SENG2021 DELIVERABLE 1

Team l33t-hackerz

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Table of Contents

PROJECT CONTEXT

The 2016 Australian census has found that 75.6% of Australians live with someone else and that the average people per household is 2.6. 82.5% of households with multiple residents had at least 1 other person that was able to assist with monetary expenses and according to the ABS there has been a 16% increase in the number of couples being in a de facto relationship before officially marrying. This would indicate that the majority of Australians live in a situation where multiple people within the same household assist in paying their living costs. Coupled with the fact that a UBank research has found that 72% of Australians do not budget expenses creates circumstances that makes it difficult for many people to effectively split their household bills. This conveys that there is an increasing trend in Australia where there is an increase of joint living arrangements in many households. Thus, the proposed solution is an application that is bank-integrated which eases tracking financial transactions for personal and joint living as well as being able to notify other parties for maintaining and paying transactions needed.

EXISTING COMPETITORS

Applications such as RoomMate, Splitwise, Beem It, Pelikin and Easyshare allows users to manually invite other people and split transactions or bills with as well as notifying and keeping track of who owes and has paid. These similar products to what is being proposed are currently on the market cater to joint living arrangements, but have poor UI designs, are not bank-integrated and may have limited features available that are essential for joint living.

PROBLEM STATEMENT

- Joint living arrangements require complex book-keeping to ensure a fair delegation of financial commitments.
- Applications to track joint expenditures are not ergonomic and user-friendly.
- Existing methods to track joint expenditures require tedious processes to set up and maintain.
- Financial management software as service applications are not seamlessly and securely bank-integrated.
- Social issues often result from a lack of trust in the governance of finances within a shared environment.

USER STORIES

ID	User Story 1
Feature	Registering a user
Description	**As a first-time user**, I want to be able to register for an individual profile account, **So that** I can access and use the application.
Flow	**Given** that I am on the homepage, **When** I click on the 'Sign Up' button, **Then** I am redirected to a signup form where I can create an account by entering: • Full name; • Email address; • Password.
Priority	Must have

ID	User Story 2
Feature	Create a group
Description	**As a user**, I want to be able to set up a group to represent a financial living arrangement, **So that** I can utilize the application to manage joint expenditures with my housemates.
Flow	**Given** that I am on the 'Landing' dashboard, **When** I click on the 'New Group' button, **Then** I am directed to a page where I can create a group by entering: • Group name; • Members to add to the group (by username or email).
Priority	Must have

ID	User Story 3
Feature	Add and remove users to a group
Description	**As a group admin**, I want to be able to add or remove users to a group, **So that** I can share expenses with relevant people.
Flow	**Given** that I am on the 'Group Overview' dashboard, **When** I click on the 'Update Group' button, **Then** I can: • Add a group member by entering their username or email; • Remove a group member by pressing the '-' next to their name.
Priority	Should have

ID	User Story 4
Feature	Notify new members
Description	**As an added member**, I can be notified that I have been added to a group via an automated email, **So that** I can join the group and utilize the application.
Flow	**Given** I am not already a member of a group, **When** a group admin adds me to their group, **Then** I receive an email notification to inform me that I have been added.
Priority	Could have

ID	User Story 5
Feature	Updating profile details
Description	**As a user**, I want to be able to change my personal details, **So that** they can reflect my current personal information.
Flow	**Given** that I am on the 'Landing' dashboard, **When** I click on the 'Settings' button on the top right hand corner and select 'Edit Profile', **Then** I can update my personal details.
Priority	Could have

ID	User Story 6
Feature	Reviewing and updating held bank consents
Description	**As a user**, I want to be able to review and update the consents granted by me for my bank to share my account data, **So that** I can manage which of my data is being shared.
Flow	**Given** that I am on the 'Landing' dashboard, **When** I click on the 'Settings' button on the top right hand corner and select 'Manage Shared Accounts', **Then** I can view, manage, add, and remove my bank accounts as per the CDR (Open Banking) Rules requirements.
Priority	Must have *(restricted by limitations in regulations for scope of project)*

ID	User Story 7
Feature	Link my personal bank account(s)
Description	**As a user**, I want to be able to link my personal bank accounts, **So that** I can view all my transactions and add all shared expenditures from my accounts to the shared transaction history page.
Flow	**Given** that I am on the 'Manage Shared Accounts' page, **When** I click on the 'Add Account' button, **Then** I am redirected to the consent process to authorise my bank to share my data for my additional account(s) as per the CDR (Open Banking) Rules requirements.
Priority	Must have *(restricted by limitations in regulations for scope of project)*

ID	User Story 8
Feature	View shared transaction history
Description	**As a group member**, I want to be able to view a list of shared expenditures, **So that** I track shared payments that relate to my group.
Flow	**Given** that I am on the 'Group Overview' dashboard, **When** I click on the 'View Shared Transaction History' button, **Then** I will be redirected to a page where I can view the shared transactions, with the following information: • Name of transaction; • Total amount of transaction; • Payer of transaction; • Amount owing of transaction.
Priority	Must have

ID	User Story 9
Feature	Review a shared bill of an expenditure
Description	**As a group member**, I want to be able to review a shared expenditure, **So that** I can ensure that it correctly reflects the financial exchange that it represents.

Flow	**Given** that I am on the 'Shared Transaction History' page,
	When I click on the 'Review' button,
	Then I will be directed to a review page where I can:
	• View the transaction information, including:
	    • Name of transaction
	    • Total amount of transaction
	    • Payer of transaction
	    • Amount owing of transaction
	• Add notes/reminders to the transaction;
	• Change the breakdown of the payment by specifying an amount or percentage per member;
	• Dispute the payment.

Priority	Must have

ID	User Story 10
Feature	Dispute a shared bill of an expenditure
Description	**As a group member**, I want to be able to dispute a bill with other users, **So that** I can correct a bill that I perceive to be incorrectly added.
Flow	**Given** that I am on the 'Transaction Review' page, **When** I click on the 'Dispute' button, **Then** I will be directed to a page where I can enter a reason for disputing, and raise the dispute with other group members.
Priority	Should have

ID	User Story 11
Feature	Change the cost breakdown of an expenditure
Description	**As a group member**, I want to be able to change the breakdown of an expenditure, **So that** expenditures are accurately distributed.
Flow	**Given** that I am on the 'Transaction Review' page, **When** I click on the 'Change Breakdown' button, **Then** I will be directed to a dispute page where I can enter a reason for disputing.
Priority	Could have

ID	User Story 12
Feature	Approve a disputed transaction
Description	**As a group member**, I want to approve/disapprove a disputed or adjusted transaction, **So that** I can make sure that all payments are distributed fairly among shared users.
Flow	**Given** that I am on the 'Shared Transaction History' page, **When** I click on a transaction with a noted dispute awaiting my approval, **Then** I will be taken to the 'Review Transaction' page which will display an option to accept or decline the dispute.
Priority	Should have

ID	User Story 13
Feature	View the status of a disputed transaction
Description	**As a group member**, I want to be able to view the status of the disputed transaction, **So that** I know whether a dispute has been resolved.
Flow	**Given** that I am on the 'Shared Transaction History' or 'Review Transaction' page, **When** a transaction listed is awaiting an approval after a dispute/adjustment, **Then** a 'Pending Approval' status will be shown.
Priority	Should have

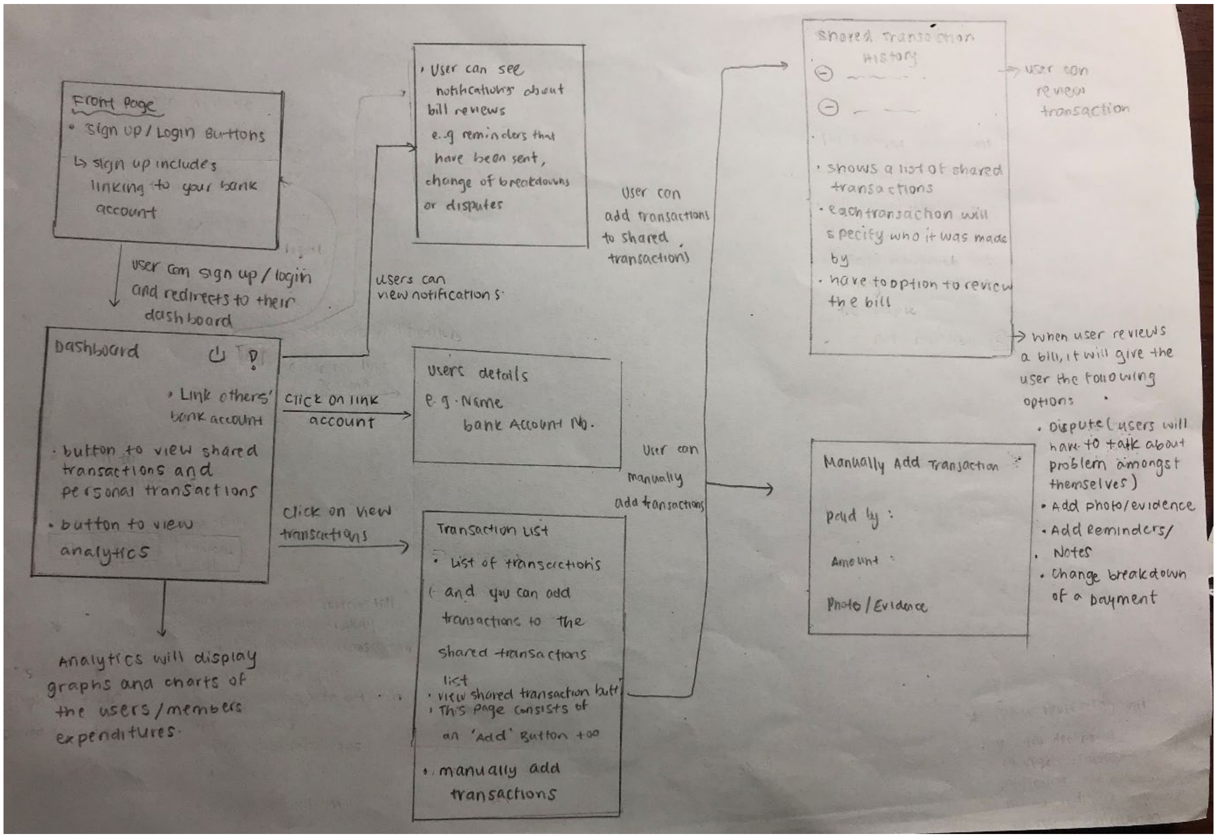
ID	User Story 14
Feature	Manually add a cash expense to the group expenditures
Description	**As a group member**, I want to be able to manually add expenses that I have made on behalf of the other users to the shared transaction list, **So that** I can get reimbursement for a purchase that I have made.
Flow	**Given** I am on the 'Shared Transaction History' page, **When** I click on the 'Add Transaction' button, and the 'Cash' option, **Then** I will be redirected to a page where I can enter the details of the expense including: • Name of expenditure; • Amount; • Date; • Photo evidence (of purchase and/or receipt).
Priority	Should have

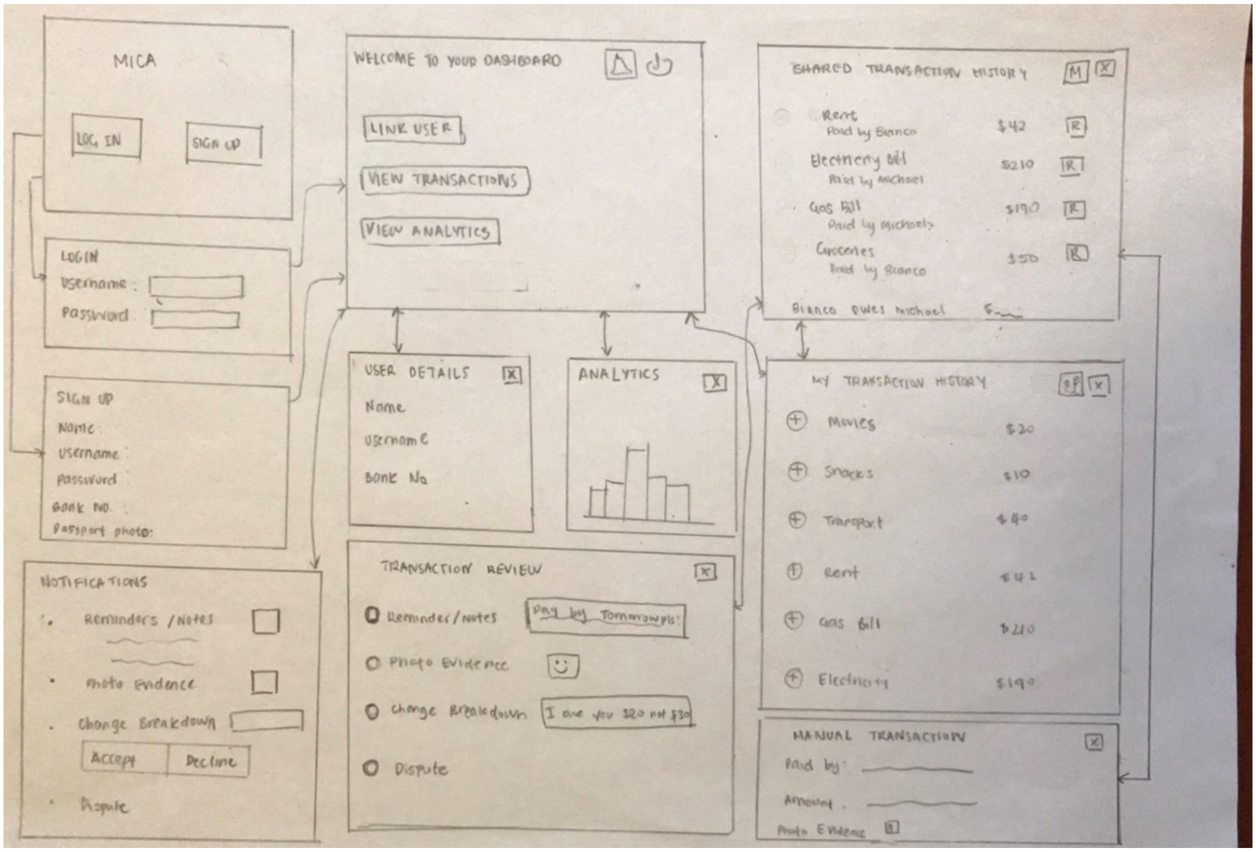
ID	User Story 15
Feature	Quick add a transaction from my personal banking transactions to the group expenditures
Description	**As a group member**, I want to be able to add a shared expense that I made with my bank account to the shared transaction list, **So that** I can get reimbursement for a purchase that I have made.
Flow	**Given** I am on the 'Shared Transaction History' page, **When** I click on the 'Add Transaction' button, and the 'Bank' option, **Then** I will be redirected to a list of transactions I have made as per my connected bank records, and I can choose specific transactions to be added to the shared transactions list using the '+' button.
Priority	Must have

ID	User Story 16
Feature	Viewing analytics regarding spending trends and the contributions of each individual through graph representations on the 'Analytics' page.
Description	**As a group member**, I want to be able to view clear and helpful analytics showing spending trends within my group, **So that** I can track and better budget over a time period.
Flow	**Given** that I am on the dashboard page, **When** I click on the 'View Analytics' button, **Then** I will be redirected to a page where a visual representation of my shared transactions and other helpful analytics will be displayed.
Priority	Should have

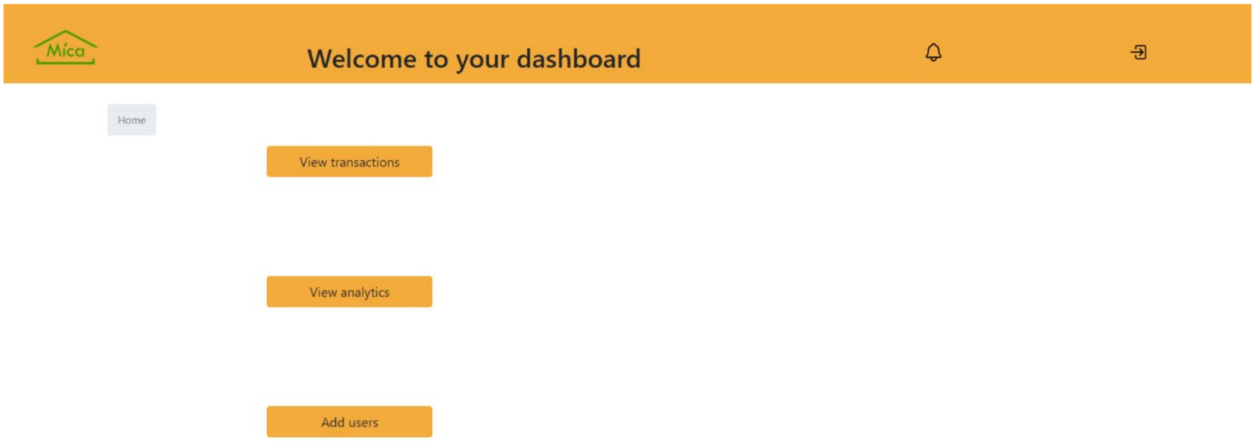
ID	User Story 17
Feature	Validating cash purchases using a scanning feature
Description	**As a group member**, I want to be able to use my phone to scan a receipt for a purchase made with cash, **So that** it is included on the shared transactions page.
Flow	**Given** that I am adding a transaction that I made by cash, **When** I click on the 'Add Transaction' button, and the 'Cash' option, **Then** I will be redirected to a page where I can use my phone camera to scan a receipt and have it interpreted and included as a 'Shared Transaction', with important information (Name, Amount) extracted automatically.
Priority	Won't have

LOW FIDELITY PROTOTYPE

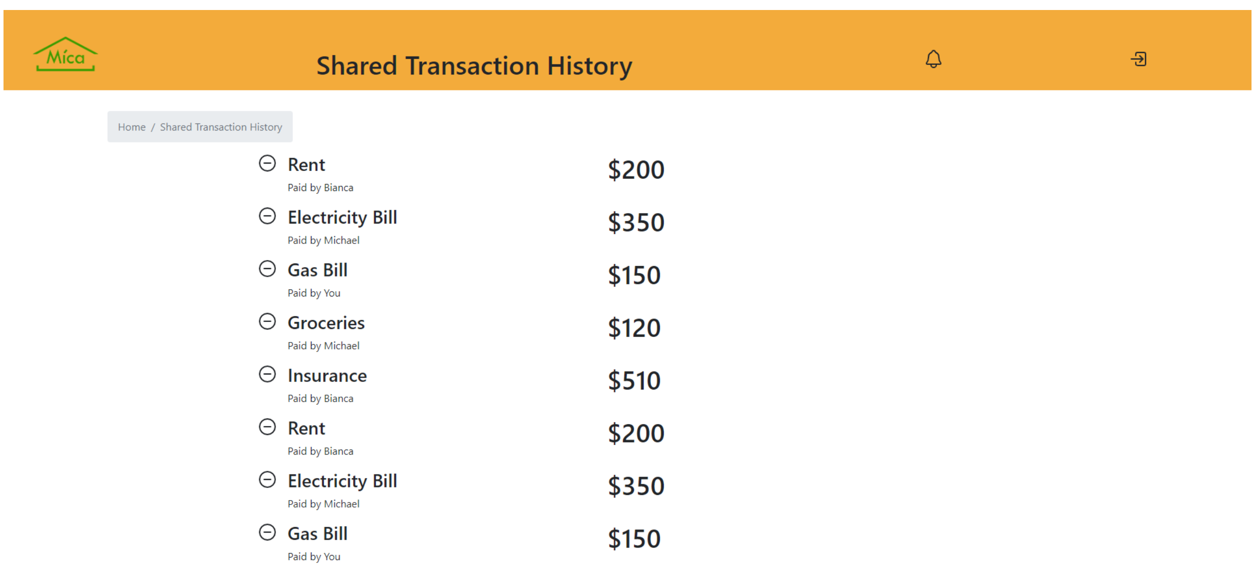



MICA
LOG IN
SIGN UP
LOGIN
Username
Password
SIGN UP
Name
Username
Password
Bank No.
Passport photo:
NOTIFICATIONS
Reminders / Notes
Photo Evidence
Change Breakdown
Accept
Decline
Dispute
WELCOME TO YOUR DASHBOARD
LINK USER
VIEW TRANSACTIONS
VIEW ANALYTICS
USER DETAILS
Name
Username
Bank No
ANALYTICS
TRANSACTION REVIEW
Reminder/notes
Pay by Tomorrow pls!
Photo Evidence
Change Breakdown
Dispute
SHARED TRANSACTION HISTORY
Rent
Paid by Bianca
$42
Electricity bill
Paid by Michael
$210
Gas Bill
$190
Groceries
Paid by Bianca
$50
Bianca owes Michael
MY TRANSACTION HISTORY
Movies
$20
Snacks
$10
Transport
$40
Rent
Gas Bill
Electricity
MANUAL TRANSACTION
Paid by:
Amount
Photo Evidence

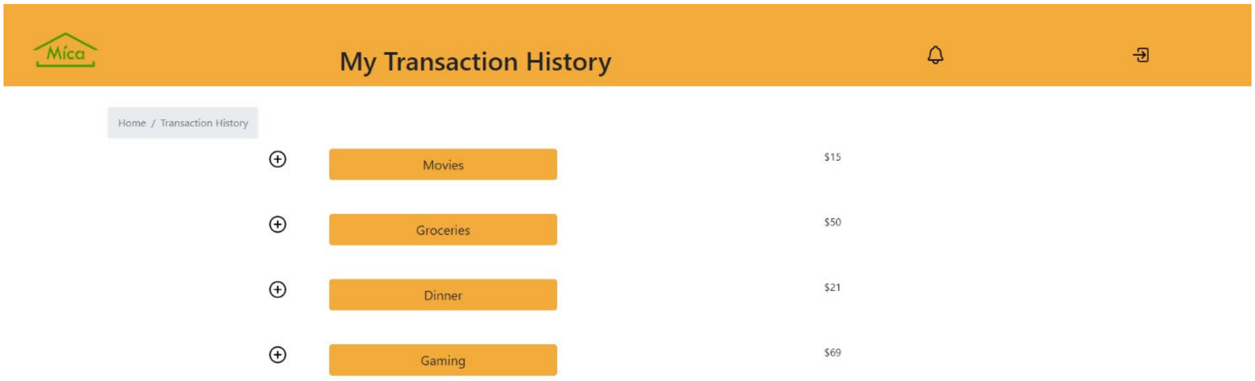
HIGH FIDELITY PROTOTYPE



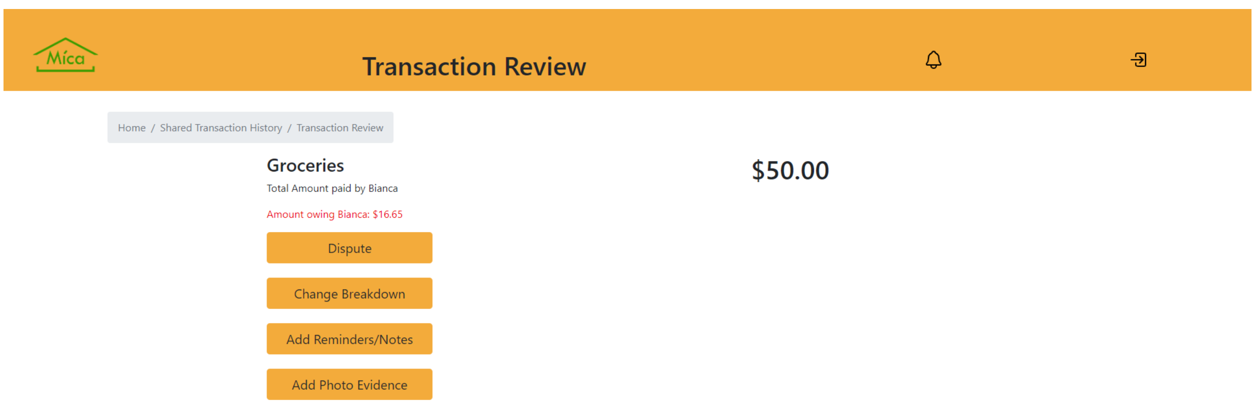
Dashboard layout of application contains view transaction, view analytics and add user buttons.



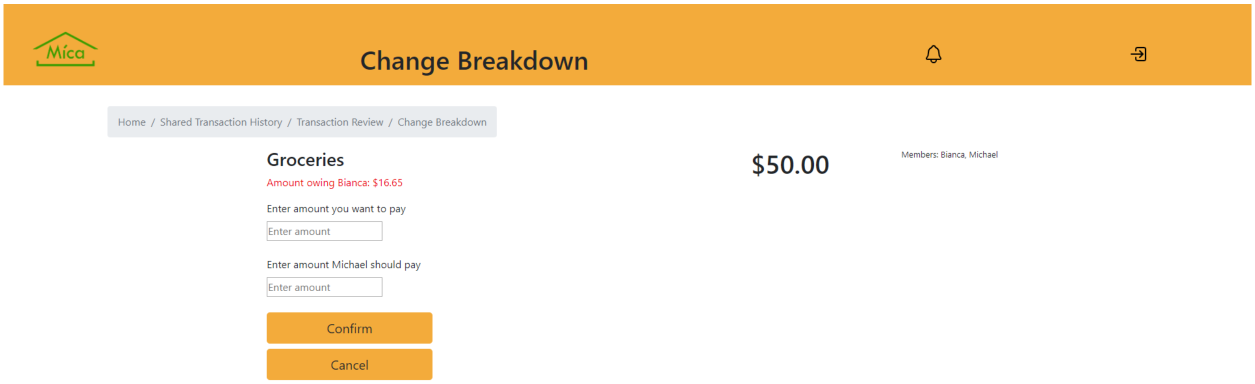
After clicking the view transaction history, users can view their shared transaction history and make changes to each transaction by clicking the option button on the left.



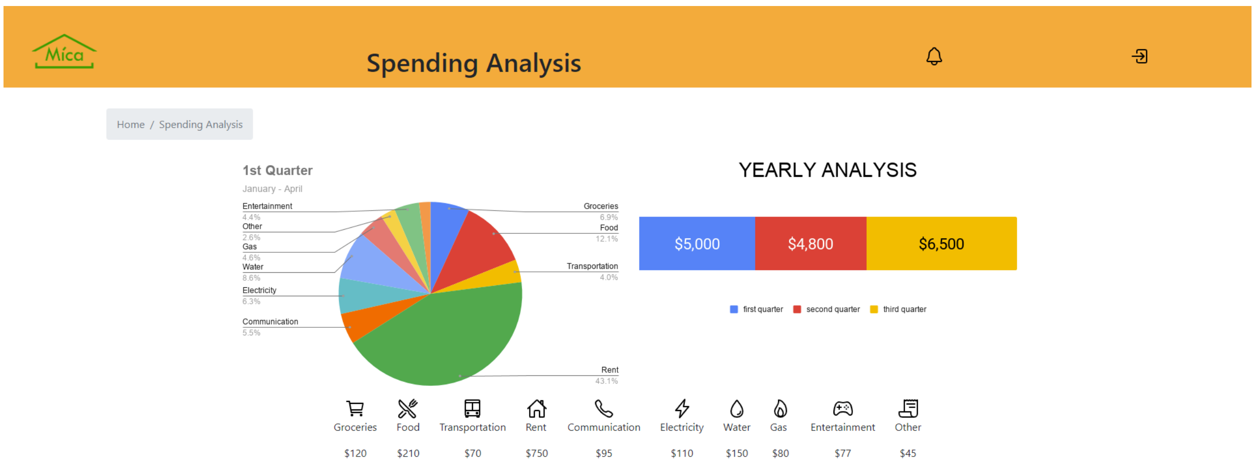
After clicking the view transaction history, users can view their own personal transaction history and add transactions to be shared with other users by clicking the add button.



After clicking shared transaction history, users can click each transaction to see the review and make changes to it with the options available. Any changes that are made would need to be confirmed by the other party.



When changing the breakdown of a shared transaction, users can confirm and make changes to the amount of money they owe or need to pay.



Users can see an overview of a group spending analysis quarterly and amounts for each category.