PayPal Application Engineer UI Take Home Exercise

Below, you will find sample screens for a PayPal application to allow a member to send money to another member. Your task will be to:

- Build a web-based UI based on the screens provided
- Provide a Node.js server that will generate mock transaction data for display in the transaction history.

The purpose of this exercise is to give you an opportunity to demonstrate your engineering knowledge as well as your familiarity and experience with JavaScript and Node.js.

Additionally, in an interview setting, it will provide a centerpiece for a discussion about your thought process and architecture applied in this engineering exercise. Our hope is that this exercise can replace much of the "white-board coding" that is typical in engineering interviews.

While we've tried to provide clear instruction, please don't hesitate to reach out with any questions you have about implementing this take-home exercise.

Common Questions

What about Interaction X?

Generally speaking, some of the instruction on this exercise has been left purposely vague. We want to see you make some decisions about how things should work.

Can I use libraries or frameworks?

You may use whatever you feel will help you get the job done. However, a word of caution: as the purpose of this exercise is to demonstrate *your* knowledge, the more 3rd party code utilized, the less effective the take-home will be for it's stated purpose. Use your judgment.

What browsers do I need to support?

For simplicity, this exercise will only be evaluated in the most recent version of Google Chrome.

UI Exercise

Initial Screen

- Allow the user to choose between sending money and reviewing their transaction history.

Send Money Screen

- Provide validation for both the *To* and *Amount* fields. The former should accept any valid email address while amount should only accept positive numbers
- Provide correct currency formatting for the amount field. For example, if the user enters 1234.56 and the currency selected is USD, display $1,234.56.
- Allow the user to change the currency type. Examples:
  - USD
  - EUR
  - JPY
- Choosing a value for "What's this payment for?" will provide clear indication of the current selection.
- Allow the user to choose "Clear" to reset the form to its default state.
- Selecting Next will move to "Loading Screen"

Loading Screen

- Provide a brief loading indicator as an overlay to simulate the time to make a request.
- Move to Success Screen

Success screen

- Allow user to send more money or view their previous transactions.

Transaction History screen

- Display recent user transactions in an "infinitely scrolling" list. See "Node Server" below for more information.
- You should determine your own approach for fetching data.
- Allow the user to go back to the main screen.

Node Server

You should build a small, Node.js based HTTP server that delivers transaction data for your transaction history display.
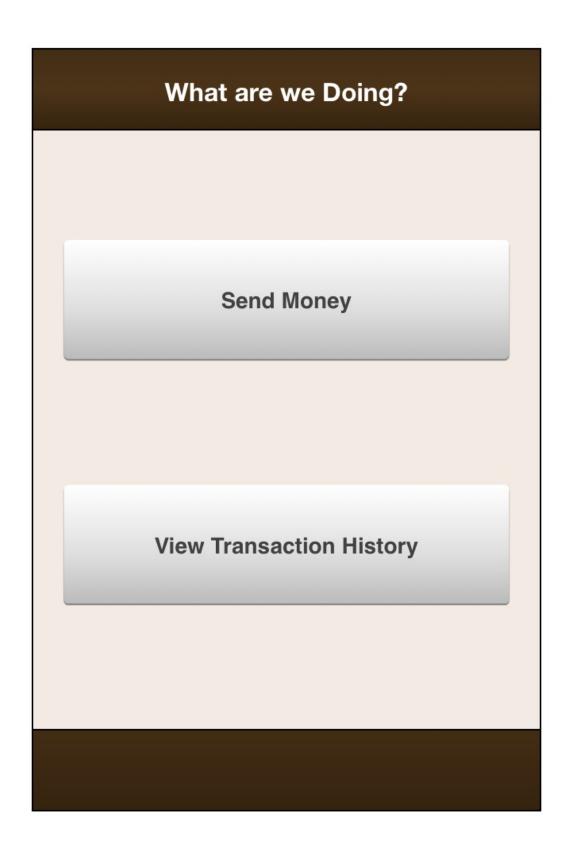
- You should determine how this data is structured and formatted.
- Ensure that your server will serve a reasonably large set of data (at least 250 transactions) and that for each run of the application, the data will be the same.
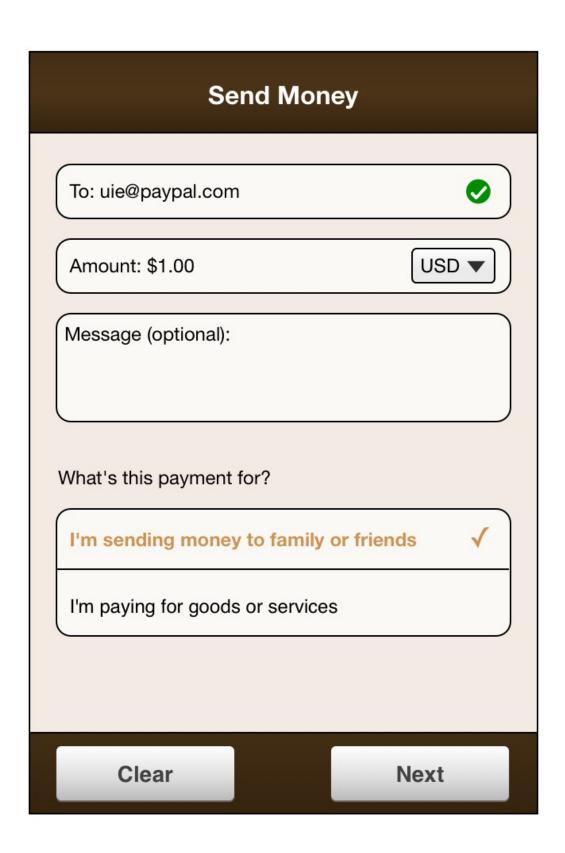
- You do not need to add any transactions done through the "Send Money" screens to your data.
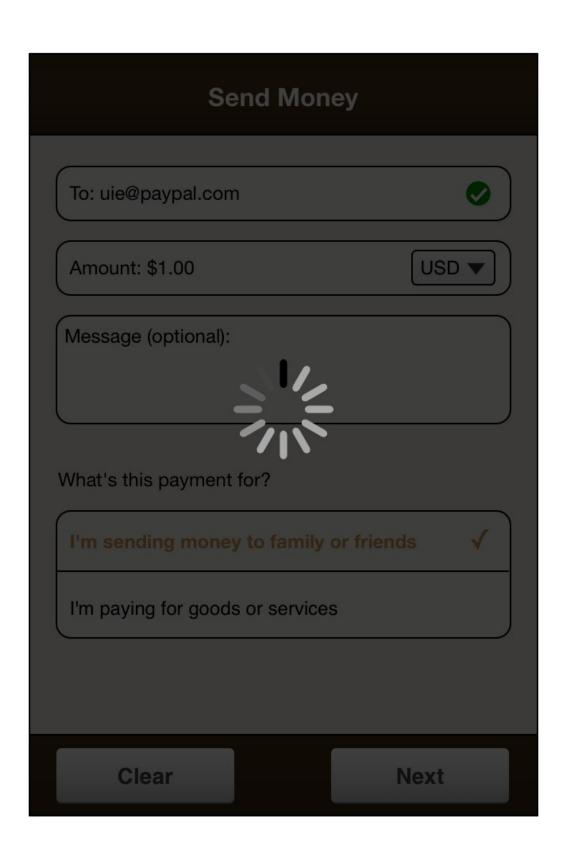
Ideas for Expansion

The above exercise is sufficient for us to begin our conversation. However, if you're interested, we encourage you to think about ways in which you can expand the scope of what we've provided here and implement (or, at least, be prepared to discuss how you would implement) any ideas that you find particularly interesting or you believe would showcase your talents and skills. To that end, we've provided some ideas below of ways this demo app could be expanded; however, feel free to formulate your own ideas as well.

- Add unit testing
- Consider caching for transaction data
- Allow for transactions to be clicked to reveal more details about the transaction
- Utilize real PayPal APIs to log in and get transaction histories.

Send Money

View Transaction History
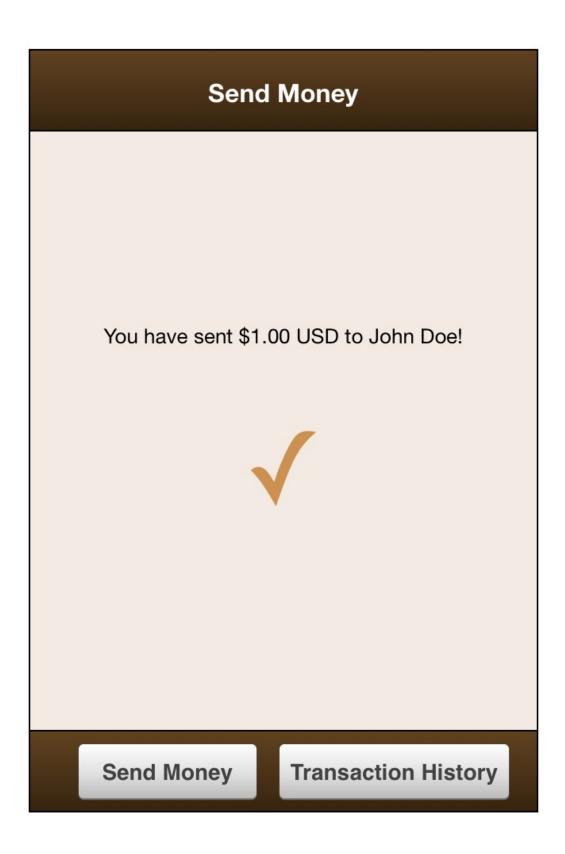
Initial Screen

Send Money

To: uie@paypal.com ✅

Amount: $1.00   USD ▼

Message (optional):

What's this payment for?

I'm sending money to family or friends ✓

I'm paying for goods or services

Clear   Next

Send Money Screen

Send Money

To: uie@paypal.com ✓

Amount: $1.00   USD ▼

Message (optional):

What's this payment for?

I'm sending money to family or friends   ✓

I'm paying for goods or services

Clear   Next

Loading Screen

Send Money

You have sent $1.00 USD to John Doe!

✓

Send Money   **Transaction History**

Success Screen

Transaction History

12/5/2013	John Smith	$123.45
12/1/2013	Starbucks	$3.34
11/22/2013	Jane Jones	$10.00
11/6/2013	Applebee's	$35.42
10/24/2013	Toys R Us	$1,239.34
9/3/2013	Apple	$199.00
7/5/2013	Ebay	$222.50
11/7/2012	Microsoft Corp	$99.00
10/5/2012	Jamba Juice	$1.00
12/05/2013		$123.45

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Transaction History Page