

QuickPay

Project Description

QuickPay is an Android app that allows **secure, instant** transfer of funds between **any** two bank accounts, for **free**.

Problem statement

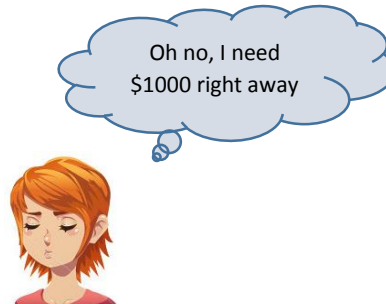
- Most banks take **3 business days** to transfer funds to a beneficiary of a **different bank** and they don't offer an instant payment service.
- Some **third party applications** allow instant transfer of funds between 2 different bank accounts but, **impose transfer limits** and charge a **transaction fee**.
- This system of banking makes it cumbersome for a person to transfer funds in the event of an emergency.

Our solution

- Though banks take a longer time to transfer money to a different bank's account, most banks have an instant transfer mechanism for 2 accounts within the same bank.
- Use this feature to facilitate instant transfers between any 2 accounts, for free!

How do we do it?

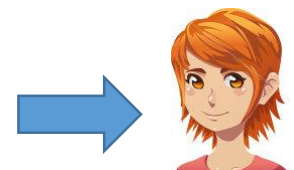
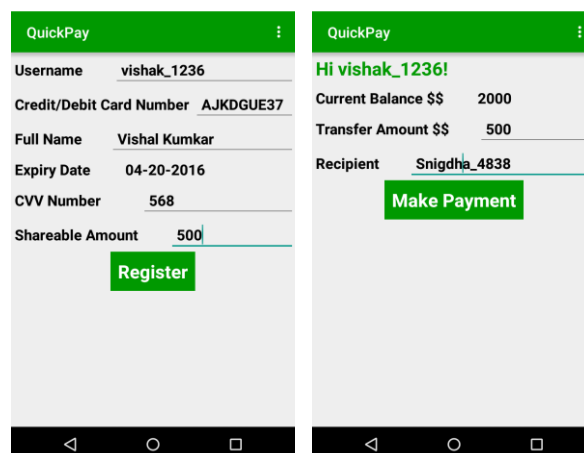
- Install the app. Register a **username**, credit/debit card details and a **"Shareable amount"**.
- Once registered, the user can do instant transfers of up-to 5 times his configured Shareable amount.



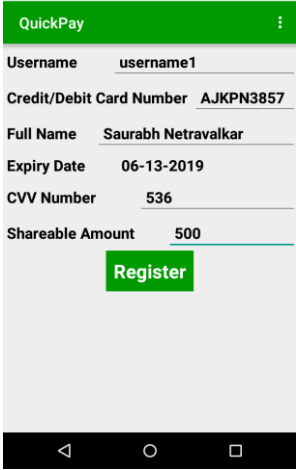
Snigdha, a Cornell student, forgot
that her bill is due today



Her dad



Under the hood...



QuickPay

Username

Credit/Debit Card Number

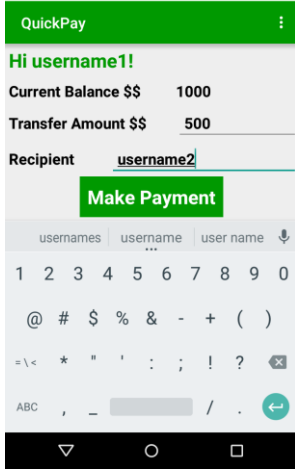
Full Name

Expiry Date

CVV Number

Shareable Amount

Register



QuickPay

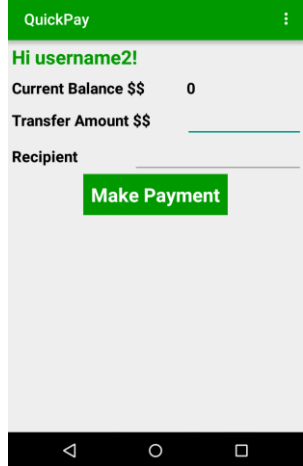
Hi username1!

Current Balance \$\$

Transfer Amount \$\$

Recipient

Make Payment



QuickPay

Hi username2!

Current Balance \$\$

Transfer Amount \$\$

Recipient

Make Payment

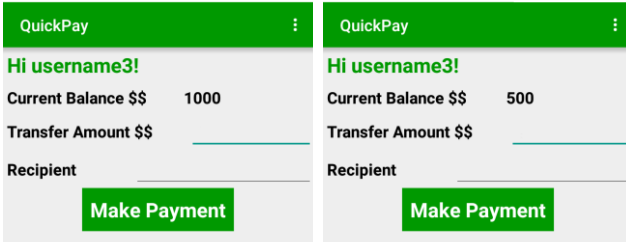
HTTP POST



QuickPay debits amount instantly

QuickPay pays username3 using regular inter-bank transfer

QuickPay initiates transfer instantly



QuickPay

Hi username3!

Current Balance \$\$

Transfer Amount \$\$

Recipient

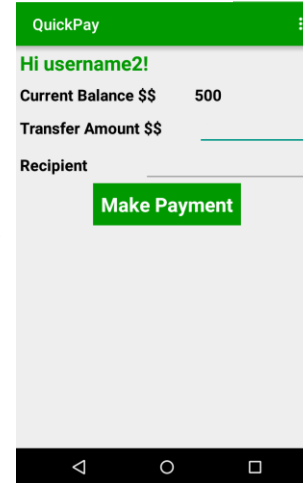
Make Payment

Username3 has set

Sharable amount = \$500

This is the max. amount that can be temporarily borrowed

QuickPay will transfer it to Username3 in 2 days.



QuickPay

Hi username2!

Current Balance \$\$

Transfer Amount \$\$

Recipient

Make Payment

Username2 receives instant credit

Find username2's bank;
Server finds that username3
has an account at same bank

Username3 and Username2 have
accounts in same bank

Same bank transfers occur instantly

This facilitates instant transfer

- The amount can be **CrowdSourced** from multiple intermediate accounts, if the transaction size is too large.
- Since a person can do instant transfers upto 5x times his configured “Shareable balance”, this encourages users to configure higher limits and hence, more “buffer” money becomes available to **QuickPay** for instant transfers.

APIs and Technologies used

- Amazon ElasticBeanstalk to deploy the application server on the cloud
- Android to develop the mobile app
- Capital One APIs to get customer debit card information, balance, account details, etc. and to find probable intermediate account holders.
- Java and Jersey framework to develop the server side application.

URL

<http://dataserver-env.elasticbeanstalk.com>

The application server has been configured to handle JSON requests and send JSON responses.

There is no server UI hosted at this URL.

POST can be simulated with Postman as:

<http://dataserver-env.elasticbeanstalk.com/rest/transaction/transfer>

```
{  
  "senderId" : "55e94a6af8d8770528e60e45",  
  "receiverId" : "55e94a6af8d8770528e60e46",  
  "bankName" : "Savings",  
  "amount" : 1000  
}
```

Team members

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