

CheckIt

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Problem

- Oftentimes one goes to a restaurant with friends, as college students do, you are not able to split the check enough ways. This requires group members to figure out how to exchange money which is often tricky.
- Sometimes when at a restaurant, one group member doesn't have cash at all, or doesn't have enough cash. Where will you get money?
- More generally, sometimes, friends or group members buy something together. Maybe one person pays and everyone else is responsible for paying them back. How does the group work out how and when to pay each other back, and keep track of who has paid back who, and how much?
- Maybe a group is planning a trip, and they need to save up money. They need to keep track of how much money each person needs to contribute, how much they've contributed so far and how much money is left to be paid.

Solution

- Our project, CheckIt, will allow users and groups of users to either split the bill on a one-time basis (i.e. going out to dinner with friends), or set up a group account (i.e. a group of roommates paying for rent), in which they can keep track of who owes who, and collect money together to pay for group purchases
 - Within these groups, users will be able to receive reminders about pending payments to friends that need to be made (through SMS/Email), and keep track of who owes whom within the group

List of Features

- One Time Bill Splitting
 - Calculates total bill given order total, tax and percent tip desired
 - Gives options to split a bill evenly or have everyone pay for themselves
 - Including option to split a tip evenly or in ratio to how much was paid
 - Asks users whether they are willing to be owed money
 - Asks users for what bills they have in their wallets so it can calculate who should make change with whom (eg Suzy has a twenty dollar bill, but she only owes ten dollars. Mark also owes ten dollars and has a ten. Therefore Mark should give his ten to Suzy and Suzy should put her twenty in)
 - Finding nearest ATM (General and for a given bank)
- Group Expenses
 - Great for groups of friends who often eat out together or are on a trip together, and want to see who has paid what portion of the total cost. Perhaps the bill has yet to be paid and

they need to get the money together, or maybe someone from the group already paid the money themselves and is now owed money by the rest of the group.

- Check it will keep track of what has been paid, and what is owed to who.
- Sends emails to users who owe other users money until their debt is paid
- Keeps track of users' reliability at paying back debts
- Send reminders to those who owe money

Pick Five

- Geolocation (for finding the nearest ATM)
- Charts and graphs (reports how much money a consumer owes/has lent)
- Front-end framework
- Send emails and/or SMSes (reminders to consumers owing other clients money)
- Data storage in the clouds
- APIs: Google Maps, Facebook

Data Being Used/Collected

For Check-Splitter:

- Facebook Account Info
- Location
- User Input:
 - Total Bill
 - Tax Percentage
 - Bills in your wallet (i.e. number of 1's, 5's, 10's etc.)
 - How to split the bill (evenly, everyone pays for themselves, etc...)
 - Tip Percentage
 - Willingness to be owed money, and any bars on who user wants owing them money

For Group Expenses:

- Facebook Account Info
- User Input:
 - Whether the bill has been paid yet, and if so, by whom. Otherwise, keeps track of when the deadline is for the group payment.
 - Total Bill
 - Amount owed by each person
 - Amount paid by each person
 - Person to whom they owe money

Algorithms/Special Techniques

- Algorithm which takes in everyone's money bills and their contribution to the total, and determines how they can trade bills so that the total cost is covered and everyone pays their fair share.
- Algorithm which determines the total bill given the meal cost, the tip percentage and the tax.

Electronic Mock-Ups

✓ CheckIt

😊 Mark W
Sign Out

My Groups

😊 Suzy Q.
\$25.00 owed by you

👤 Tom, Dick, Harry
\$10.00 owed by Tom

👤 Roommates
Checked!

👤 Coworkers
\$10.00 owed by you

😊 Mom
Checked!

😎 Ming C.
\$1000.00 owed by Ming

👤 The Gang
\$10.00 owed by Charlie

My Account

Jess, \$15

Chris, \$20

Coworkers, \$10

Suzy, \$25

Money You Owe

Tom, \$10

Ming, \$1000

Charlie, \$10

Money Owed

Previous Transactions

Paid \$10 to Mom

Spent \$25 at Taipei Tokyo with Coworkers

Received \$5 from Harry

Spent \$100 on rent with Roommates

My Groups

 Suzy Q.
\$25.00 owed by you

 Tom, Dick, Harry
\$10.00 owed by Tom

 Roommates
Checked!

 Coworkers
\$10.00 owed by you

 Mom
Checked!

 Ming C.
\$1000.00 owed by Ming

 The Gang
\$10.00 owed by Charlie

Tom, Dick, Harry

 - Tom, Dick, Harry, You

Justin Bieber Concert Tickets

Tom, \$100	Dick, \$100	Harry, \$100	You, \$100
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Boston Burger Company

Tom, \$10	You, \$30	Dick, \$20	Harry, \$20
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Diva

Tom, \$15.50	Dick, \$15.50	Harry, \$15.50	You, \$15.50
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Previous Transactions

Harry paid \$20 at Boston Burger Company
Tom paid \$10 at Boston Burger Company
You paid \$30 at Boston Burger Company
Harry paid \$100 to Tom for Justin Bieber Concert Tickets

Quick Split

New Group

Request Money

Send Money

My Settings

 Roommates
Checked!

 Coworkers
\$10.00 owed by you

 Mom
Checked!

 Ming C.
\$1000.00 owed by Ming

 The Gang
\$10.00 owed by Charlie

Quick Split

Subtotal

Tax

% Tip

Tip
☐ 10%
☒ 15%
☐ 20%

Num People

<input type="text"/>	<input type="text"/>	<div>Bills <input type="button" value="v"/> \$1 \$5 \$10 \$20</div>
<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<div>Bills <input type="button" value="v"/></div>

My Groups



Suzy Q.

\$25.00 owed by you



Tom, Dick, Harry

\$10.00 owed by Tom



Roommates

Checked!



Coworkers

\$10.00 owed by you



Mom

Checked!



Ming C.

\$1000.00 owed by Ming



The Gang

\$10.00 owed by Charlie

Quick Split - Calculated

Rebecca, give \$5 to Lisa.

Lisa, give \$20 to Rebecca

Rebecca, give \$10 and \$20 to Briana.

Nicki, give 3 \$5 to Briana.

Briana, pay \$60.





Notes

We understand that our project is ambitious. If while working on this project, we believe that there are too many features to complete in time, we will update our project proposal and get your permission.