **not** complete the form.



Use autofill

For example, to hint to the browser that it should auto-complete the form with the users name, email address and phone number, you should use:

```
<label for="frmNameA">Name</label>
<input type="text" name="name" id="frmNameA"
  placeholder="Full name" required autocomplete="name">
<label for="frmEmailA">Email</label>
<input type="email" name="email" id="frmEmailA"
  placeholder="name@example.com" required autocomplete="email">
<label for="frmEmailC">Confirm Email</label>
<input type="email" name="emailC" id="frmEmailC"
  placeholder="name@example.com" required autocomplete="email">
<label for="frmPhoneNumA">Phone</label>
<input type="tel" name="phone" id="frmPhoneNumA"
  placeholder="+1-555-555-1212" required autocomplete="tel">
```

Use autofill



name
attribute



autocomplete
attribute

Use autofill: Autocomplete attributes

Autocomplete attributes

g.co/pay/autofill

Content type	name attribute	autocomplete attribute
Name	name fname mname lname	<ul style="list-style-type: none"> • name (full name) • given-name (first name) • additional-name (middle name) • family-name (last name)
Email	email	email
Address	address city region province state zip zip2 postal country	<ul style="list-style-type: none"> • For one address input: <ul style="list-style-type: none"> • street-address • For two address inputs: <ul style="list-style-type: none"> • address-line1 • address-line2 • address-level1 (state or province) • address-level2 (city) • postal-code (zip code) • country
Phone	phone mobile country-code area-code exchange suffix ext	tel

Use autofill: Credit Card attributes

Credit Card attributes

g.co/pay/autofill

Content type	name attribute	autocomplete attribute
Credit Card	ccname cardnumber cvc ccmonth ccyear exp-date card-type	<ul style="list-style-type: none">• cc-name• cc-number• cc-csc• cc-exp-month• cc-exp-year• cc-exp• cc-type

Use in-line validation

Modern browsers have several built-in tools to help provide real-time data validation and may prevent the user from submitting an invalid form. Visual cues should be used to indicate whether a form has been completed properly.

TL;DR

- Leverage the browser's built-in validation attributes like `pattern`, `required`, `min`, `max`, etc.
- Use JavaScript and the Constraints Validation API for more complex validation requirements.
- Show validation errors in real time, and if the user tries to submit an invalid form, show all fields they need to fix.

Personal Information

FIRST NAME

MI

LAST NAME

DATE OF BIRTH

SOCIAL SECURITY NUMBER ?

ARE YOU A U.S. CITIZEN?

46%

Did not implement error
messaging in real-time

Use in-line validation

Use these attributes to validate input

- The pattern attribute
- The required attribute
- The min, max, and step attributes
- The maxlength attribute
- The minlength attribute
- The non-validate attribute

[Learn more here](#)

You can also

- Use JS for more complex real time validation
- Set custom validation methods
- Prevent submission on invalid forms
- Show feedback in real time

[Learn more here](#)

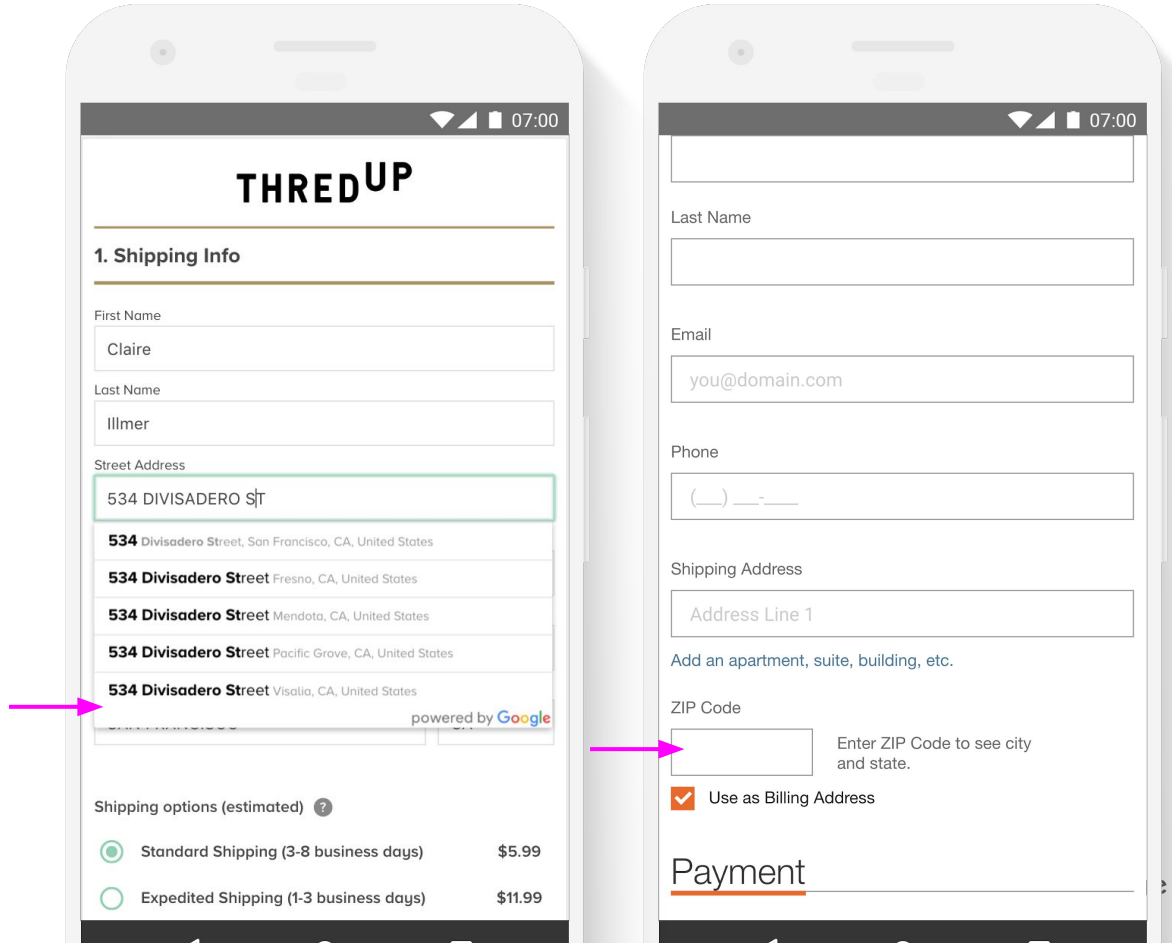
Make location entry easy

Consider the Google Places API for address input.

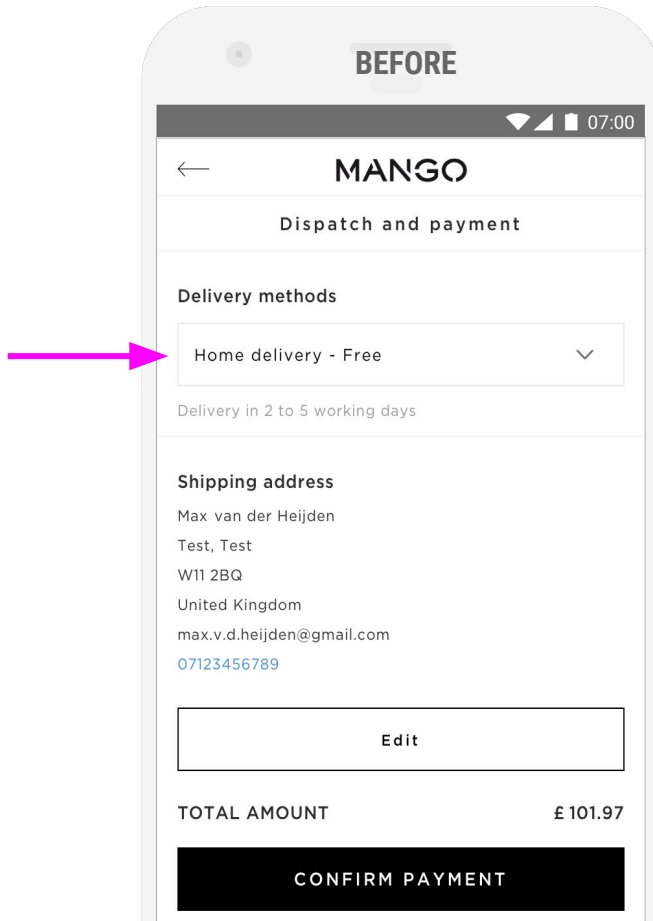
[Learn More.](#)

Or use zip or postal code to populate city and state.

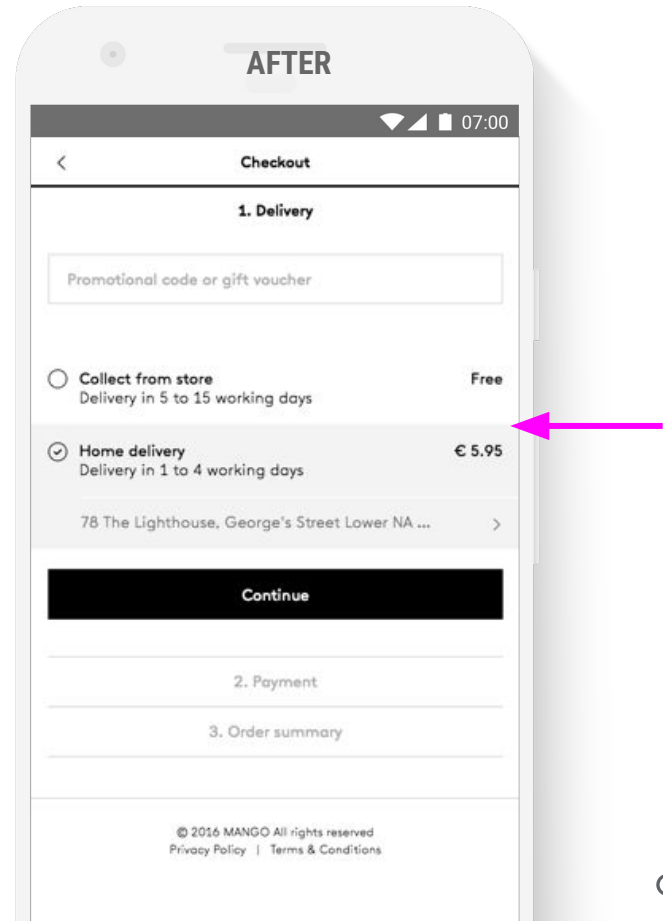
Example: [HomeDepot](#)



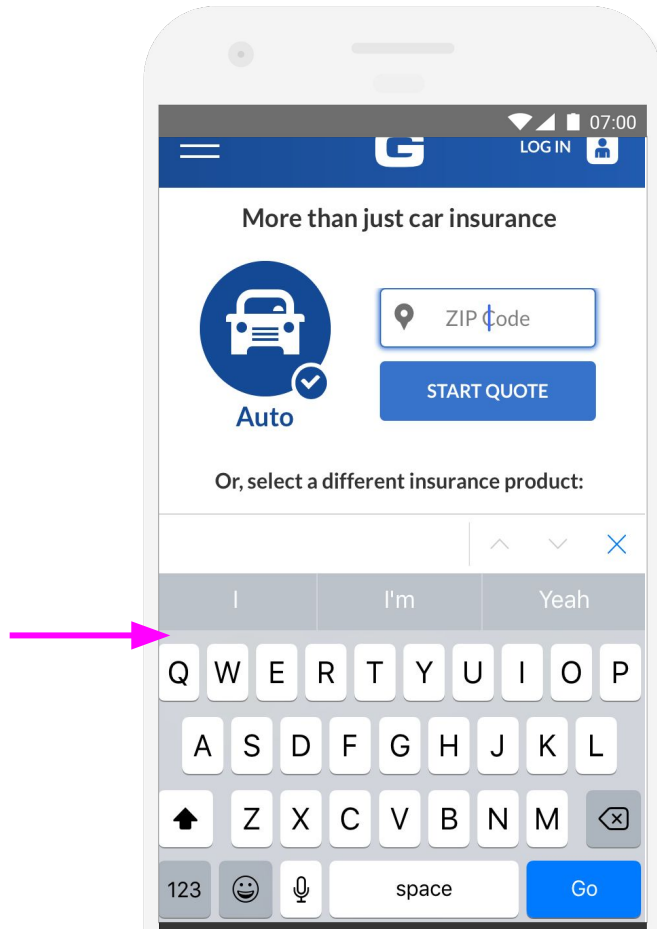
Don't use dropdowns if less than 3 options



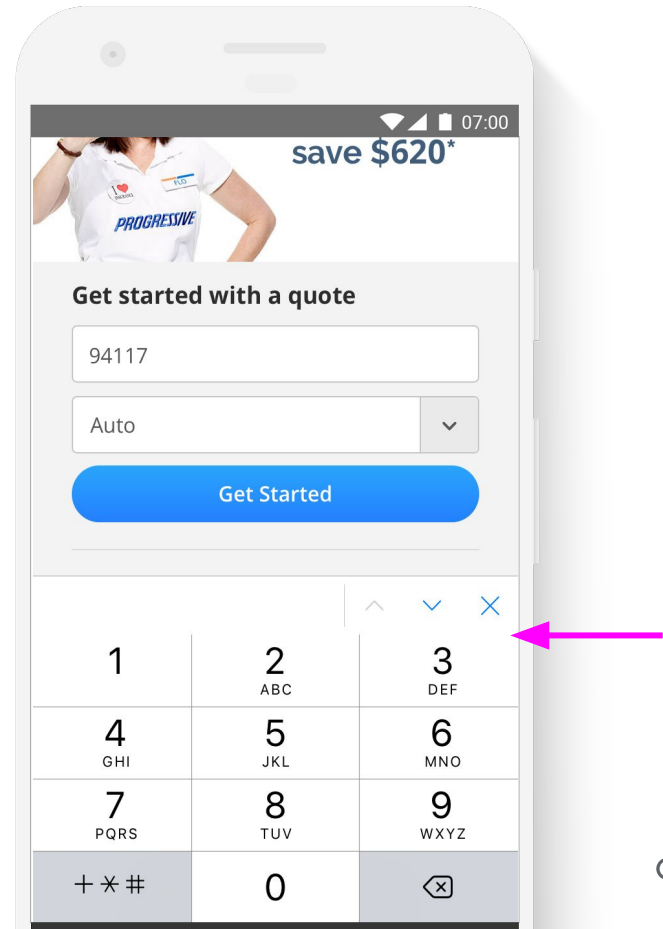
VS.



Always use the correct keypads (phone, zip, card)



VS.



Ensure that the correct input type is used

Input Type

HTML

number

```
<input type="number"  
  min="2" max="10"  
  step="2" value="6">
```

email

```
<input type="email">
```

url

```
<input type="url">
```

date

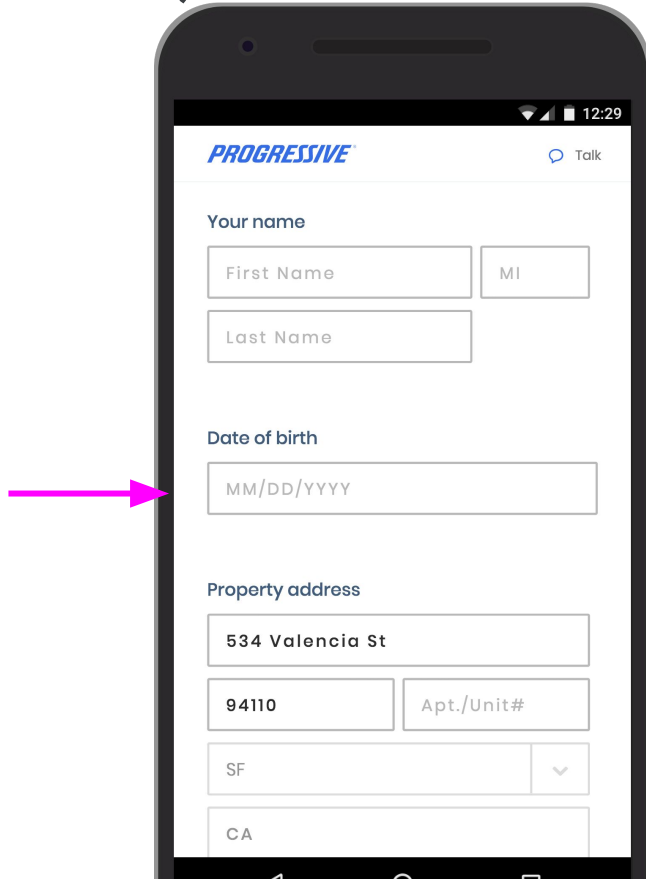
```
<input type="date">
```

range

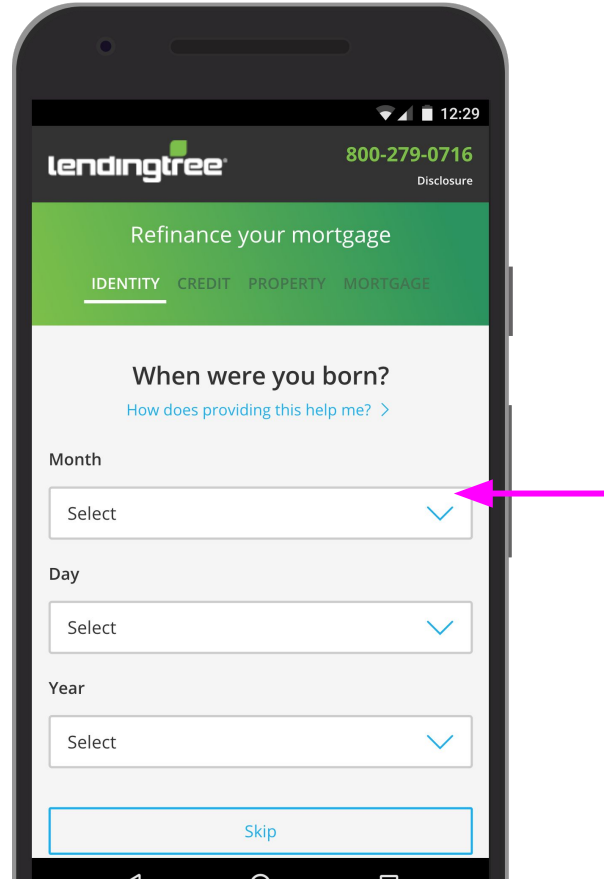
```
<input type="range"  
  min="2" max="10"  
  step="2" value="6">
```



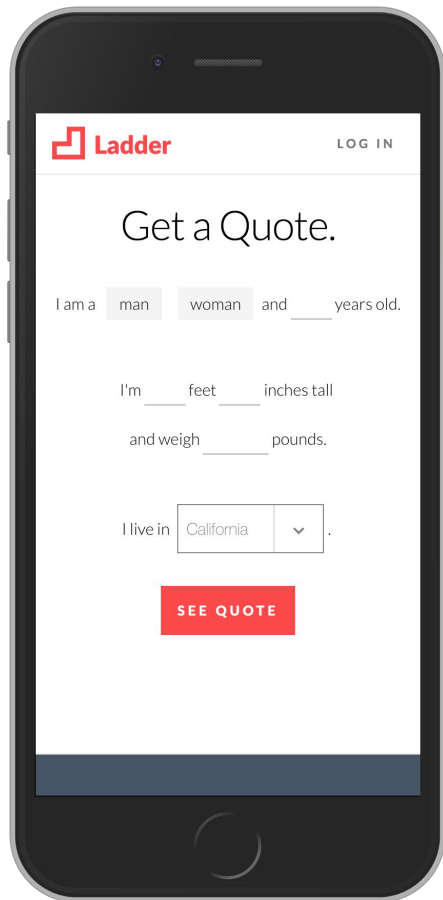
Always use the easiest date input (typically typing or calendar)



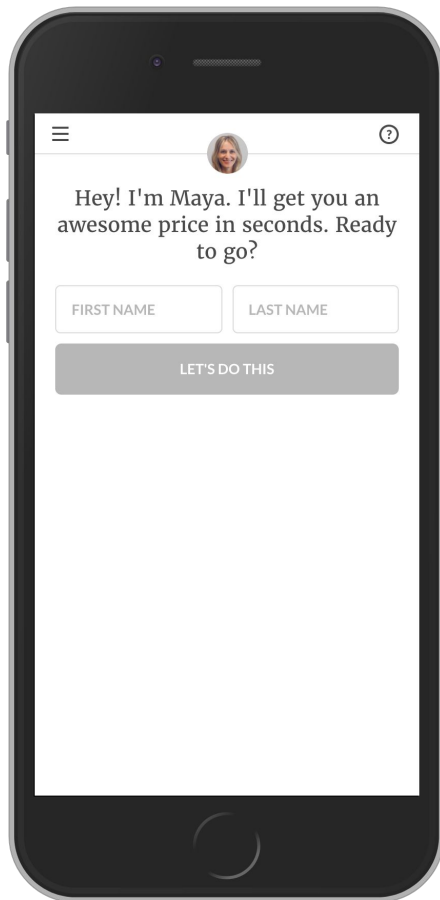
VS.



Forms can be fun



The image shows a smartphone displaying the Ladder mobile app. The app has a red logo and a 'LOG IN' link. The main heading is 'Get a Quote.' Below this, there are several form fields: 'I am a' with 'man' and 'woman' as selectable options, followed by 'and ___ years old.'; 'I'm ___ feet ___ inches tall' and 'and weigh ___ pounds.'; and 'I live in' with a dropdown menu showing 'California'. A prominent red button at the bottom says 'SEE QUOTE'.



The image shows a smartphone displaying the Lemonade mobile app. At the top, there is a user profile picture and a help icon. The main heading is 'Hey! I'm Maya. I'll get you an awesome price in seconds. Ready to go?'. Below this, there are two input fields for 'FIRST NAME' and 'LAST NAME'. A large grey button at the bottom says 'LET'S DO THIS'.

Ladder and Lemonade do a great job of making forms feel personal-- either like talking to a real person willing to help, or even like filling out mad libs.

Common Autofill mistakes

Card number

MM / YY

CVC

Cardholder name

The image shows a payment form with four input fields. The first field is a wide box labeled 'Card number' with a mouse cursor hovering over it. Below it are two smaller boxes: 'MM / YY' on the left and 'CVC' on the right. At the bottom is a wide box labeled 'Cardholder name'. The entire form is set against a light gray background.

30%

Faster form completion when using autofill

developers.google.com/we/updatesb/2015/06/checkout-faster-with-autofill

Use autofill: Common mistakes, “fake placeholders”

My Checkout Page

First Name

Last Name

Address

City

Postal Code

Country

Placeholders

Use placeholder attribute

A user experience best practice is to label form fields outside the field, so that there's a permanent reference for the user, of the type of information that is needed in that field.

Form fields also have placeholders - text that is shown in the field, that typically give examples of the data that would be placed there. We've seen developers use “fake placeholders” instead of using the placeholder attribute and then use javascript to remove the value. This makes it hard for autofill to determine if the user had inputted the value versus it being default text in the field - and this results in fields not being autofilled.

Use autofill: Common mistakes, CVC vs CSC

Credit Card
attributes

CC-CSC

g.co/pay/autofill

**Don't use CC-CVC,
It won't work!**

Content type	name attribute	autocomplete attribute
Credit Card	ccname cardnumber cvc ccmonth ccyear exp-date card-type	<ul style="list-style-type: none">• cc-name• cc-number• cc-csc• cc-exp-month• cc-exp-year• cc-exp• cc-type

Sign in, login & passwords

Sign-In Is Friction

What does this do?

Sign in with Google

Sign in with Facebook

Can I skip this?

Which one?

123456

Email

me_every_time@

Password

[Forgot password?](#)

Sign in

Don't have an account? [Sign up!](#)

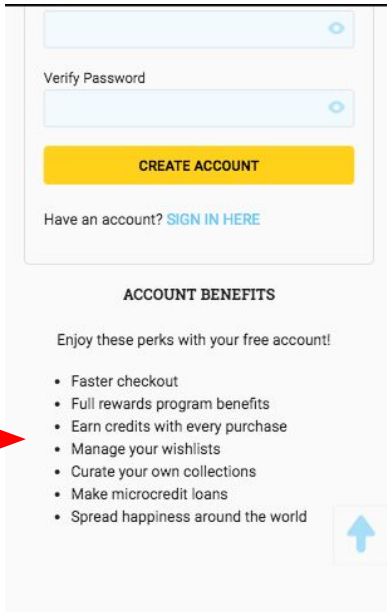
Usually!

Proprietary + Confidential

Google

Add value prop around why create an account

novica.com



Verify Password


CREATE ACCOUNT

Have an account? [SIGN IN HERE](#)

ACCOUNT BENEFITS

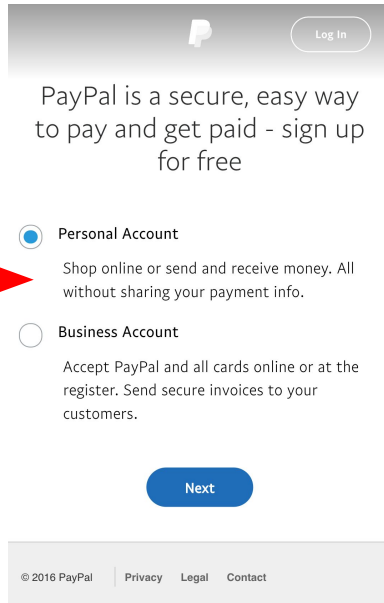
Enjoy these perks with your free account!

- Faster checkout
- Full rewards program benefits
- Earn credits with every purchase
- Manage your wishlists
- Curate your own collections
- Make microcredit loans
- Spread happiness around the world



A red arrow points to the 'ACCOUNT BENEFITS' section.

paypal.com



PayPal is a secure, easy way to pay and get paid - sign up for free

Personal Account
Shop online or send and receive money. All without sharing your payment info.

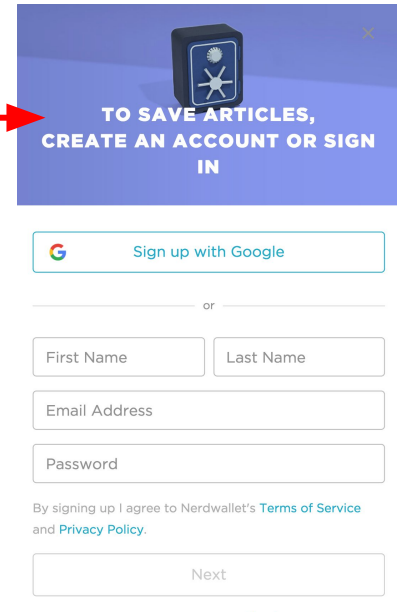
Business Account
Accept PayPal and all cards online or at the register. Send secure invoices to your customers.

Next


© 2016 PayPal | [Privacy](#) | [Legal](#) | [Contact](#)

A red arrow points to the 'Personal Account' option.

nerdwallet.com



TO SAVE ARTICLES, CREATE AN ACCOUNT OR SIGN IN

 [Sign up with Google](#)

or

First Name Last Name

Email Address

Password

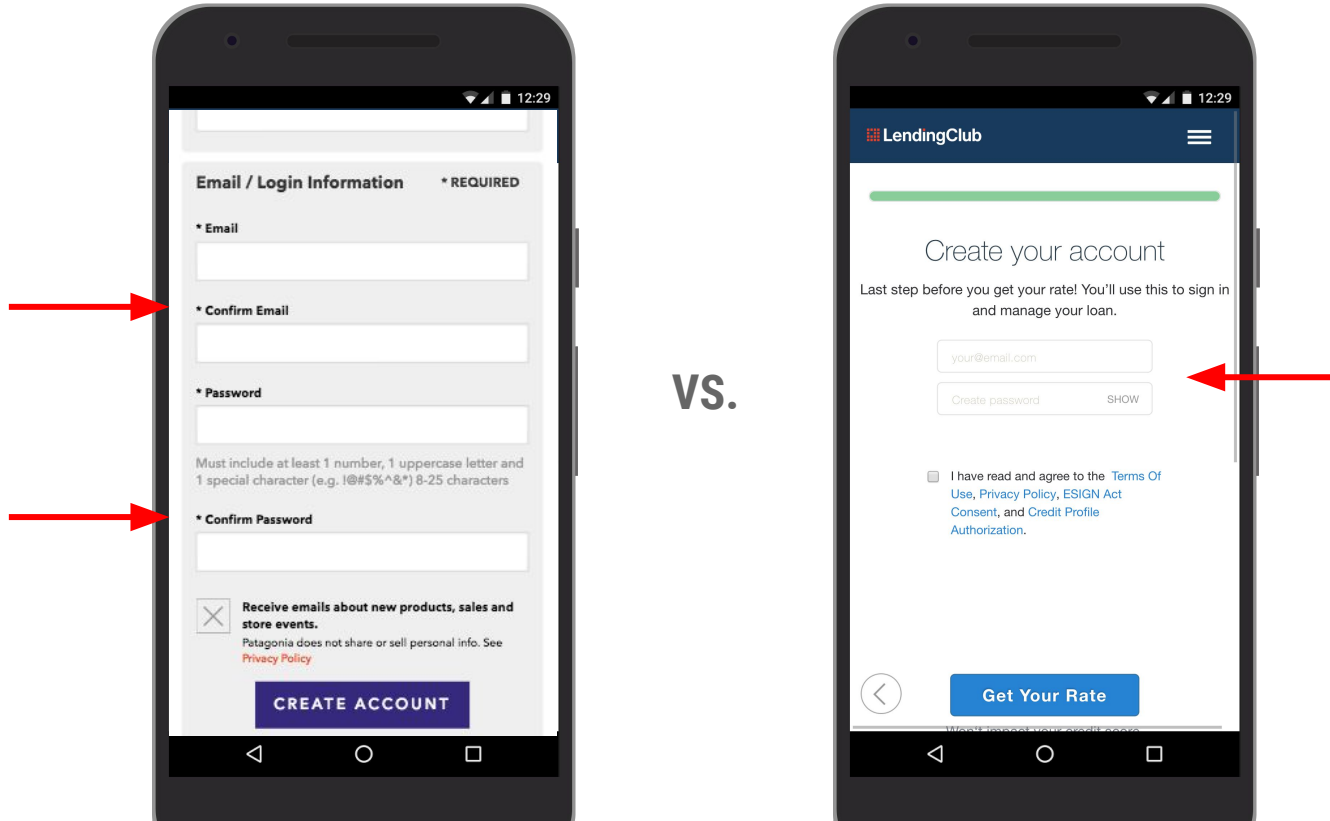
By signing up I agree to Nerdwallet's [Terms of Service](#) and [Privacy Policy](#).

Next

Have an account? [Sign in](#)

A red arrow points to the 'TO SAVE ARTICLES, CREATE AN ACCOUNT OR SIGN IN' header.

Don't make users confirm account info



VS.

Give password hints. Instead of making users confirm password, instead give them the option to view

credible.com

- ✓ Compare rates from up to 8 lenders
- ✓ Prequalified loan requests **won't** affect your credit score
- ✓ Average user saves \$18,668

Welcome to Credible! Please choose a password below.

Email Address

test230239@test.com

Choose Password

.....

- ✓ Uppercase letter
- ✓ Lowercase letter
- ✓ Number
- Minimum 8 characters

By creating an account, you confirm that you agree to our [Terms of Use](#) and [Privacy Policy](#).

Sign Up and Find My Rates

Customers rate us 9.4 out of 10 based on

transferwise.com

TransferWise

Welcome to money without borders.

Already signed up? [Log in](#)

Personal

Business

Your email address

Create a password

Password must contain a **letter** and a **number**, and be minimum of **9 characters**



Sign up

nerdwallet.com

LET'S START BY CREATING YOUR NERDWALLET ACCOUNT.



Sign up with Google

or

Requirements:

- One uppercase letter
- One numeral or special character
- Eight character minimum

•

Please enter a valid password

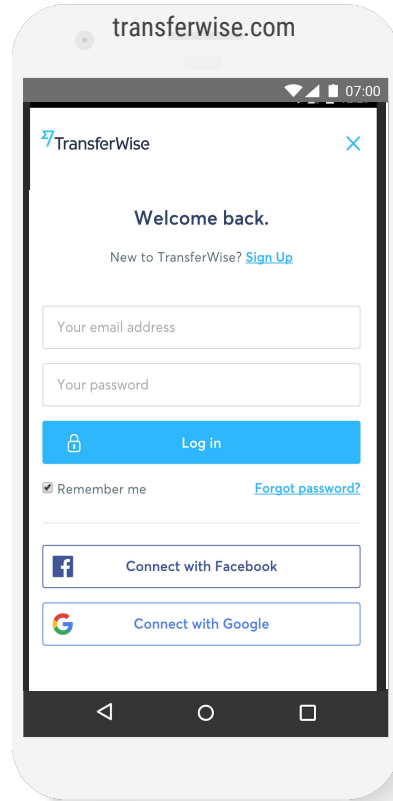
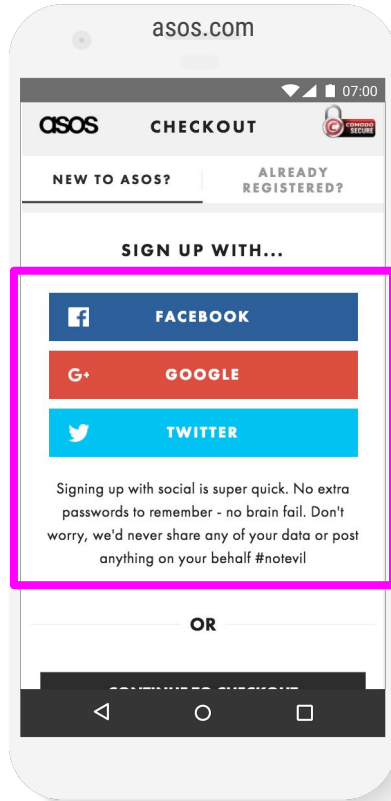
Continue

By signing up, I agree to NerdWallet's [Terms of Service](#) and [Privacy Policy](#).

Have an account? [Log in](#)

Google

Allow users to sign in with social



92% of users give up if they don't remember a username or password.

Source: Blue Research, The Value of Social Login, 2013. N=600

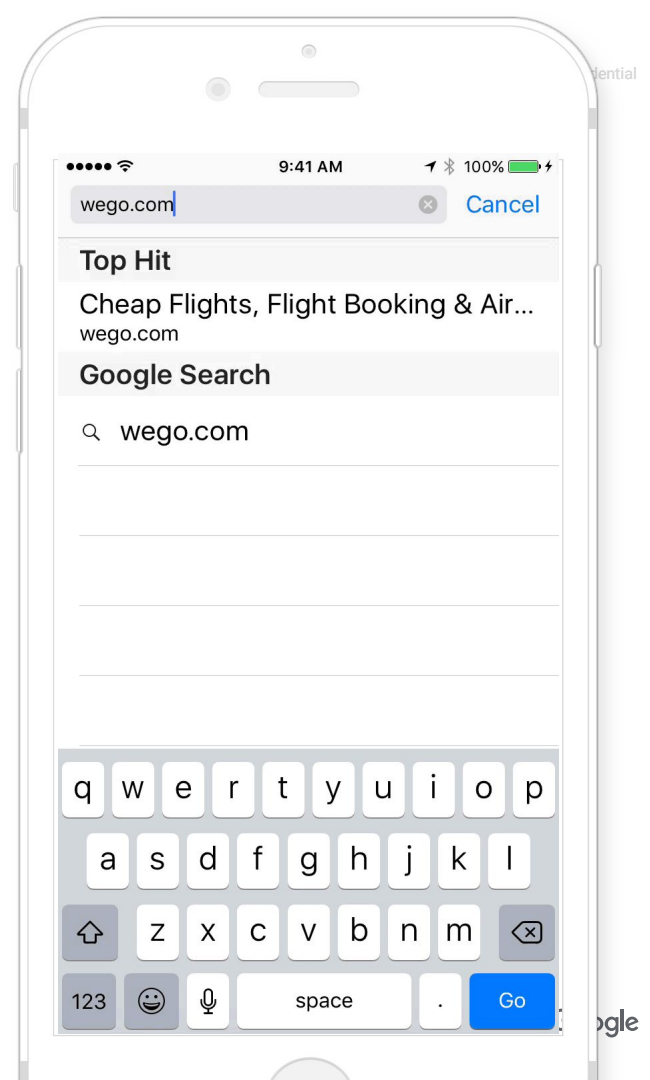
Consider integrating Google one-tap login

How it Works

- **New Users:** 1-tap Sign-up anywhere
- **Returning Users:** Auto sign-in across devices & platforms

Benefits

- Streamlined conversion UX - no typing/buttons
- Enable instant personalization on page load
- Passwordless account security



Consider integrating Google one-tap login



Hotel
Tonight

10X

account creations

23%

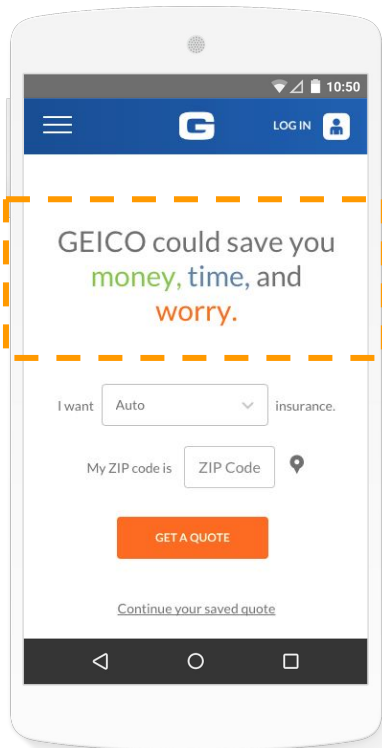
higher purchase rate conversion

General Conversion Principles

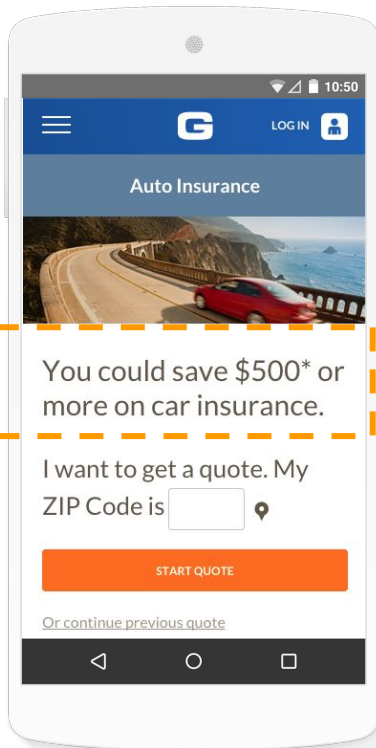
Display a value prop at every stage of the funnel

Proprietary + Confidential

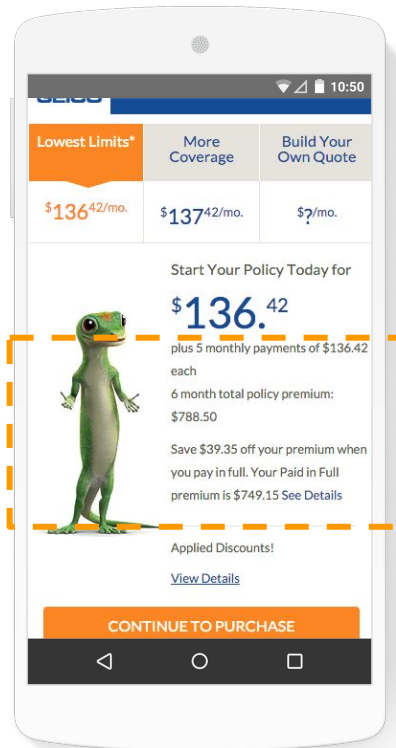
Homepage



Product detail



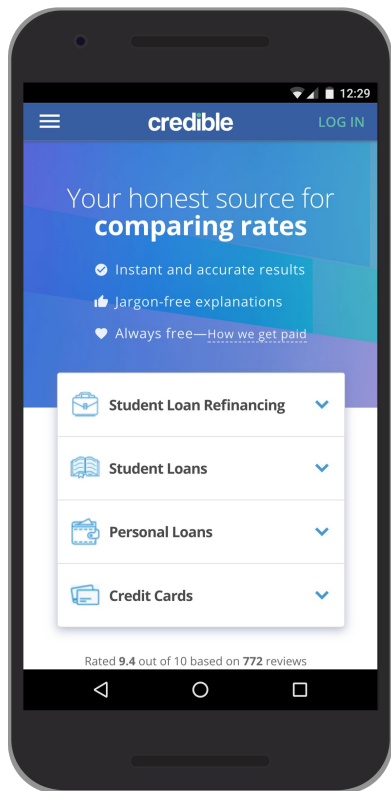
Conversion Funnel



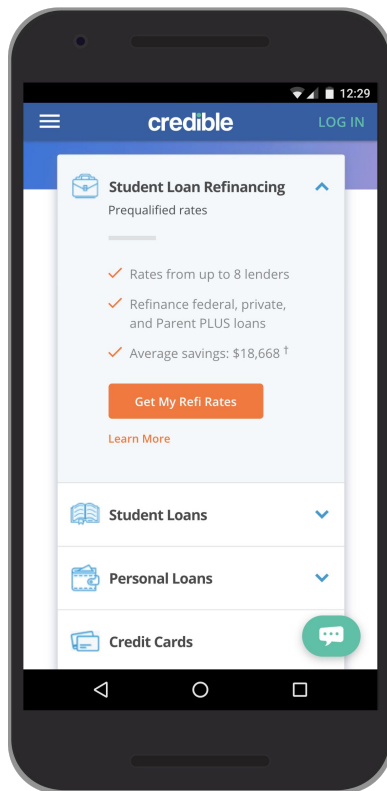
Display a value prop at every stage of the funnel

Proprietary + Confidential

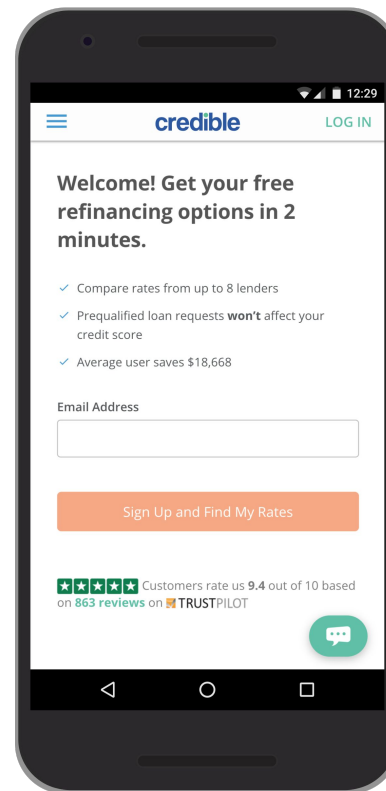
Homepage



Product detail

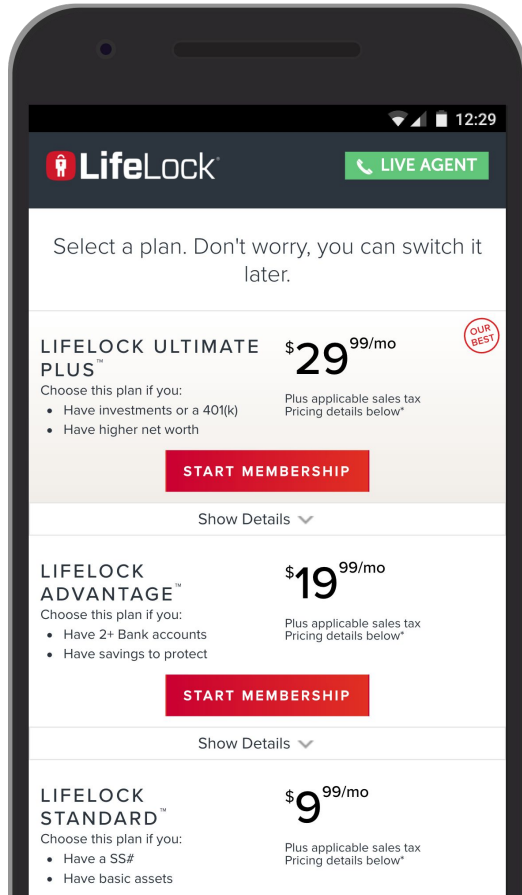


Conversion Funnel

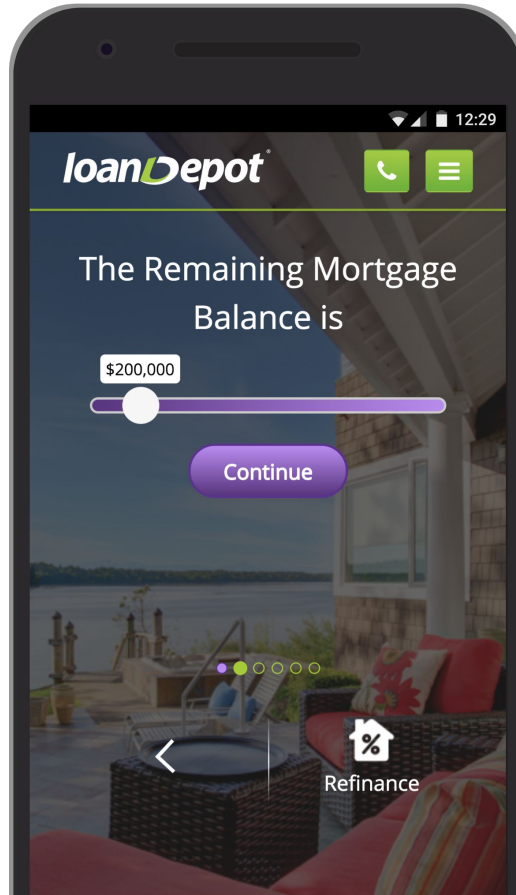


If calls are important, prompt calling at every stage of the funnel

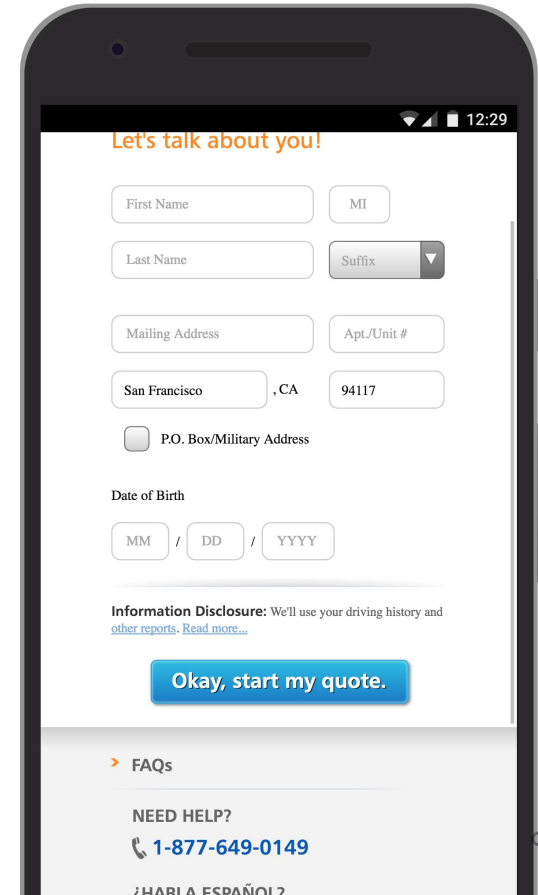
lifelock.com



loandepot.com



progressive.com



29%

Do not allow users to navigate
back and forth in a form
without losing information

Show progress/pagination to guide the user

Proprietary + Confidential

juniqe.com

07:00

JUNIQE

Address >> Payment >> Order review

ADDRESS INFORMATION

Billing address

Title

First name*

Last name*

Address*

Address line 2 / Company

Zip/Postal Code*

geico.com

12:29

GEICO

Customer Vehicles Drivers Discounts Quote

You're in good company! 967 of your San Francisco neighbors purchased a GEICO policy last month.

Customer Information

We need to ask you for some personal information to provide you with an accurate quote. This information is kept private and secure, and will not be sold.

First name

Last name

Address

Apt

credible.com

12:29

credible

< Back

What loans are you refinancing today?

My own student loans

Parent PLUS loans

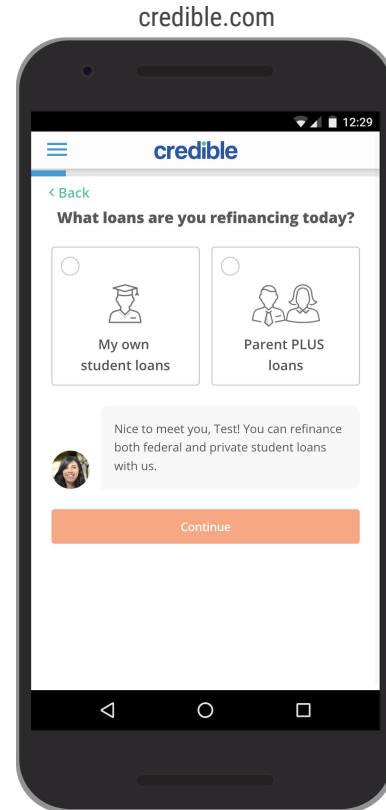
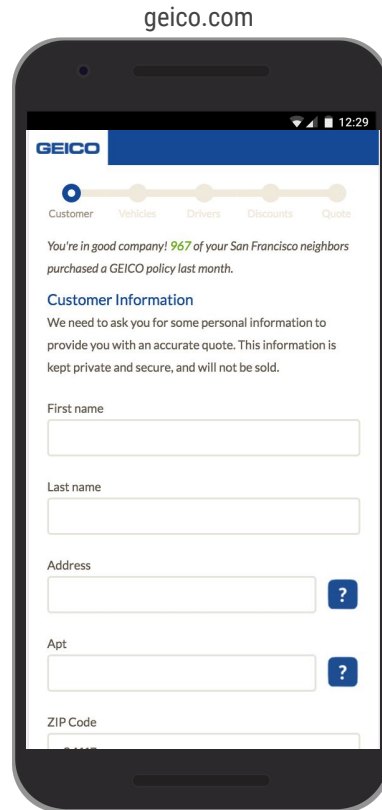
Nice to meet you, Test! You can refinance both federal and private student loans with us.

Continue

Pagination best practices

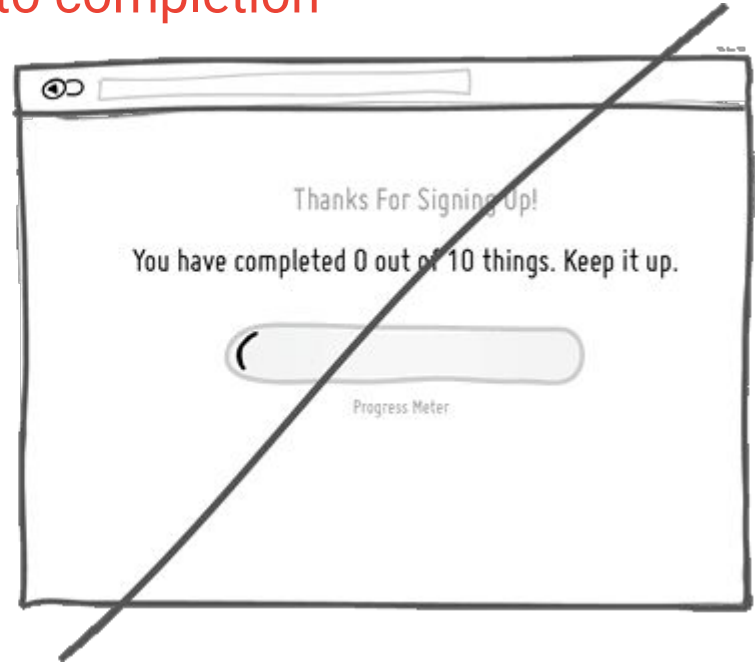
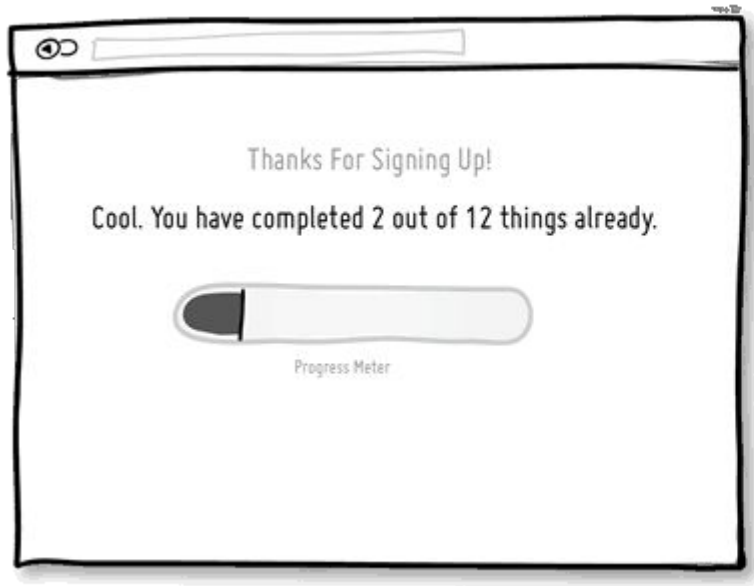
Label each step to help prime the user for what data is next.

If a large number of steps, used a progress bar that moves forward toward completion.



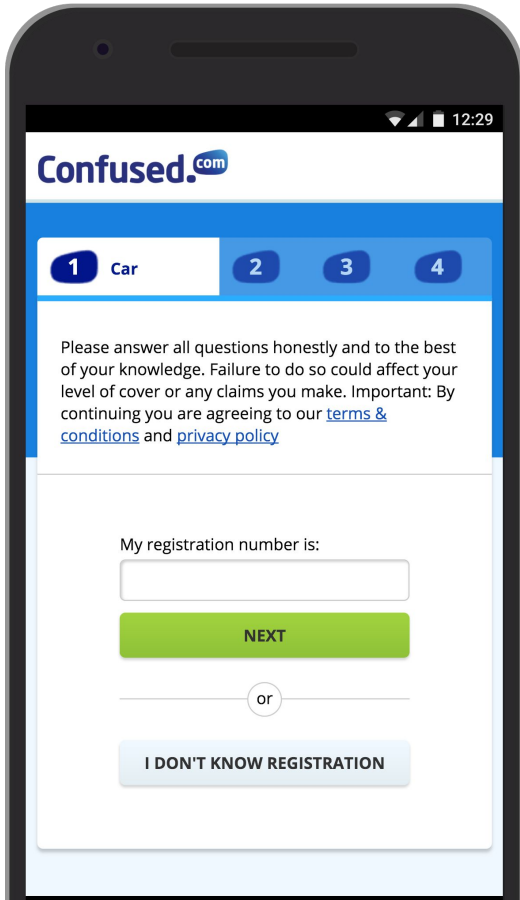
Research: Use upfront progress instead of starting at zero

There is more motivation for getting things done
the closer we are to completion



Limit exit points during conversion

confused.com



12:29

Confused.com

1 Car 2 3 4

Please answer all questions honestly and to the best of your knowledge. Failure to do so could affect your level of cover or any claims you make. Important: By continuing you are agreeing to our [terms & conditions](#) and [privacy policy](#).

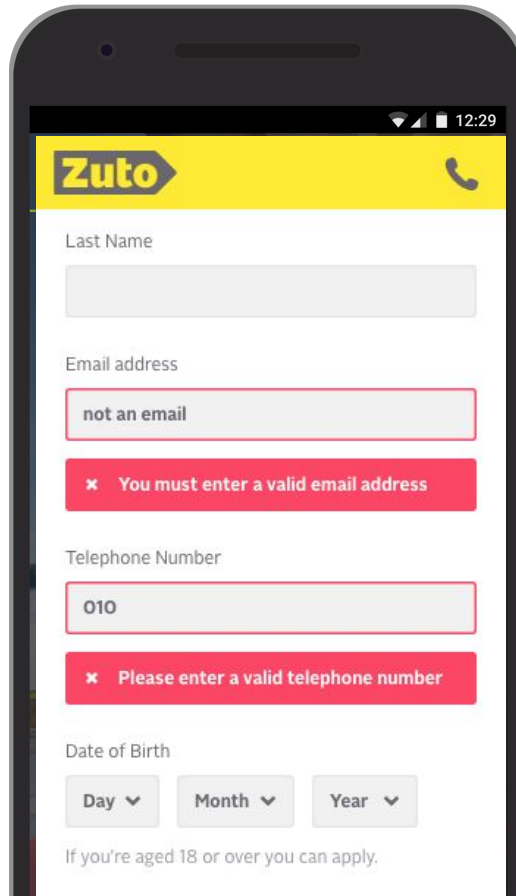
My registration number is:

NEXT

or

I DON'T KNOW REGISTRATION

zuto.com



12:29

Zuto

Last Name

Email address

✘ You must enter a valid email address

Telephone Number

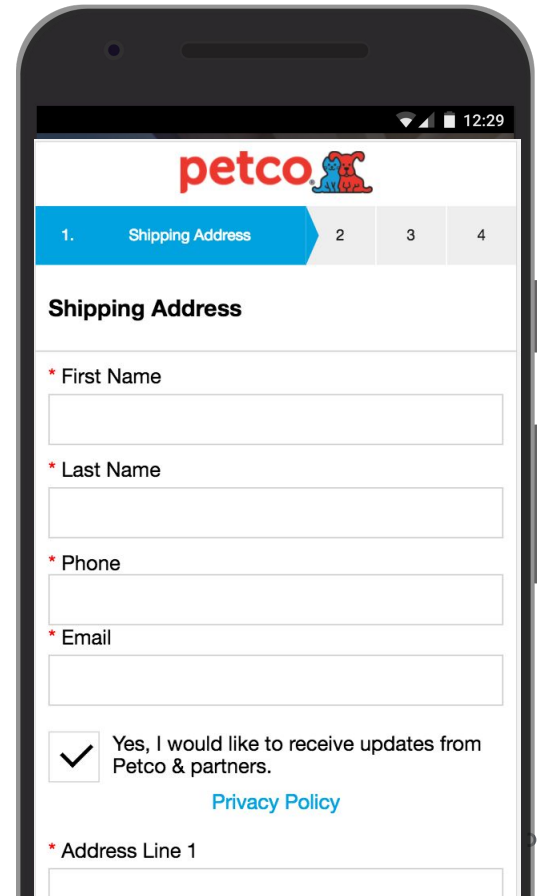
✘ Please enter a valid telephone number

Date of Birth

Day ▼ Month ▼ Year ▼

If you're aged 18 or over you can apply.

petco.com



12:29

petco

1. Shipping Address 2 3 4

Shipping Address

* First Name

* Last Name

* Phone

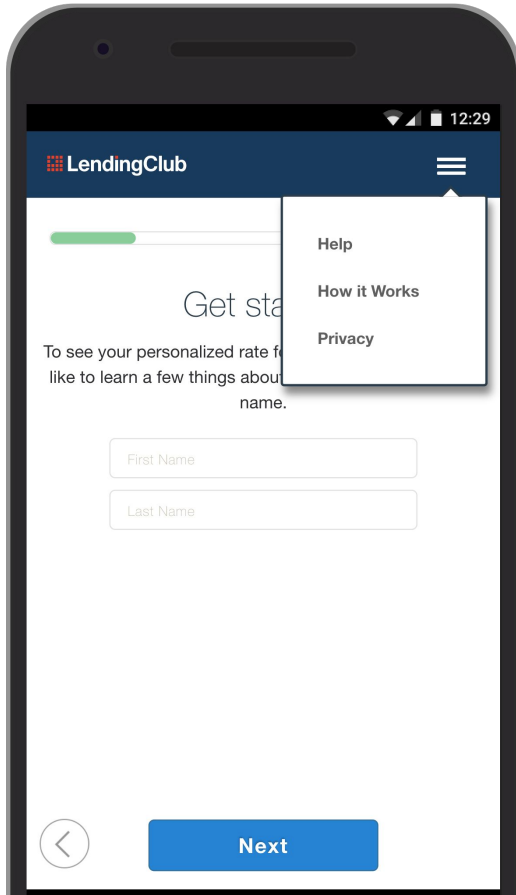
* Email

Yes, I would like to receive updates from Petco & partners.
[Privacy Policy](#)

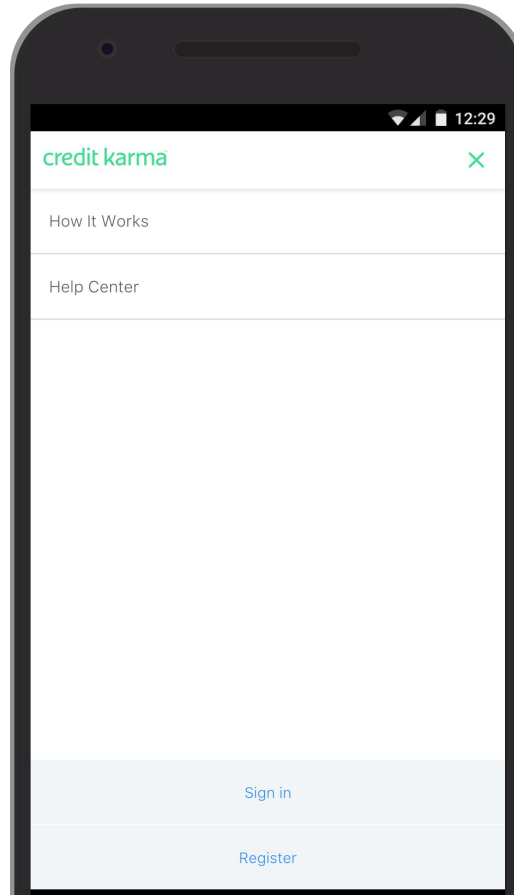
* Address Line 1

Consider limiting menu items to customer service or “how it works”

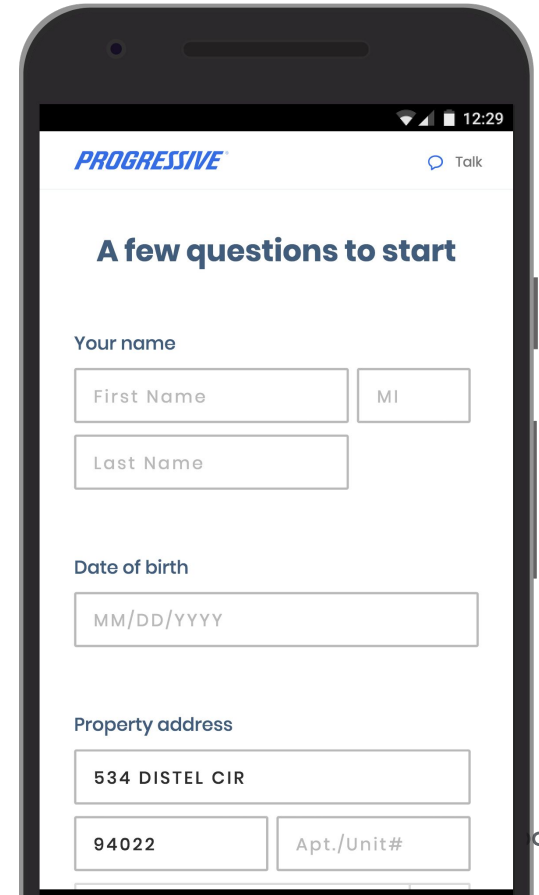
lendingclub.com



creditkarma.com

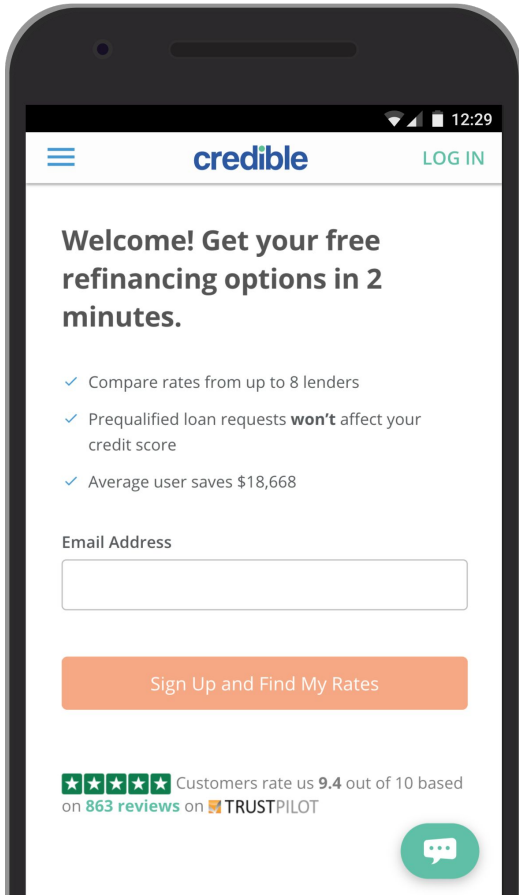


progressive.com

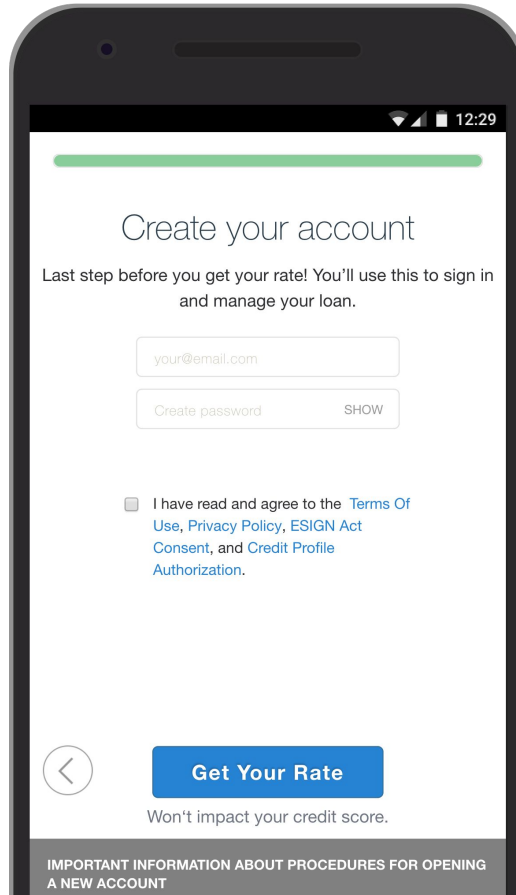


Use descriptive CTAs

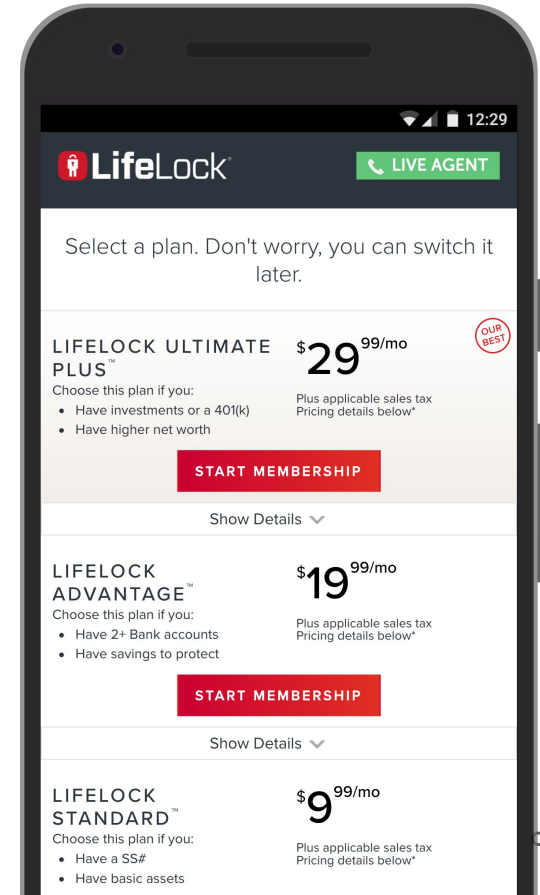
nerdwallet.com



lendingclub.com

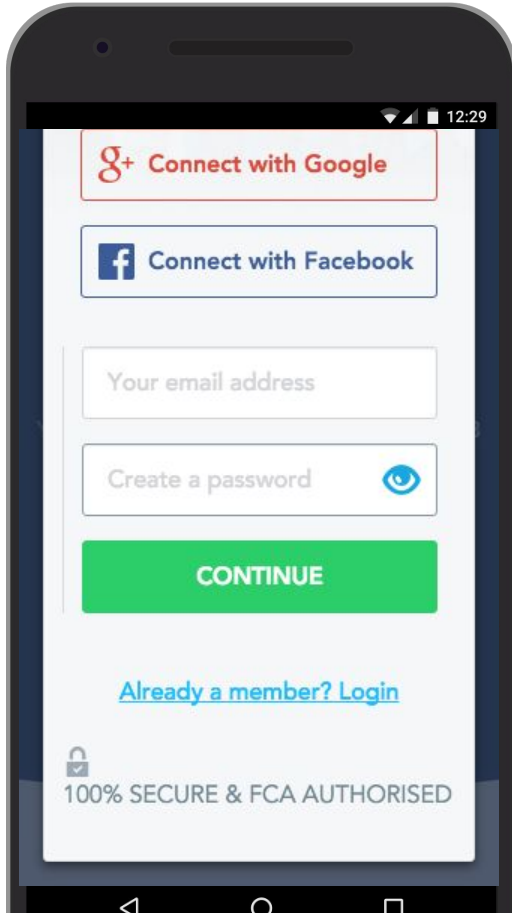


lifelock.com

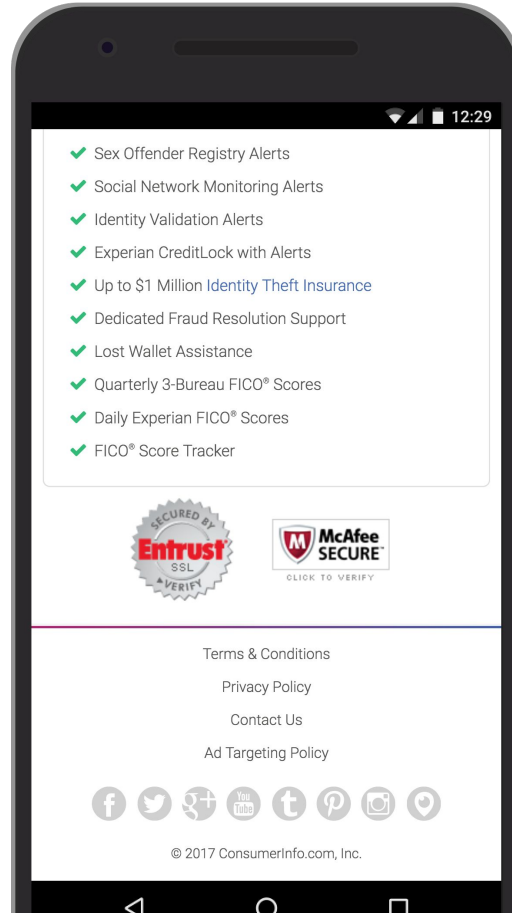


Show the security of your site to gain user trust

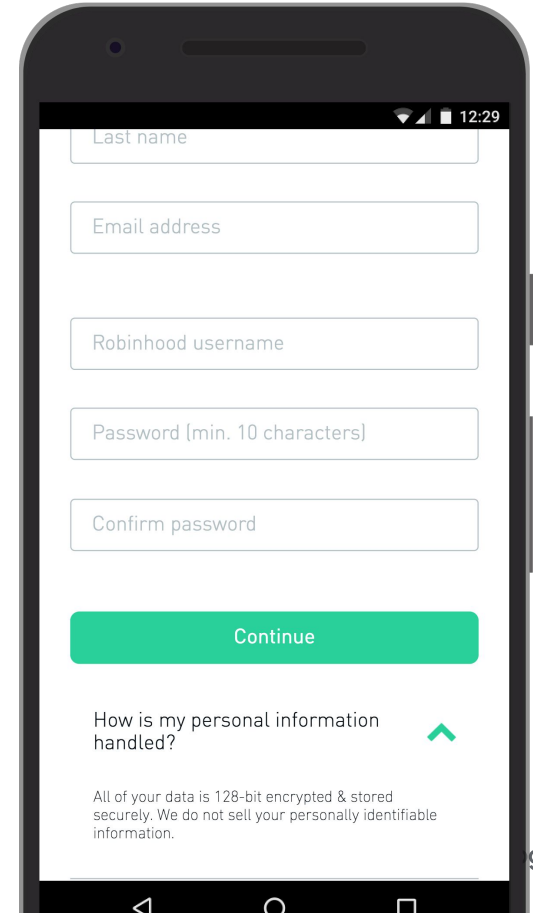
transferwise.com



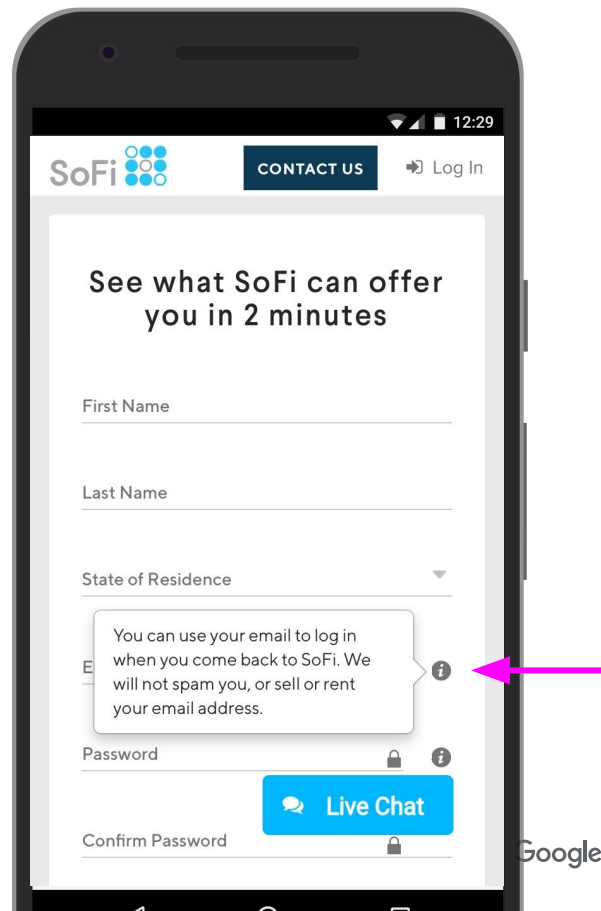
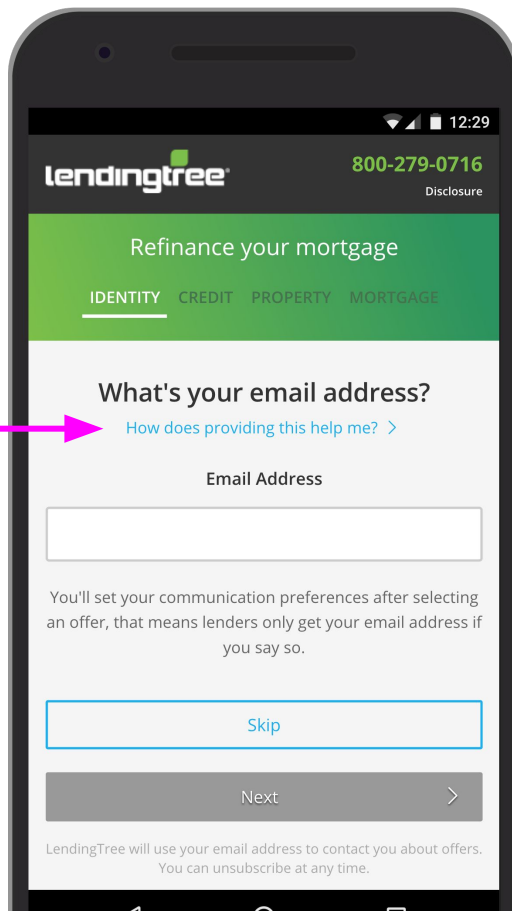
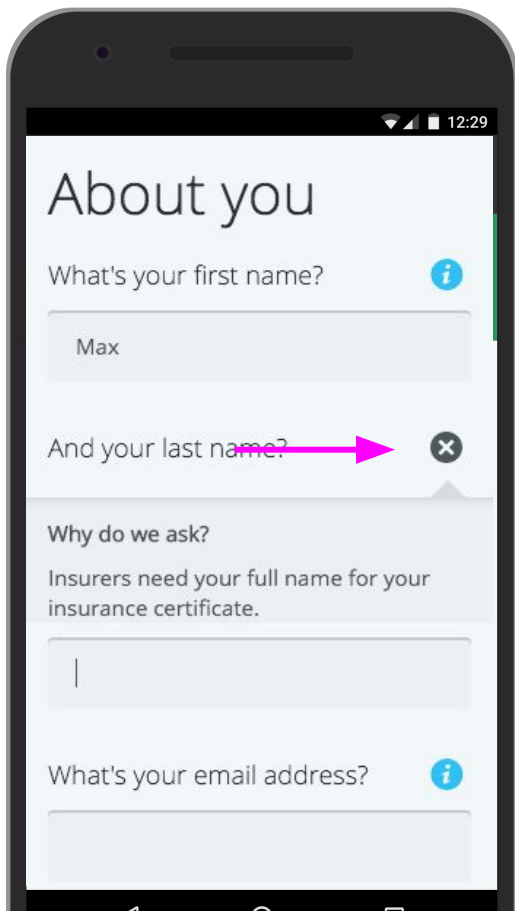
experian.com



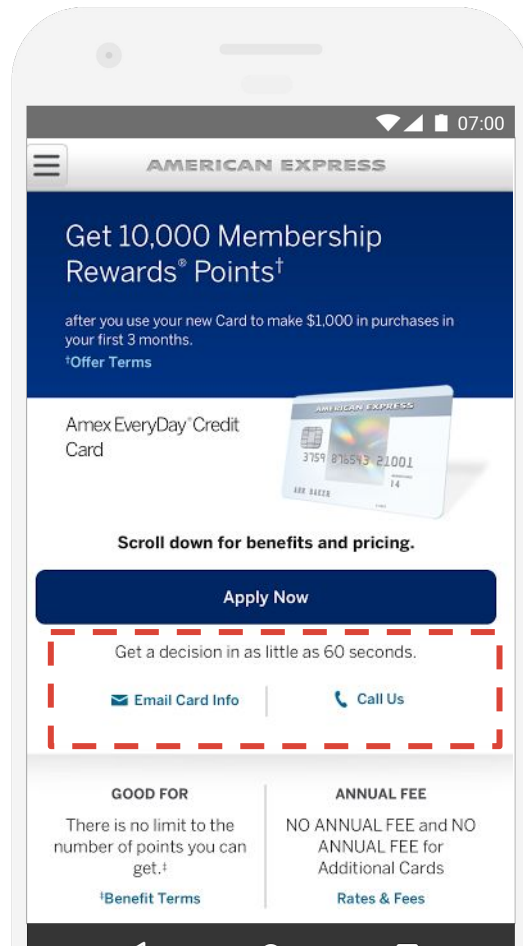
robinhood.com



Clarify why personal information is needed



Facilitate x-device by allowing users to save or email





Thank you!