Money Splitter Application

A Mini Project Report

Submitted By

Prodeep Ghosh 200905384

Prajith Sivakumar 200905247

In partial fulfilment for the award of the degree of
Bachelor's in Technology (B. Tech)
IN
Computer Science & Engineering

MANIPAL INSTITUTE OF TECHNOLOGY
MANIPAL
A Constituent Institution of Manipal University

Department of Computer Science & Engineering

Department of Computer Science & Engineering

BONAFIDE CERTIFICATE

Certified that this project report "**Money Splitter "**
is the bonafide work of:

Prodeep Ghosh 200905384
Prajith Sivakumar 200905247

who carried out the mini project work under my supervision.

Dr. Krishnamoorthi Makkithaya
Head of Department, CSE

Radhakrishna Bhat
Supervisor

Submitted to the Viva voce Examination held on

_____

EXAMINER **EXAMINER**

TABLE OF CONTENTS

ABSTRACT

CHAPTER 1: INTRODUCTION

CHAPTER 2: PROBLEM STATEMENT & OBJECTIVES

CHAPTER 3: METHODOLOGY

CHAPTER 4: RESULTS & SNAPSHOTS

CHAPTER 5 & 6: CONCLUSION, LIMITATIONS & FUTURE WORK

CHAPTER 7: REFERENCES

ABSTRACT

This document gives a brief description of how our project was designed and developed . The idea of our project was to create a fully working Money Splitter Application Tool using HTML, CSS, Python and django.

Money Splitter is an easy to use money splitting app where you can keep track of your budgets and calculate how much money you have to give or take from your friends. This app can be very useful during trips and other occassions where calculation of budget and who pays for what is necessary.

INTRODUCTION

Money Splitter Tool is the easiest way to share expenses with friends and family and stop stressing about “who owes who”. Millions of people around the world can use to organize group bills for households, trips, and more.

Splitwise is great for:
- Roommates splitting rent and apartment bills
- Group trips around the world
- Splitting a vacation house for skiing or at the beach
- Weddings and bachelor/bachelorette parties
- Couples sharing relationship costs
- Friends and co-workers who go out to lunch or dinner together frequently
- Loans and IOUS between friends
- And so much more

PROBLEM STATEMENT AND OBJECTIVES

Problem Statement

In a very dynamic and busy world, keeping a track of your expenses and expenditure is not an easy task . Simply remembering the figures or noting them down on a piece of paper is ineffective and time consuming and prone to miscalculations.The creation of a Money Splitting Tool can provide an accessible platform for people of all groups to organize their bills in an effective manner.

Objectives

- Reduce the stress and awkwardness that money places on our most important relationships.
- Design and develop a user-friendly and visually appealing website.
- Create and upload high-quality content and resources.
- Promote the website through social media and online channels.
- Evaluate the effectiveness of the website in engaging with the audience.

METHODOLOGY

Some of the UI features this website contains:

1. Fully Responsive
2. Interactive interface with eye catching images and cards
3. Floating Animations
4. Favicon

Some of the Backend features this website contains:

1. Secure Login with Google.
2. Calculate your own personal budget by adding your incomes and expenses or removing them once added.
3. Create Rooms/Groups and add your friends.

4. Add transction in your room and select all members who are gonna split the amount. This transaction can later be updated easily by the member who generated it.
5. Check who pays how much amount and whom you should pay for which transaction in "My Debts" section.
6. To see your final settlement with a person irrespective of the rooms you are in go to the "Show Final Settlements" in "My Debts" page.
7. Only the receiver can settle the payment so as to ensure the payer cannot settle the amount without paying.

In this project, first we created a project with the name money_splitter and then created an app named splitter and included the app in urls.py of project file. In the urls.py of the app, we created the navigation urls to different pages namely :login,signup,logout,create room,my debts,settle debts,final transaction and many more.

We created the database schema in models.py which had many classes as per our requirement .There is a user class which is unique for a user.Room class has 3 fields

which are name,creator and members for that room.Then we created a transaction class with the fields room,reason,created at ,amount,splitters and payer.Another class named debt was created which had the fields room,transaction,sender,receiver

and amount. At last , we created the final_transaction models which displayed the

overall summary of our payment with the net amount we have to pay or receive from our friends.We can also enter and keep a record of expenses and income and

for that we created personal_income and personal_expense model

classes.Eventually after defining all the classes in models.py, we registered them in

admin.py of our app. Finally we used the command python manage.py migrate to

create actual tables in the database which we can populate later.

Then we cretaed a template folder which had the HTML structures for various pages

and we used the property of extends to use code reusability.Static Folder in the app

directory had all the media images and the css styling scripts to make the website

more appealing.Finally views.py stores all the functions and logic which allows the

user to sign up ,login ,validate it and properly calculate the values of transaction.

We also used HTML and CSS extensively in this project to design and layout the website. Floating animations was also used in sign up page with added animations and cards were attatched in our home page to make the ui more attractive. We utilized various HTML tags and attributes to create the website's structure, and CSS was used to style and position the website elements. Additionally, we used Google’s email hosting service to successfully redirect responses of the form to the desired email ID.

Overall, the combination ofHTML,CSS, andJavaScript enabled us tocreate a functional, interactive, and visually appealing money splitter tool.

CONCLUSION, LIMITATIONS & FUTURE WORK

Conclusion

In conclusion, our money splitter website offers an easy and efficient way to split expenses among friends, family, or colleagues. Whether you're going on a trip, throwing a party, or just want to split the bills evenly, our platform can help you do it quickly and accurately. With our user-friendly interface and customizable options, you can tailor the splitter to your specific needs and preferences.

Limitations

Although this money splitter website has a range of features, there are some limitations that should be noted. First, the website is primarily designed for keeping track of expenses of the user. It does not offer features for other aspects, such as providing means of payment within the website itself. Additionally, The website may not be able to accurately split expenses if there are complex transactions involved.

Future Work

Here are some potential future works that could be considered for a money splitter website.

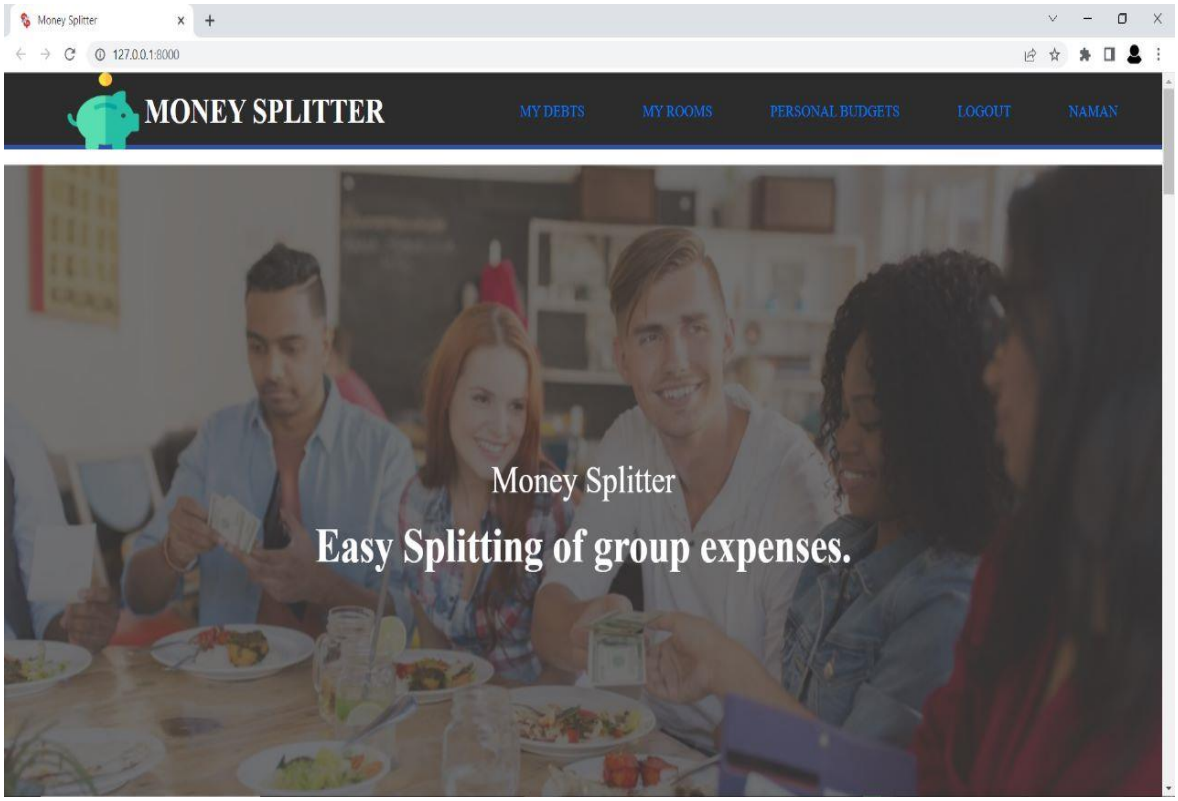
Improved user experience: Continuously improving the user experience of the website by implementing user feedback, conducting usability testing, and making iterative design improvements.

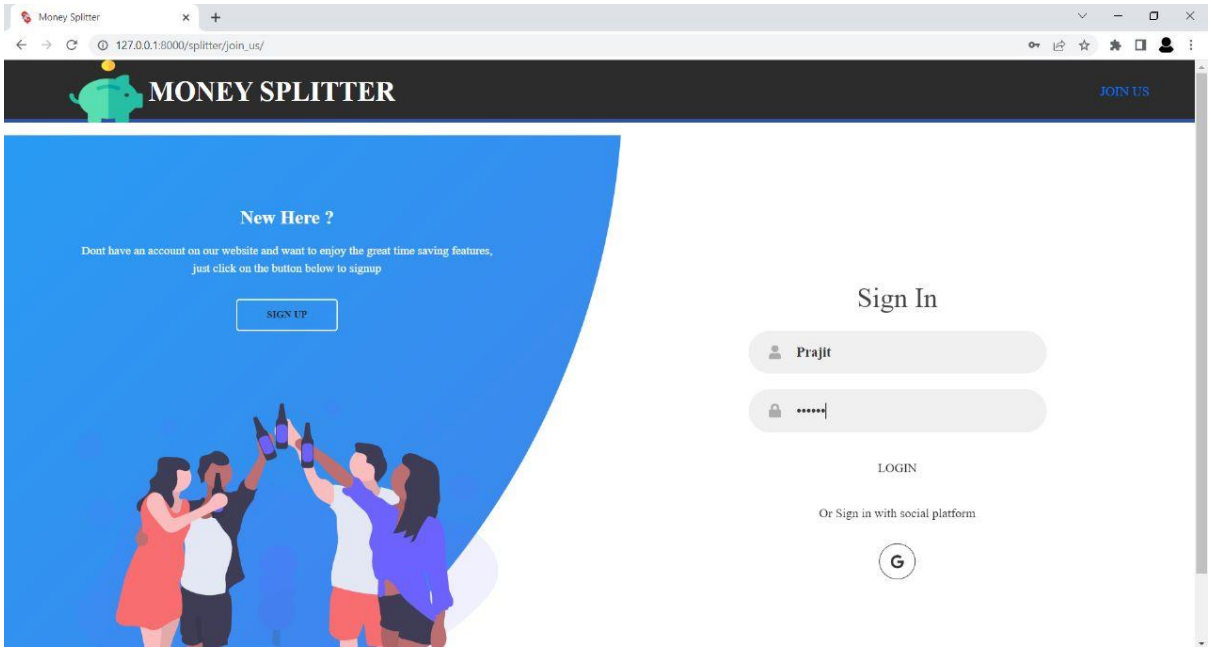
Integration with other services: Integrating the money splitter website with other popular services, such as payment platforms or budgeting tools, to provide users with more comprehensive financial management capabilities.

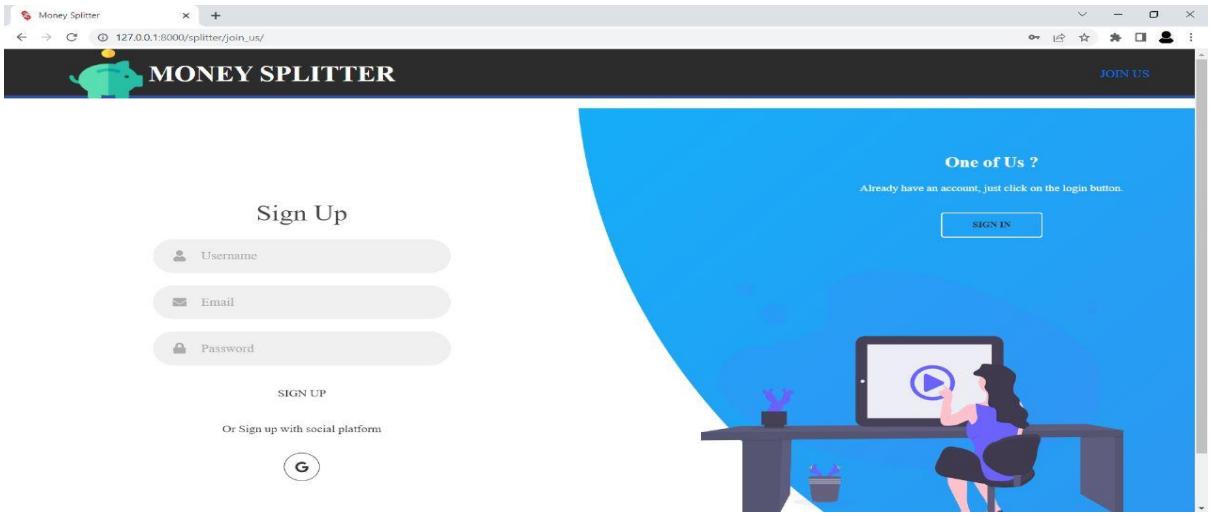
Personalization: Allowing users to customize the website to their individual preferences and needs, such as setting default split ratios, customizing notifications, or creating tags for expenses.

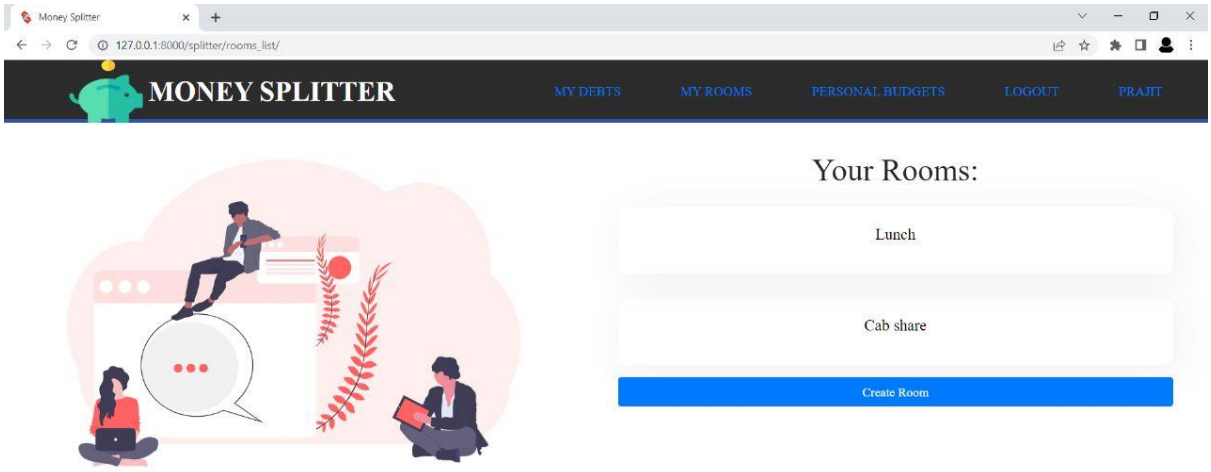
Enhanced security: Continuously improving the website's security measures, such as implementing two-factor authentication or improving data encryption, to ensure the protection of user data

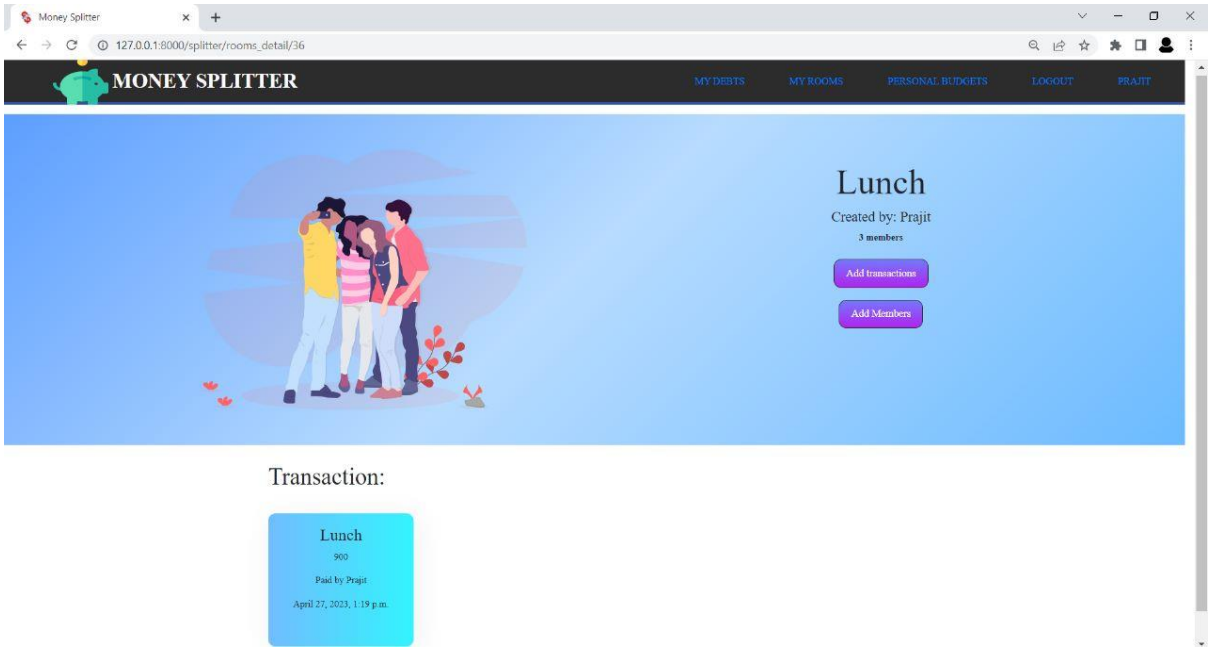
RESULTS & SNAPSHOTS

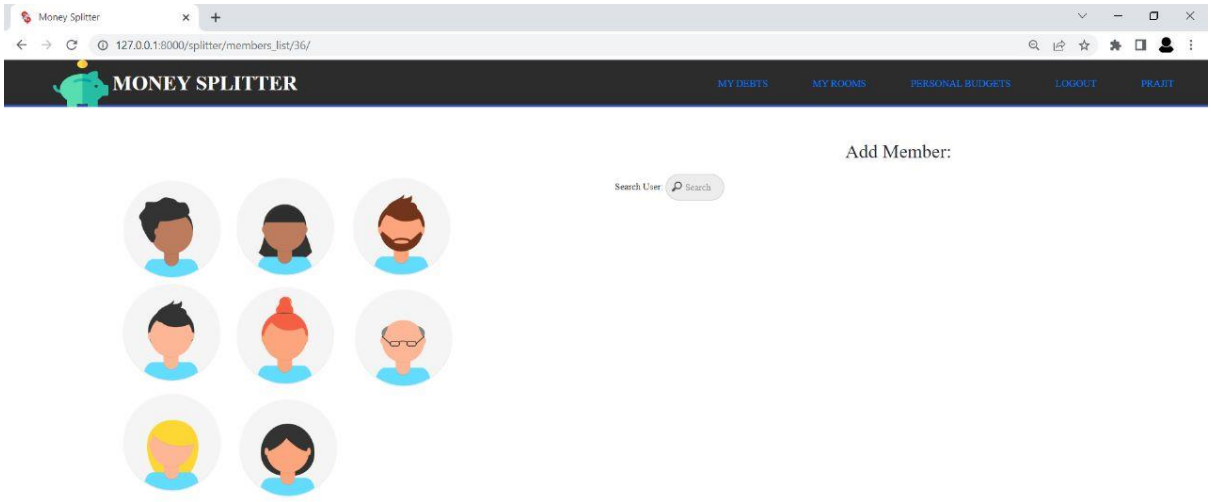


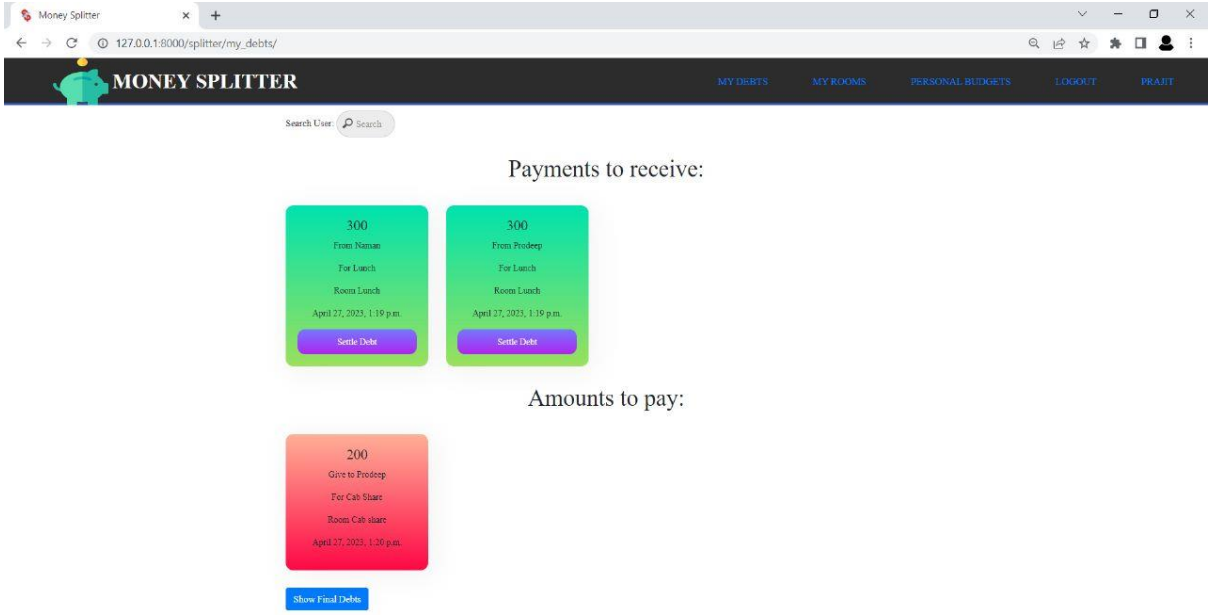

Money Splitter
127.0.0.1:8000/splitter/join_us/
MONEY SPLITTER
JOIN US
New Here ?
Dont have an account on our website and want to enjoy the great time saving features, just click on the button below to signup
SIGN UP
Sign In
Prajit
LOGIN
Or Sign in with social platform

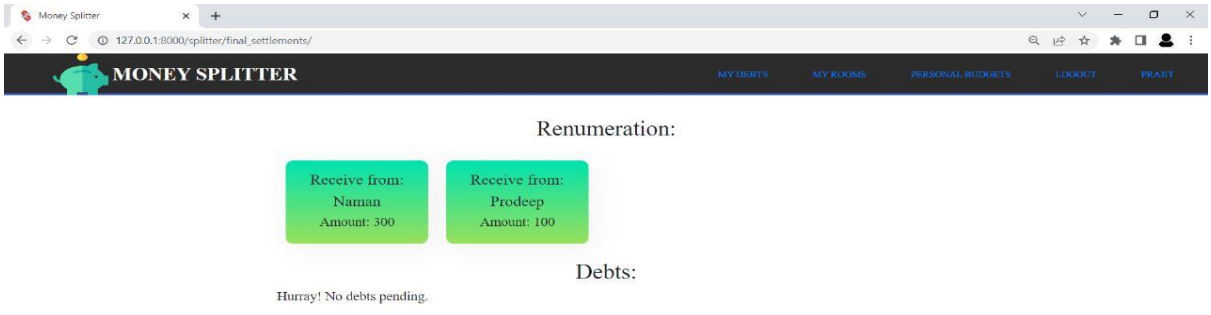

Money Splitter
127.0.0.1:8000/splitter/join_us/
MONEY SPLITTER
JOIN US
Sign Up
Username
Email
Password
SIGN UP
Or Sign up with social platform
One of Us ?
Already have an account, just click on the login button.
SIGN IN


Money Splitter
127.0.0.1:8000/splitter/rooms_list/
MONEY SPLITTER
MY DEBTS
MY ROOMS
PERSONAL BUDGETS
LOGOUT
PRAJIT
Your Rooms:
Lunch
Cab share
Create Room


Money Splitter
127.0.0.1:8000/splitter/rooms_detail/36
MONEY SPLITTER
MY DEBTS
MY ROOMS
PERSONAL BUDGETS
LOGOUT
PRAJIT
Lunch
Created by: Prajit
3 members
Add transactions
Add Members
Transaction:
Lunch
900
Paid by Prajit
April 27, 2023, 1:19 p.m.


Money Splitter
127.0.0.1:8000/splitter/members_list/36/
MONEY SPLITTER
MY DEBTS
MY ROOMS
PERSONAL BUDGETS
LOGOUT
PRAJIT
Add Member:
Search User:
Search


Money Splitter
127.0.0.1:8000/splitter/my_debts/
MONEY SPLITTER
MY DEBTS
MY ROOMS
PERSONAL BUDGETS
LOGOUT
PRAJIT
Search User:
Search
Payments to receive:
300
From Naman
For Lunch
Room Lunch
April 27, 2023, 1:19 p.m.
Settle Debt
300
From Prodeep
For Lunch
Room Lunch
April 27, 2023, 1:19 p.m.
Settle Debt
Amounts to pay:
200
Give to Prodeep
For Cab Share
Room Cab share
April 27, 2023, 1:20 p.m.
Show Final Debts


Money Splitter
127.0.0.1:8000/splitter/final_settlements/
MONEY SPLITTER
MY DEBTS
MY ROOMS
PERSONAL BUDGETS
LOGOUT
PRAJIT
Renumeration:
Receive from:
Naman
Amount: 300
Receive from:
Prodeep
Amount: 100
Debts:
Hurray! No debts pending.