

BRANDED CLIENT APP

Credit Card Screen

iOS UX/UI

June, 9 2017



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Branded Client App

CARD NUMBER

Carrier 9:41 AM 42%

< Add a Credit Card

Please enter one of the following credit cards

VISA Mastercard AMERICAN EXPRESS DISCOVER

Card Number

First Name Last Name

Expiration Date 3-Digit CVV ⓘ

Country United States Billing ZIP Code

1 2 3
ABC DEF

4 5 6
GHI JKL MNO

7 8 9
PQRS TUV WXYZ

+ * # 0 ⌫

Label with input focus
Note: Numeric keyboard for everything but name

Carrier 9:41 AM 42%

< Add a Credit Card

Please enter one of the following credit cards

VISA Mastercard AMERICAN EXPRESS DISCOVER

Card Number: American Express
37

First Name Last Name

Expiration Date 4-Digit CVV ⓘ

Country United States Billing ZIP Code

1 2 3
ABC DEF

4 5 6
GHI JKL MNO

7 8 9
PQRS TUV WXYZ

+ * # 0 ⌫

Input field - Card detection

The credit card form adopts a lot of its behavior from Material Design:

<https://material.io/guidelines/components/text-fields.html#>

Also look at iOS Facebook app:

More: Settings: Payment Settings: New Card

We should be able to detect credit card type based on the first 2 digits entered. We'll use this for a variety of things, including marking the proper credit card icon, updating the card number label, providing the correct CVV format, as well as doing basic card number validation. I'm sure there are tools in iOS and Android to do this, but here's an example:

<https://creditcardjs.com/credit-card-type-detection>

CARD NUMBER FORMAT

Add a Credit Card

Please enter one of the following credit cards

VISA

mastercard

AMERICAN EXPRESS

DISCOVER

Card Number: Visa

4111 9876 5432 1098

First Name

Last Name

Expiration Date

3-Digit CVV

i

Country

United States

Billing ZIP Code

1

2

3

ABC

DEF

4

5

6

GHI

JKL

MNO

7

8

9

PQRS

TUV

WXYZ

+ * #

0

x

Default card format

Add a Credit Card

Please enter one of the following credit cards

VISA

mastercard

AMERICAN EXPRESS

DISCOVER

Card Number: American Express

3765 432109 87654

First Name

Last Name

Expiration Date

4-Digit CVV

i

Country

United States

Billing ZIP Code

1

2

3

ABC

DEF

4

5

6

GHI

JKL

MNO

7

8

9

PQRS

TUV

WXYZ

+ * #

0

x

American Express card format

We accept Visa, MasterCard, American Express, and Discover credit cards. Our customers may not accept all of these options, so the logos displayed should match the individual business settings.

The default card format should be 4 groups of 4 digits each (16 total). For American Express, the card number format is 4+6+5 (15 total). The spaces shown in the UI are not entered by the user, rather we render them to match the appropriate format.

If a valid card format has been entered, we will highlight that card by setting the opacity of the remaining cards to 30%. The card number label with also append the card type.

Note: The card type also determines what security code format to request (3 or 4 digit).

CARD NUMBER ERROR


Carrier9:41 AM42%


<

Add a Credit Card

Please enter one of the following credit cards

VISA





DISCOVER

Please enter a valid card number

9999 8888 7777 6666

First Name

Last Name

Expiration Date

3-Digit CVV

i

Country

United States

Billing ZIP Code

1

2

3

ABC

DEF

4

5

6

GHI

JKL

MNO

7

8

9


PQRS

TUV

WXYZ

+ * #

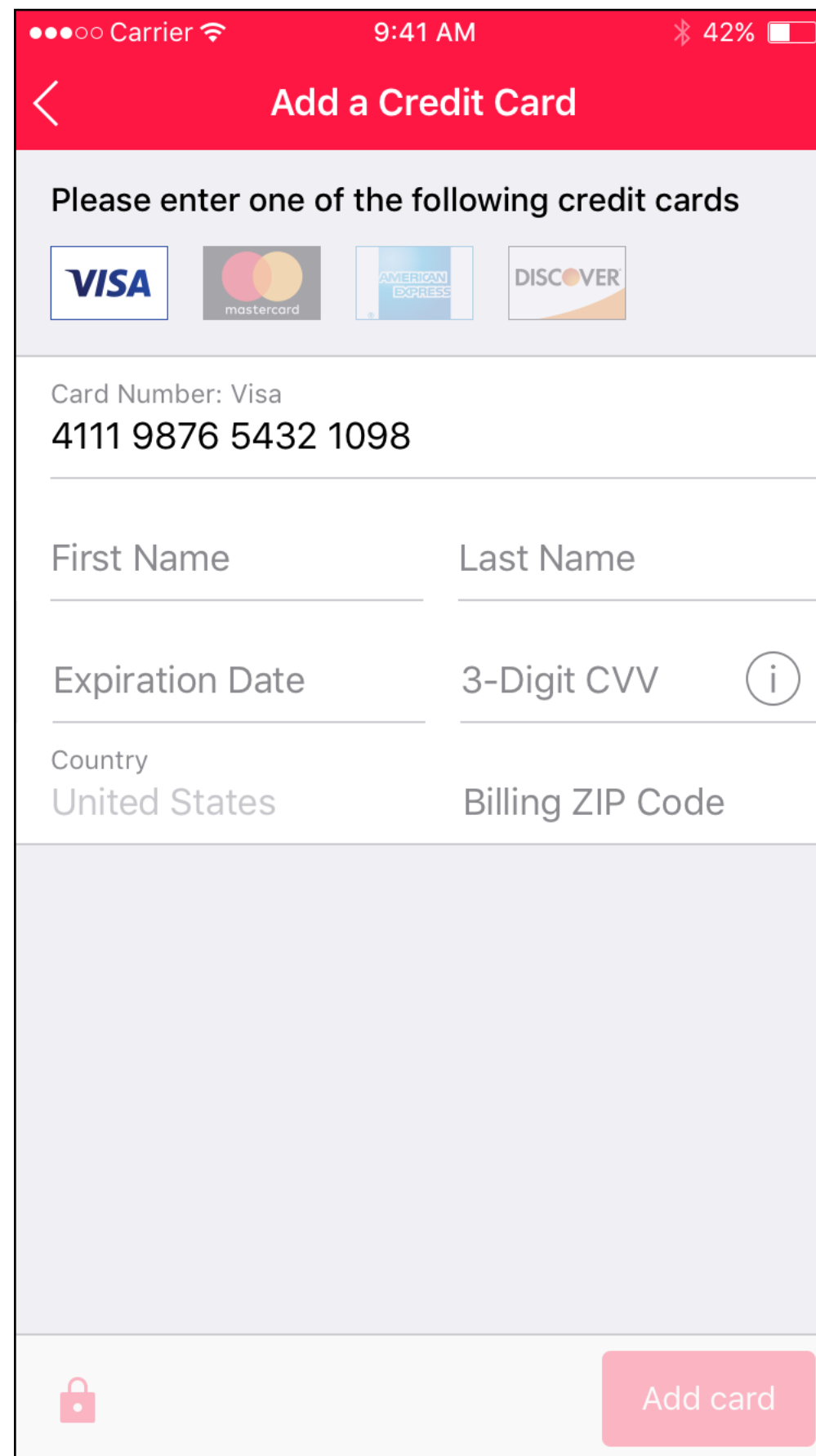
0



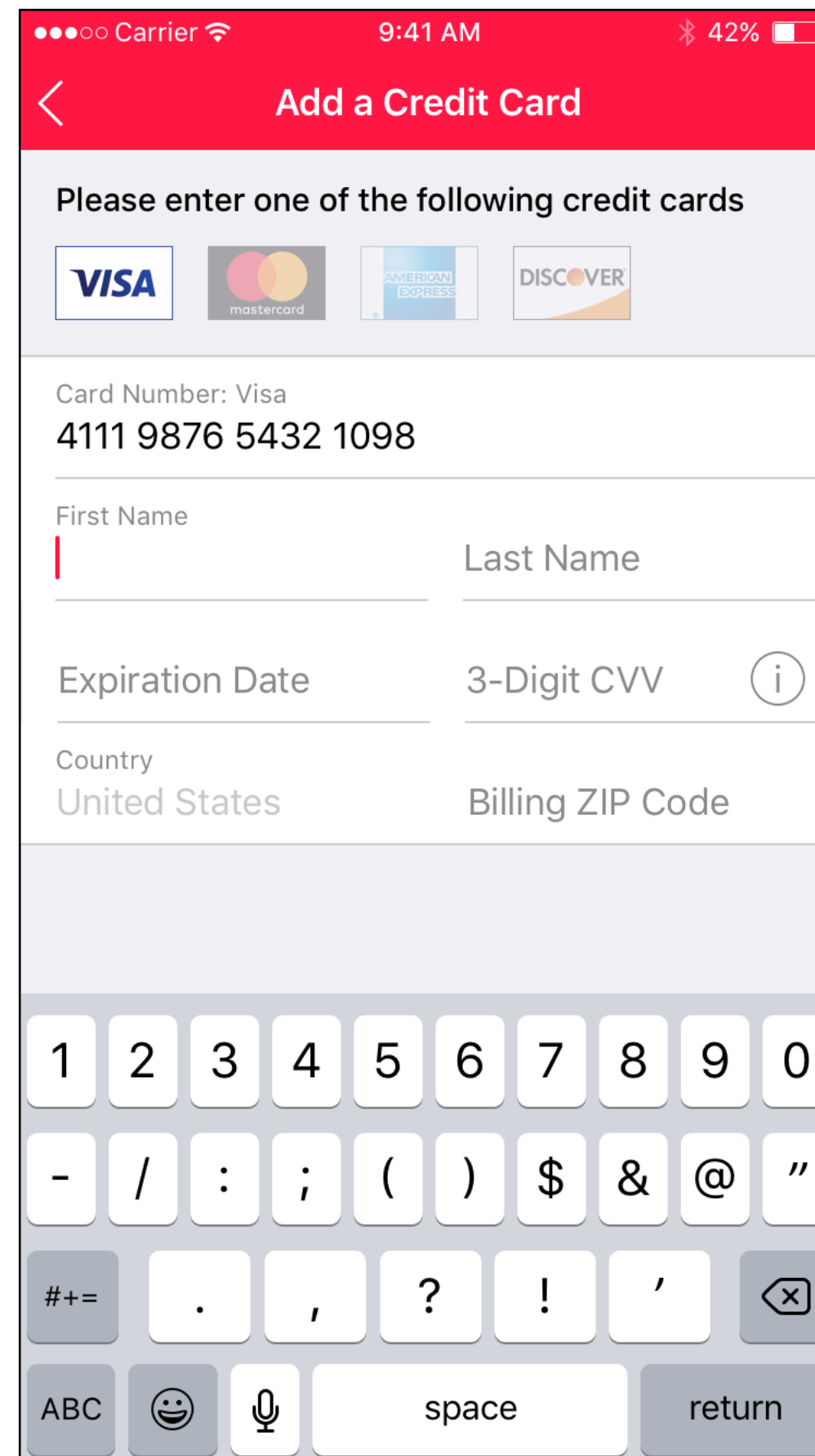
Invalid card number

Depending on how we implement inline card number validation, we should be able to detect certain failure scenarios prior to submitting the form. If an invalid card number is detected, we highlight both the label and the input field in red. The label text changes to the error message.

FIRST NAME, LAST NAME



Labels - No focus



Label with input focus

Note: Not all fields have placeholder text

The credit card form adopts a lot of its behavior from Material Design. Form fields begin with a label in the main input area. When the input field is active, the label moves up and reduces size. An input fields may also have placeholder text, which is different from the label.

<https://material.io/guidelines/components/text-fields.html#>

Also look at iOS Facebook app:


More: Settings: Payment Settings: New Card


FIRST NAME, LAST NAME CONTINUED


Add a Credit Card

Please enter one of the following credit cards

VISA







Card Number: Visa
4111 9876 5432 1098

First Name
John

Last Name

Expiration Date

3-Digit CVV

i

Country
United States

Billing ZIP Code

1234567890

- / : ; () \$ & @ "


#+= . , ? ! ' <div>ABC </div><div>space</div><div>return</div></div></div>


First name field


Add a Credit Card

Please enter one of the following credit cards

VISA







Card Number: Visa
4111 9876 5432 1098

First Name
John

Last Name
Doe

Expiration Date

3-Digit CVV

i

Country
United States

Billing ZIP Code


1234567890

- / : ; () \$ & @ "

#+= . , ? ! ' <div>ABC </div><div>space</div><div>return</div></div></div>

Last name field

Note: Tapping return should forward the input focus to the next form field.

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EXPIRATION DATE ALTERNATIVE

Carrier9:41 AM42%

Add a Credit Card

Please enter one of the following credit cards

VISA

mastercard

AMERICAN EXPRESS

DISCOVER

Card Number: Visa

4111 9876 5432 1098

First Name

Last Name

John

Doe

Expiration Date

3-Digit CVV

i

Country

Billing ZIP Code

United States

01 - January

02 - February

03 - March

04 - April

05 - May

06 - June

07 - July

08 - August

2016

2017

2018

2019

2020

2021

Input field - correct

Carrier9:41 AM42%

Add a Credit Card

Please enter one of the following credit cards

VISA

mastercard

AMERICAN EXPRESS

DISCOVER

Card Number: Visa

4111 9876 5432 1098

First Name

Last Name

John

Doe

Expiration Date

3-Digit CVV

i

Country

Billing ZIP Code

United States

01 - January

02 - February

03 - March

04 - April

05 - May

06 - June

07 - July

08 - August

2016

2017

2018

2019

2020

2021

🔒

Add card

Input field - month error

Expiration date is handled by a month/year picker. The current month and year should be set as the default values.

Branded Client App

SECURITY CODE

Carrier9:41 AM42%

Add a Credit Card

Please enter one of the following credit cards

VISAmastercardAMERICAN EXPRESSDISCOVER

Card Number: Visa4111 9876 5432 1098

First NameJohn

Last NameDoe

Expiration Date01/23

3-Digit CVV

CountryUnited States

Billing ZIP Code

123

456789

0

ABCDEF

GHIJKLMNO

PQRSTUVWXYZ

+ * #

Default field is for 3-digit CVV

Carrier9:41 AM42%

Add a Credit Card

Please enter one of the following credit cards

VISAmastercardAMERICAN EXPRESSDISCOVER

Card Number: Visa4111 9876 5432 1098

First NameJohn

Last NameDoe

Expiration Date01/23

3-Digit CVV123

CountryUnited States

Billing ZIP Code

123

456789

0

ABCDEF

GHIJKLMNO

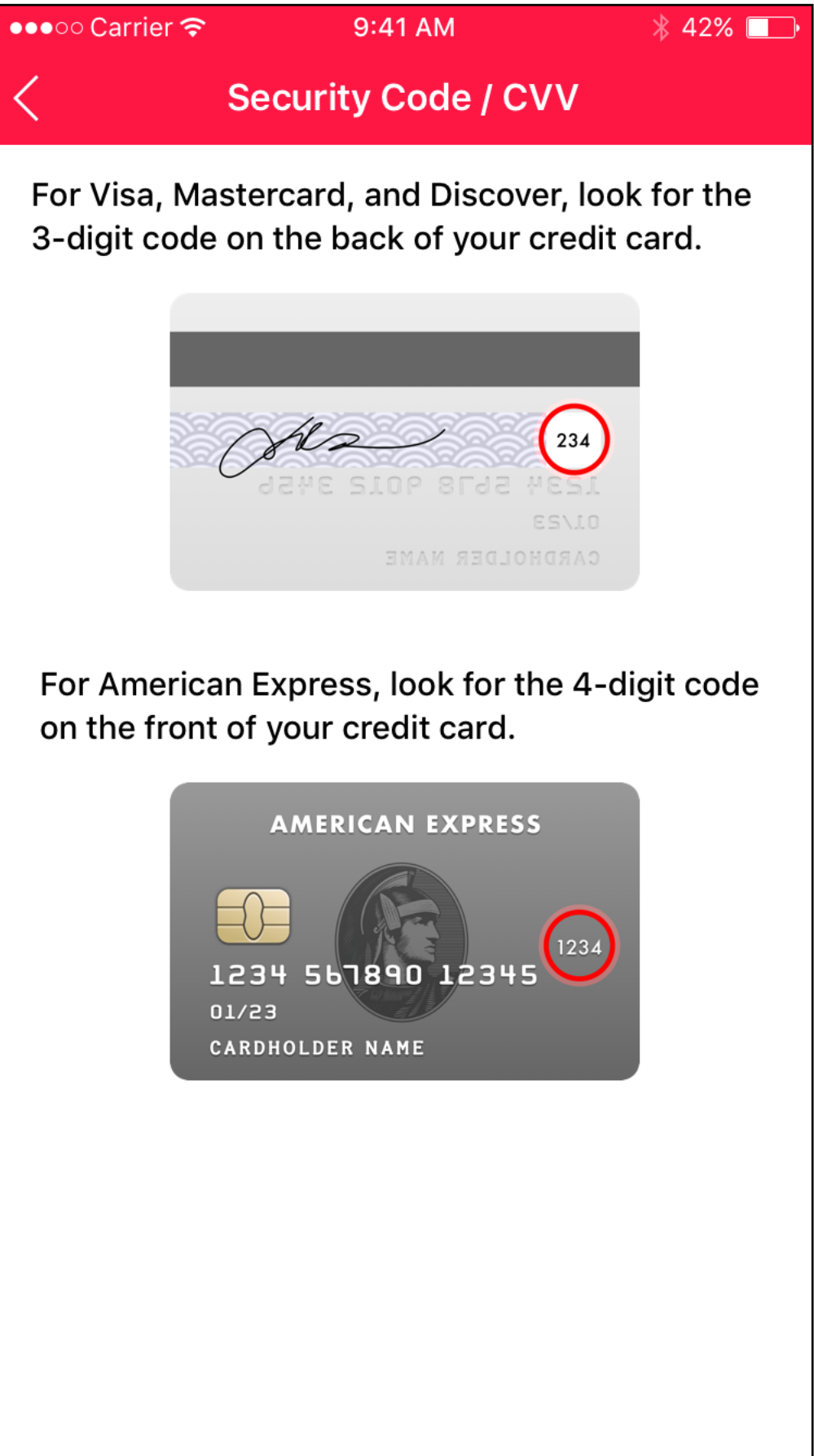
PQRSTUVWXYZ

+ * #

3-digit CVV entered

The credit card type determines the correct security code format. By default, the correct value and placeholder text should be 3-digit. For American Express, a 4-digit code is required.

SECURITY CODE EXAMPLE / ERROR



CVV example screen

CVV error - AMEX requires 4-digits

It’s difficult to get a CVV error, but it can happen if the user enters information out of order. Here’s how we should correct for or indicate an error.

If the user first enters an American Express number, they will be asked to enter a 4-digit CVV. If they then change their card type to something other than AMEX, the CVV should only be 3-digits, thus causing an error. In this scenario, we will simply prune the last digit, thus fixing the formatting issue.

If the user starts with a 3-digit CVV, then adds an AMEX card, that security code with be lacking a required digit. If the CVV field is in focus, no error code needs to render, however if another field or no field is in focus, then an error message is shown, indicating the required 4-digit code.

COUNTRY

Carrier9:41 AM42%

<

Add a Credit Card

Please enter one of the following credit cards

VISA

mastercard

AMERICAN EXPRESS

DISCOVER

First Name

John

Last Name

Doe

Card Number: Visa

4111 9876 5432 1098

Expiration Date

01/23

3-Digit CVV

123

i

Country

United States

Billing ZIP Code

Add card

County set to US and menu disabled

Initially, we are going to limit credit cards input to US-only. I want the design to support additional countries in the future, so for now, I'd showing a disabled country menu, set to US.

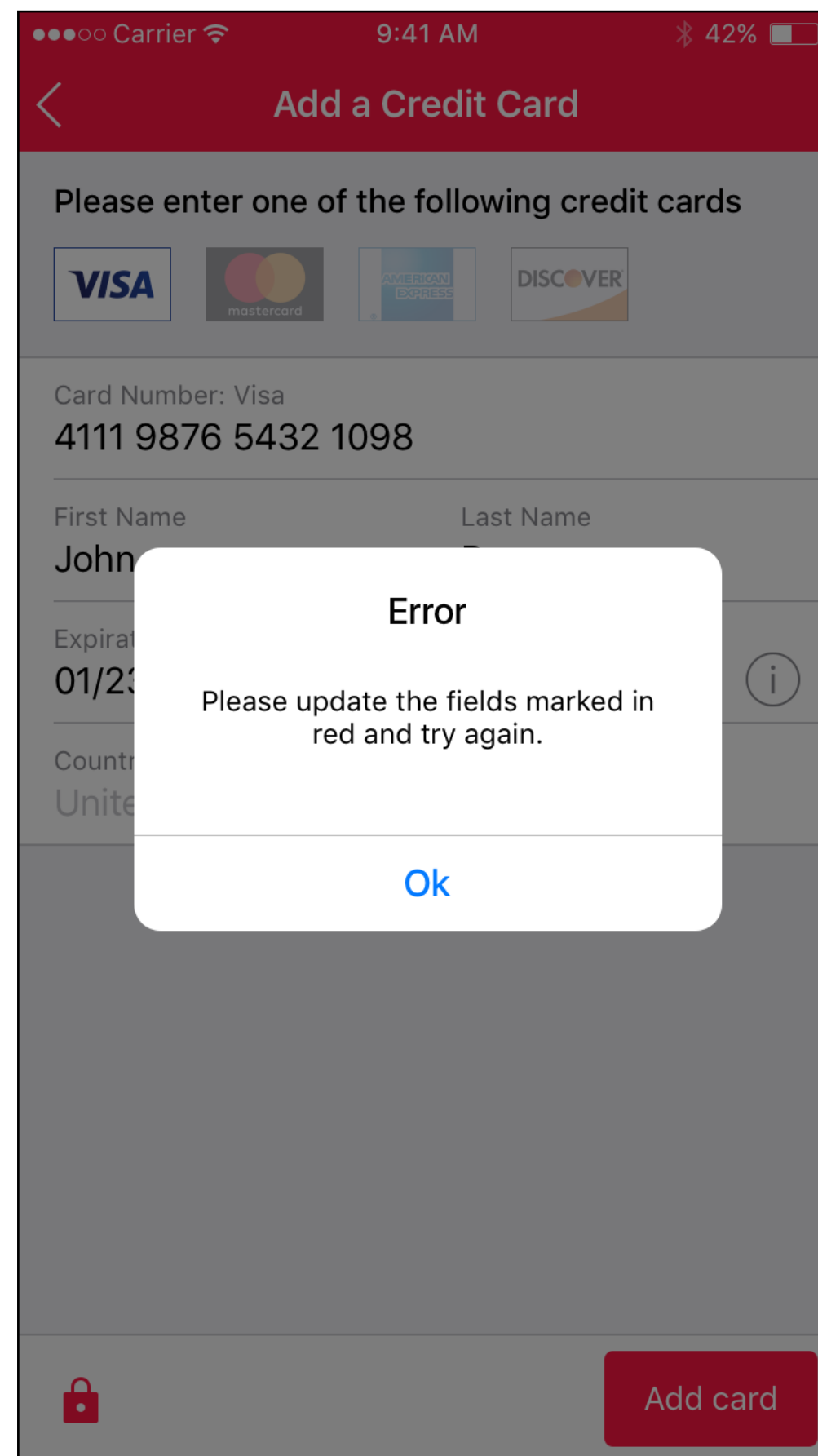
Rendering the country has value, in that it sets a better expectation for clients who may try to add non-US credit cards.

Label, input focus with placeholder text

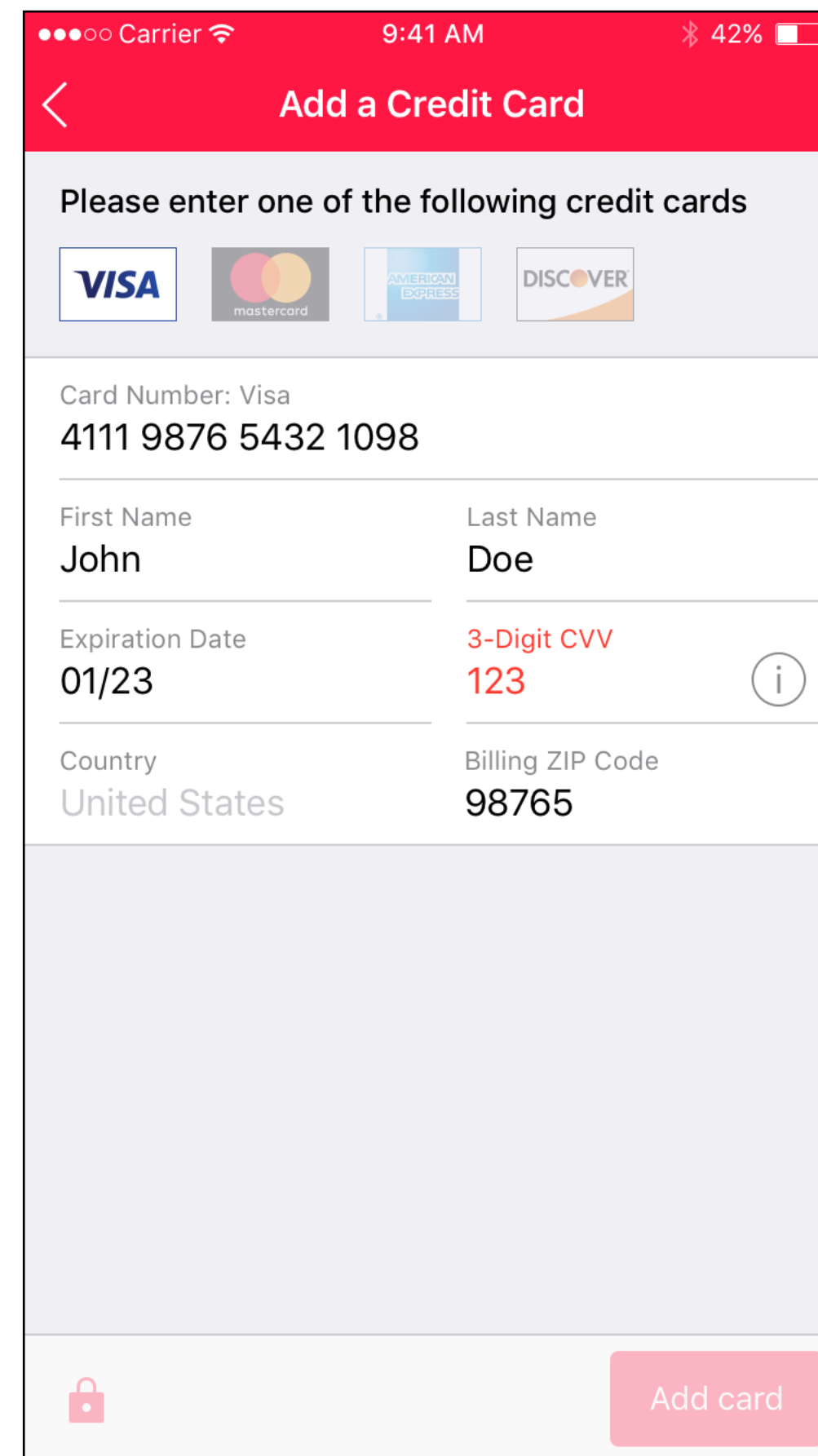
Input complete

Note: I'm not sure if we need to support Canadian Postal Codes. International cards will not require this field.

ERRORS ON SUBMIT



Error Modal



Fields to correct marked in red

Formatting errors, including blank fields, character count for credit card number and security code, etc. should be handled inline, prior to form submission (add card). Of course, a card may fail for any number of reason, so we need the ability to message outside of the form as well.

Errors of this type may include things like losing an internet connection, but for this example, the error is specific to submitting incorrect information.

When the user does this, we show a modal, then indicate the failed fields in red, similar to the inline examples above.

Note: I'm not sure how error messages are passed back to the app, so the exact formatting and number of messages may need adjusting.