

TACTILE DEBIT

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PROJECT DESCRIPTION

Credit and Debit Cards have made people's lives more convenient. Financial transactions have become one card swipe away. People do not need to carry hard cash in their wallets anymore.

However, as a replacement of physical cash, credit cards can make people lose track of their budget. Without feeling the amount of physical money changing in the wallet, it is easy to swipe the money away and spend beyond what we expect. There is no embodied difference between having \$1000 left in your account or \$10. We think that this is a sensory impoverished state of dealing with money.

Additionally, this model for currency encourages thoughtless spending. Through our design of "tactile Debit" we want to bring some aspects of the tactile feedback from the physical monetary control into the digital credit/debit card control.

Through our design, we want to change the spending behavior of the user over time, by introducing tangibility into the digital money space.

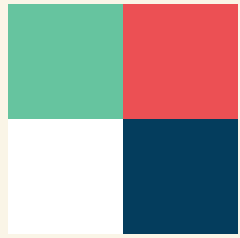
PROJECT DESCRIPTION

When you open your wallet for the card, the wallet gives feedback to tell you your budget status. The intensity of the vibration depends on how you are doing on your budget. If you are under your daily budget, it gives a slow vibration, and a fast vibration if you've gone over.

When you close your wallet after paying, the wallet gives another vibration feedback about the budget status. As soon as the budget is changed (Money is spent from your account), the data gets updated and is sent to the spark core over wifi. The switch gets triggered when the wallet is opened or closed and sends signal to the spark core. The spark core then uses the data to determine the intensity of the vibration and sends a signal to the vibration motor accordingly. The vibration motor vibrates and provides "in the moment" feedback to the user, about the status of his budget.

VIDEO LINK

<http://youtu.be/SzvKtImLeug>



PROTOTYPE

SYSTEM STRUCTURE

1.

Controller



2.

System

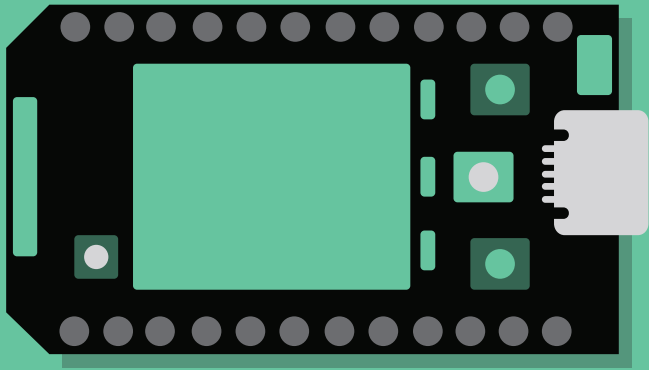


3.

Feedback



RELATED TECHNOLOGY



SPARK CORE

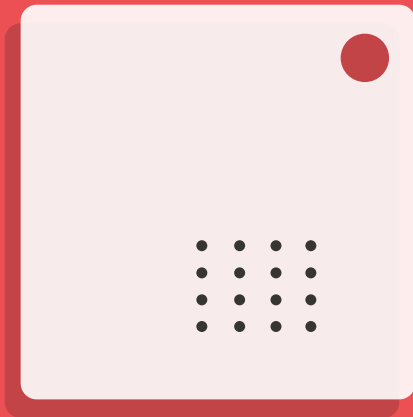
Spark Core is a development kit which has Cloud and WiFi services embedded in it. We will use it to get the bank account information through the API. Then Spark Core collaborates with the switch and vibration motor to achieve all interactions.



API

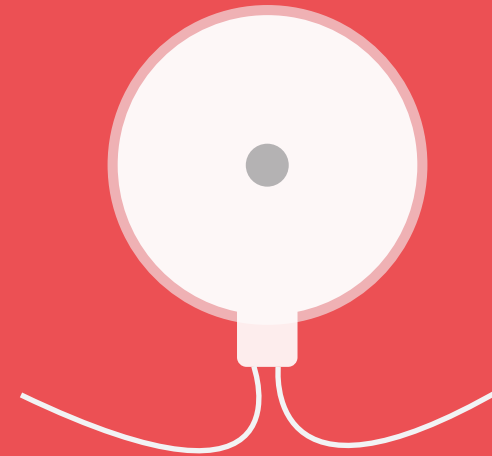
An API will be used to gather bank account data.

RELATED TECHNOLOGY



SWITCH

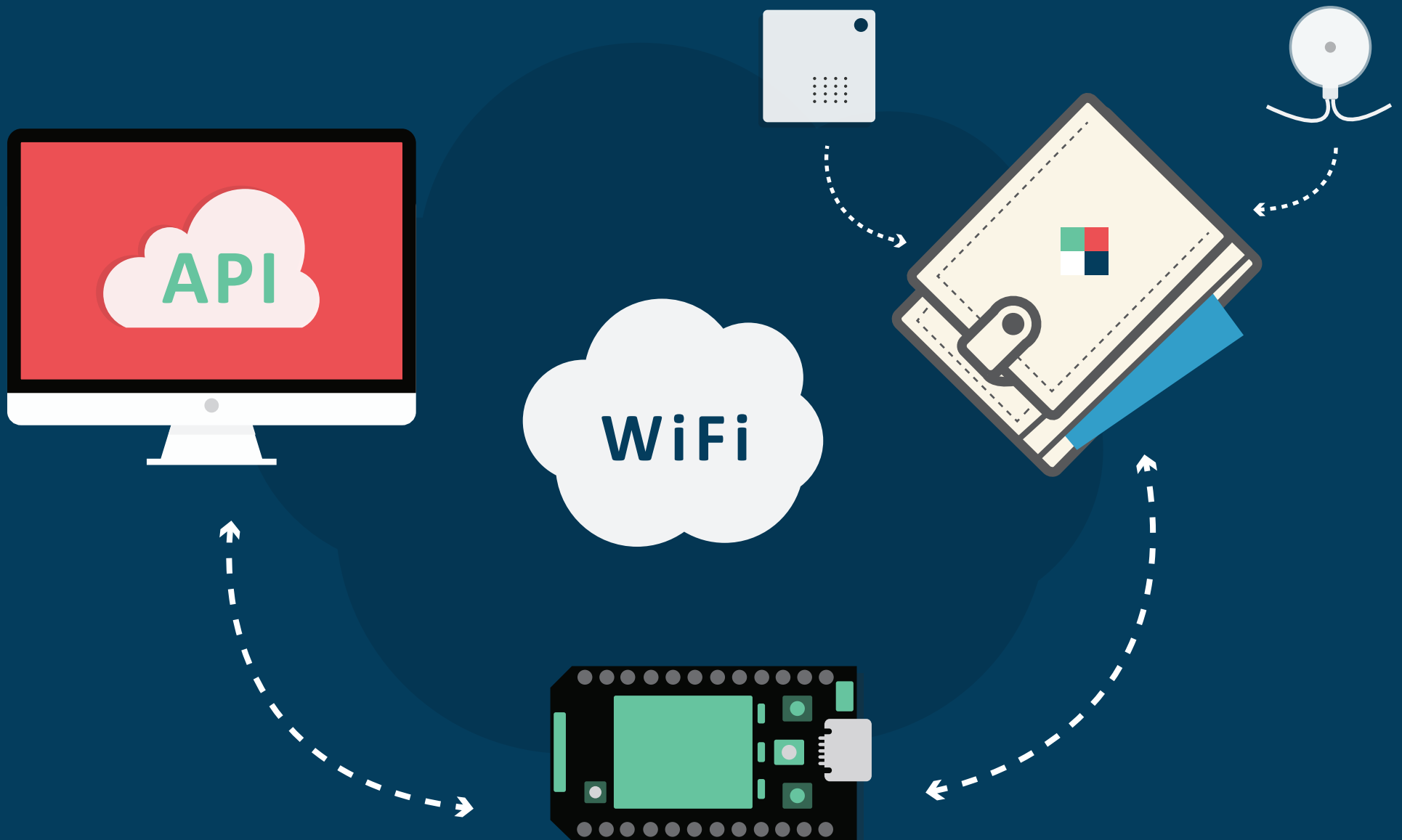
A switch will be used to detect the opening and closing of the wallet.



VIBRATION MOTOR

A vibration motor will give vibration notification of the bank account balance to people when they open or close the wallet.

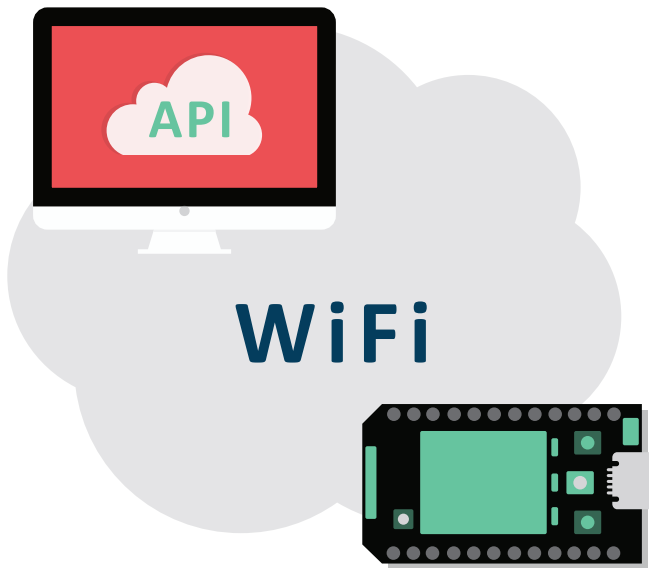
SYSTEM LAYOUT



HOW IT WORKS

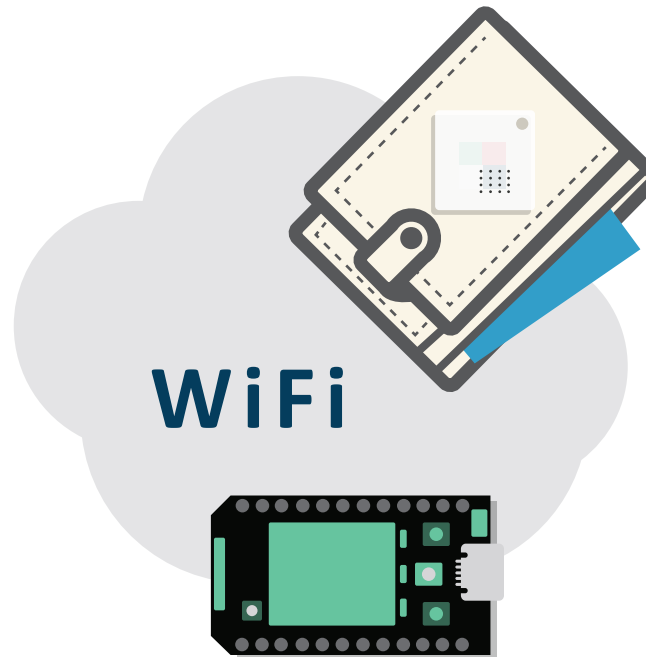
1.

Spark Core gets the bank account information through the API



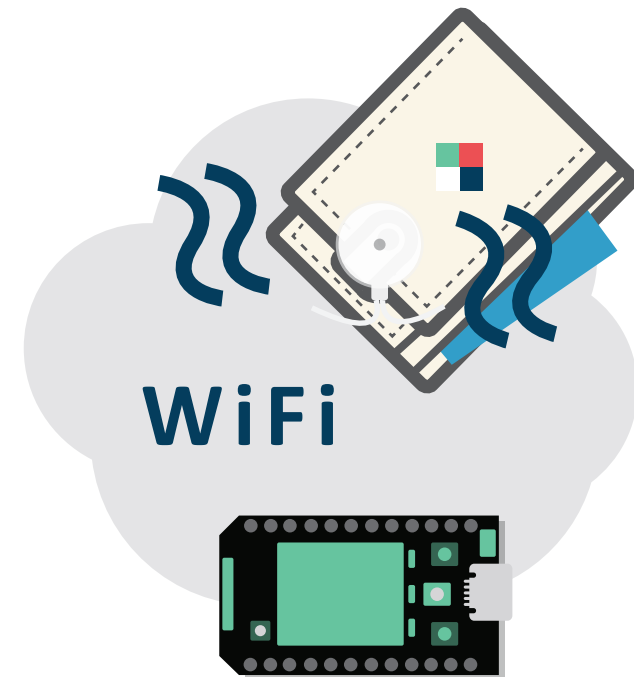
2.

Spark Core detects opening/closing motion through the switch



3.

According to account information, Spark Core controls the vibration motor



IMPLEMENTATION STRATEGY

WEEK 1

OCT 23 - OCT 29

Purchase switch, vibration motor and spark core.

Research more on people's budget plan and purchasing behavior.



WEEK 2

OCT 30 - NOV 05

Build the wallet prototype using the switch, vibration motor and spark core.

WEEK 3

NOV 06 - NOV 12



WEEK 4

NOV 13 - NOV 19

Test the prototype in context with users.

WEEK 5

NOV 20 - NOV 26

Iterate the design and make improvements on the prototype.



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