Braintree Mobile Code Submission

Welcome! Thanks for taking some time to show us your skills. We'd love to see your best code. So take your time, and focus your solution on the skills you would like to demonstrate to us.

Overview

Imagine that you're writing software for a credit card provider. Create an app that enables users to process information about various credit cards.

Upon submitting the app for review the following conditions should be met:

- All TODOs are resolved
- Tests exist, and they all pass
- App builds successfully
- App can run on a device

Also the most important consideration is your code is presentable. This is a code submission, and Braintree engineers will be looking at your code. Try to make it as clean as you can!

Functional Requirements

Please build a native iOS or Android app with single view containing a form that allows a user to submit a card.

- There must be tests, documentation about how to run the tests, and they should pass.
- Your form should support the following networks and test numbers:
    - Amex (371449635398431)
    - Discover (6011111111111117)
    - JCB (3530111333300000)
    - MasterCard (5555555555554444)
    - Visa (4111111111111111)
- The form should contain:
    - A number field
        - Numbers from unknown card networks should bypass all validation rules, except for Luhn validation.
        - Prevent the user from entering too many digits.
            - American Express cards have 15 digit numbers.
            - MasterCard, Visa, Discover, and JCB credit and debit cards have 16 digit numbers.
    - A card logo
        - Show a generic card logo next to the text field when the field is empty.
        - Show the correct card logo when you've identified the card type.
    - An expiration date input

        - With the format MM/YY.
    - CVV field
        - Prevent the user from entering CVV that is too long.
        - Show a CVV hint icon when the user is editing the CVV.
        - Prevent the user from entering too many digits.
        - American Express cards have 4 digit codes.
        - MasterCard, Visa, Discover, and JCB credit and debit cards have 3-digit codes.
    - A submit button
        - When the user taps submit, perform a Luhn validation on the card number.
        - If Luhn validation passes and all other fields are valid, show a "Success!" message. Otherwise, display a helpful error message.
        - There is no need to save or persist the card details. Simply display the validation status.
- The app should offer a pleasant user experience.

Code Requirements

You are free to use whatever tools you deem fit. However, you should implement the card processing logic from scratch (e.g. card number validation, card detection). You may use a luhn algorithm from a 3rd party source, so long as it is a correct implementation of the algorithm and the code's source location is documented.

If you choose to use code from a different source, document where it came from.

Please include all relevant files to build your app.

Please include a `README` in your submission that describes the user experience and implementation, how to run the app, how to run the tests, as well as any developer notes.

We are looking for a level of code quality that you would be comfortable shipping in production. We love tests and well-modeled code.

Resources

- You may use these assets (https://www.dropbox.com/s/fkzsachacyhdhyx/mobile-card-assets.zip?dl=0) for card logos
- You also may find this page (http://en.wikipedia.org/wiki/Bank_card_number) to be a useful reference.

Submission

When you're done, zip or tar your project and email it back. We'd prefer a Dropbox link (if possible). If you have any questions, feel free to contact us!

Note: Help us maintain a fair application process! Please do not share, post online, upload to Github or otherwise publicize this assignment or your solution.