

A Project Report

On

**“ROOM-MATES SPENDING TRACKING
AND PAYMENT SETTLEMENT”**

Submitted for partial fulfillment of the award of the requirements for the award of
the degree of

**BACHELOR OF ENGINEERING
IN
INFORMATION TECHNOLOGY
BY**

SYED SALMAN AHMED (160320737303)

ZAID ALI KHAN (160320737304)

SYED QASIM ALI (160320737306)

Under the guidance of

MS. SHAHEEN BEGUM

Assistant Professor

Department of I.T

DCET, Hyderabad.



**Department of Information Technology
Deccan College of Engineering and Technology
(Affiliated to Osmania University)**

Hyderabad





Deccan College of Engineering & Technology

(A MINORITY INSTITUTION)

(AFFILIATED TO OSMANIA UNIVERSITY)

Estd. by DAR-US -SALAM EDUCATIONAL TRUST
Dar-us-salam, Near Nampally, Hyderabad-500 001.

CERTIFICATE

This is to certify that the project work entitled “R-STAPS - Room-mates Spending Tracking and Payment Settlement” is a bonafide work carried out by Mr. SYED SALMAN AHMED (1603-20-737-303), Mr. ZAID ALI KHAN (1603-20-737-304), Mr. SYED QASIM ALI (1603-20-737-306) in partial fulfilment of the requirements for Mini Project laboratory, VI sem BACHELOR OF ENGINEERING IN INFORMATION TECHNOLOGY by the OSMANIA UNIVERSITY, Hyderabad, under our guidance and supervision.

The results embodied in this report have not been submitted to any other university or institute for the award of any degree or diploma.

Internal Guide

Ms. SHAHEEN BEGUM

Assistant Professor
Dept. of IT,
DCET, Hyderabad.

Co-ordinator

Ms. SHAHEEN BEGUM

Assistant Professor
Dept. of IT,
DCET, Hyderabad.

External Examiner

DECLARATION

This is to certify that the work reported in the present project entitled "**ROOM-MATE SPENDING TRACKING AND PAYMENT SETTLEMENT**" is a record of work done by us in the Department of Information Technology, Deccan College of Engineering and Technology, Osmania University. The reports are based on the project work done entirely by us and not copied from any other source.

SYED SALMAN AHMED →160320737303

ZAID ALI KHAN →160320737304

SYED QASIM ALI →160320737306

ACKNOWLEDGEMENT

I would like to express my sincere gratitude and indebtedness to my project supervisor.

Ms. SHAHEEN BEGUM for his/her valuable suggestions and interest throughout the course of the project.

I am thankful to Head of Department **DR. AYESHA AMEEN** for providing excellent infrastructure and a nice atmosphere for complementing this project.

I convey my heartfelt thanks to the lab staff for allowing me to use the required equipment whenever needed.

Finally, I would like to take this opportunity to thanks my family for their support through the work. I sincerely acknowledge and thanks who gave directly or indirectly their support in this project work.

SYED SALMAN AHMED →160320737303

ZAID ALI KHAN →160320737304

SYED QASIM ALI →160320737306



ACKNOWLEDGEMENT

I would like to express my sincere gratitude and indebtedness to my project supervisor.

Ms. SHAHEEN BEGUM for his/her valuable suggestions and interest throughout the course of the project.

I am thankful to Head of Department **DR. AYESHA AMEEN** for providing excellent infrastructure and a nice atmosphere for complementing this project.

I convey my heartfelt thanks to the lab staff for allowing me to use the required equipment whenever needed.

Finally, I would like to take this opportunity to thanks my family for their support through the work. I sincerely acknowledge and thanks who gave directly or indirectly their support in this project work.

SYED SALMAN AHMED →160320737303

ZAID ALI KHAN →160320737304

SYED QASIM ALI →160320737306



L I S T O F F I G U R E S

FIGURE	NAME	PAGE NO.
Figure 5.2.1	Main Page	28
Figure 5.2.2	Admin Login	29
Figure 5.2.3	Admin Interface	29
Figure 5.2.4	User Login	30
Figure 5.2.5	User Interface	30
Figure 5.2.6	Settle up Interface	31
Figure 5.2.7	Group pay Interface	31
Figure 5.2.8	Group pay slip Interface	32
Figure 5.2.9	Payment Interface	32
Figure 5.2.10	Request Interface	33
Figure 5.2.2	Database	33

A B S T R A C T

R-STAPS - Room-mates Spending Tracking and Payment Settlement

Introduction:

R-STAPS, also known as Room-mates Spending Tracking and Payment Settlement, is a userfriendly web application designed to organize all your expenses in one place. Whether you are sharing expenses during vacations, splitting rent with roommates, or reimbursing someone for lunch, R-STAPS simplifies the process and ensures transparency. The primary focus of RSTAPS is to promote fairness among users, providing mediation advice through its "fairness calculators" based on crowdsourced data.

Features:

1. Kill the Rent:

R-STAPS allows users to set up rent shares with their flat-mates and easily divide the rent among friends and roommates, making the process hassle-free.

2. Share the Fun:

The application facilitates seamless balance settlement for group activities such as trips, movies, dinners, and lunches, ensuring everyone contributes their fair share.

3. Keep Track of Your Money:

R-STAPS maintains a comprehensive database of all transactions, eliminating the need for manual record-keeping, and providing users with a reliable source for financial tracking.

Overall Description:

Users can access their transaction information, send money to other users (provided they also use R-STAPS), and view the list of pay requests received along with the respective amounts. The application offers multiple features like "Settle Up," "Rent Pay," "Others," and "Pending" to cater to various payment scenarios.

User Functions:

- Send and receive money to/from anyone using the application.
- View transaction history and R-STAPS account balance.
- Access account details as per their requirements.

Administrative Functions:

- Add or delete user accounts as required.
- Manage and update the data stored in the SQL database.

Operating Environment:

- Operating System: Windows
- Database: SQL Database
- Platform: PHP

External Interface Requirements:**User Interfaces:**

- Front-end: HTML/CSS
- Back-end: SQL

Hardware Interfaces:

- Windows-based system
- Any browser supporting HTML and CSS

Software Interfaces:

- Operating System: Windows
- Database: SQL Database

TABLE OF CONTENTS

DESCRIPTION	PAGE
Certificate	i
Declaration	ii
Acknowledgements	iii
List of Figures	iv
Abstract	v
CHAPTER I	
INTRODUCTION	1
1.1 Introduction	
1.2 Focus	
CHAPTER II	3
LITERATURE SURVEY	
CHAPTER III	
SYSTEM ANALYSIS	5
3.1 Objectives	
3.2 Problem specification	
3.3 Proposed System	
3.4 Applications	
3.5 Modules and their functionalities	
3.6 Software and Hardware requirements	

CHAPTER IV DESIGN 4.1 Flow chart 4.2 Algorithm 4.3 ER Diagram 4.4 Use-Case Diagram 4.5 Sequence Diagram 4.6 State Diagram	8
CHAPTER V IMPLEMENTATION 5.1 Partial code 5.2 Screen shots	14
CHAPTER VI CONCLUSION AND FUTURE ENHANCEMENT 6.1 Conclusion 6.2 Future Enhancement	34
CHAPTER VII REFERENCES	36

CHAPTER I

1.1 Introduction

RSTAPS, or Roommate Spending Tracking and Payment Settlement, is a system designed to help roommates track and manage their shared expenses and settle payments. It provides a convenient way for roommates to keep track of who owes what, simplifying the process of splitting bills and expenses among multiple individuals.

The objective of RSTAPS (Roommate Spending Tracking and Payment Settlement) is to provide roommates with a convenient and efficient system for tracking shared expenses, managing individual balances, and facilitating payment settlements. RSTAPS aims to eliminate the complexities and conflicts associated with managing finances among roommates, promoting transparency, accuracy, and timely payment settlements.

RSTAPS is a comprehensive system designed to streamline the process of managing shared expenses and settling payments among roommates. It offers a range of features and functionalities to simplify financial management within a shared living arrangement.

1.2 Focus

Most people want to be fair to each other, but sometimes they forget, or can't decide on what fair is. In addition to helping people honour their debts, we provide mediation advice about fairness issues through our "fairness calculators." These calculators turn our crowdsourced data into a neutral fairness opinion about your personal situation.

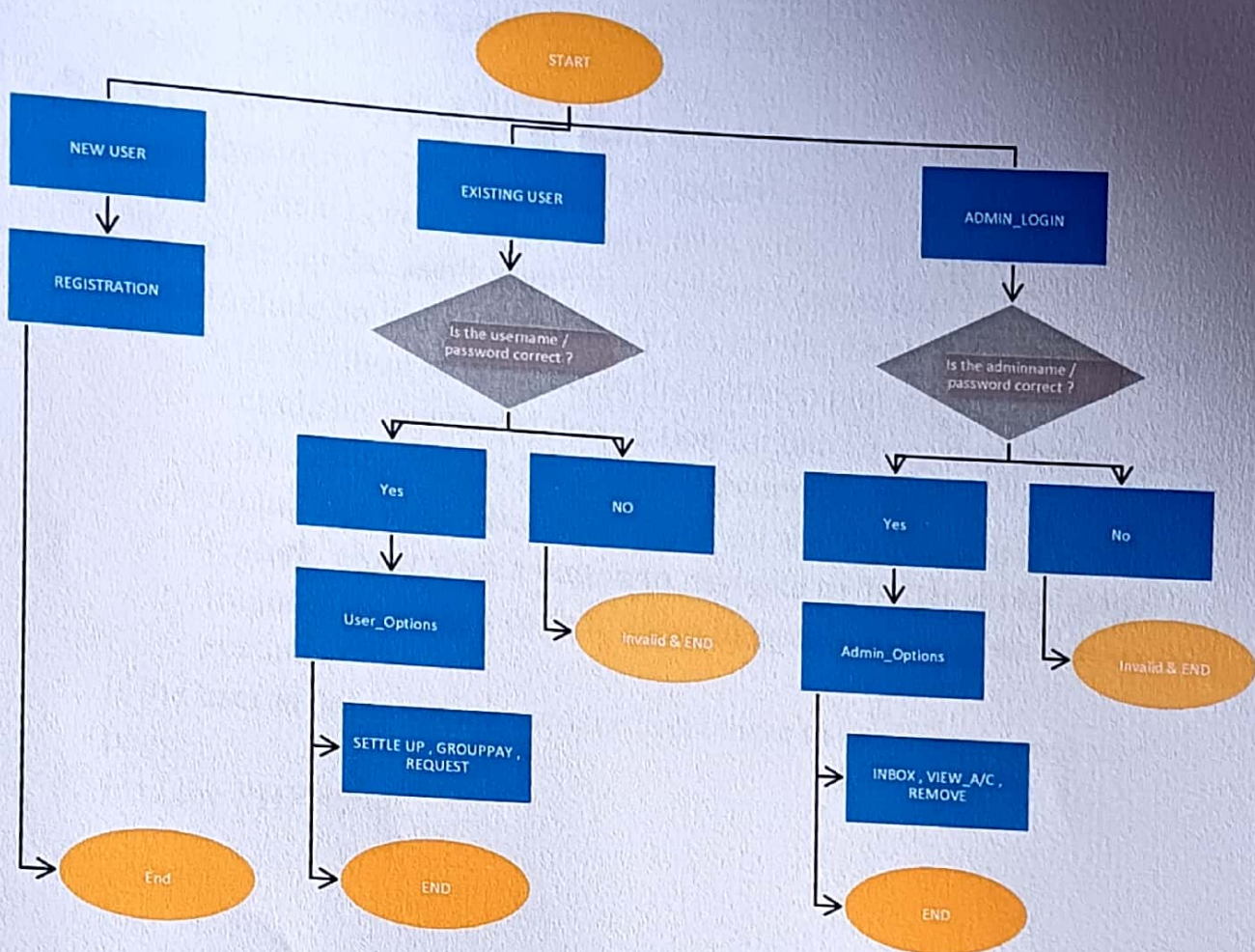
The core features of RSTAPS include:

- **Payment Settlement:** Roommates can settle their debts through RSTAPS by recording payments made to each other. The system updates the balances accordingly, reducing the amount owed between roommates.
- **Expense Tracking:** RSTAPS allows roommates to enter and categorize shared expenses such as rent, utilities, groceries, and other household bills. Each roommate can input their portion of the expense, and the system keeps a record of these transactions.
- **Group Pay Option:** RSTAPS includes a group pay feature that allows roommates to contribute to shared expenses as a group. Instead of individually entering their portions of an expense, roommates can choose to split the cost equally among all members. This feature simplifies the process of splitting bills and reduces the need for individual calculations.
- **Request Option:** RSTAPS includes a request option that allows roommates to request payments from each other for shared expenses. If a roommate has paid for an expense on behalf of the group, they can send a payment request through the system to the other roommates who owe their respective shares. This feature simplifies the process of tracking and collecting payments for shared expenses.
- **Secure and Accessible:** RSTAPS ensures the security of personal financial information and provides access to roommates through a web interface. Roommates can log in to

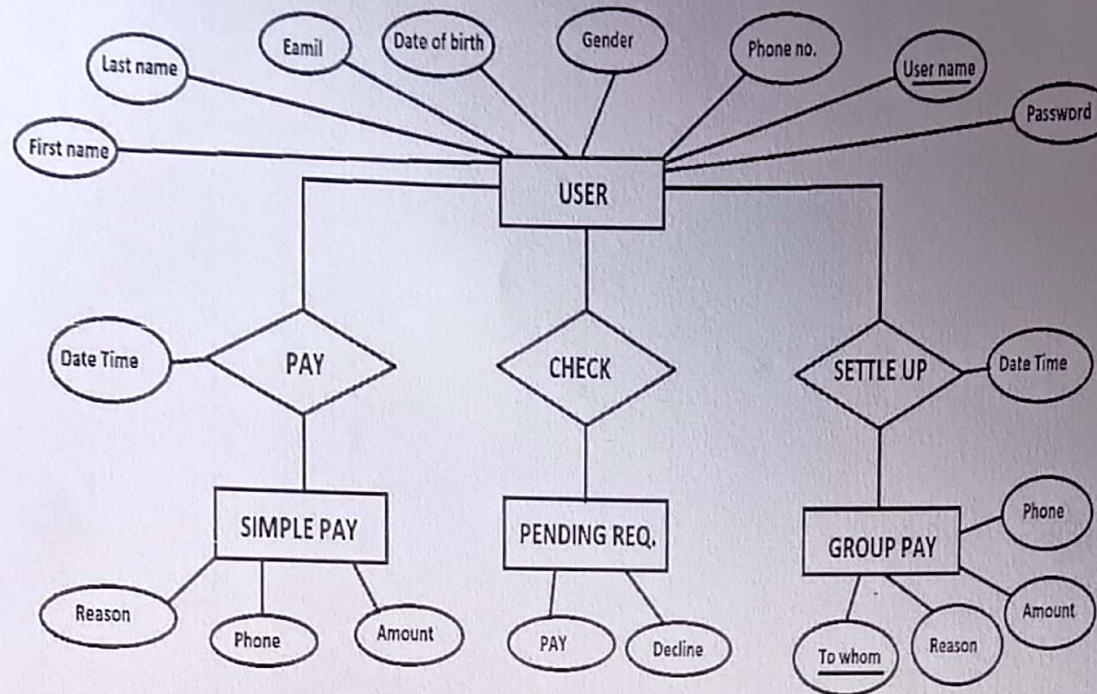
CHAPTER IV

DESIGN

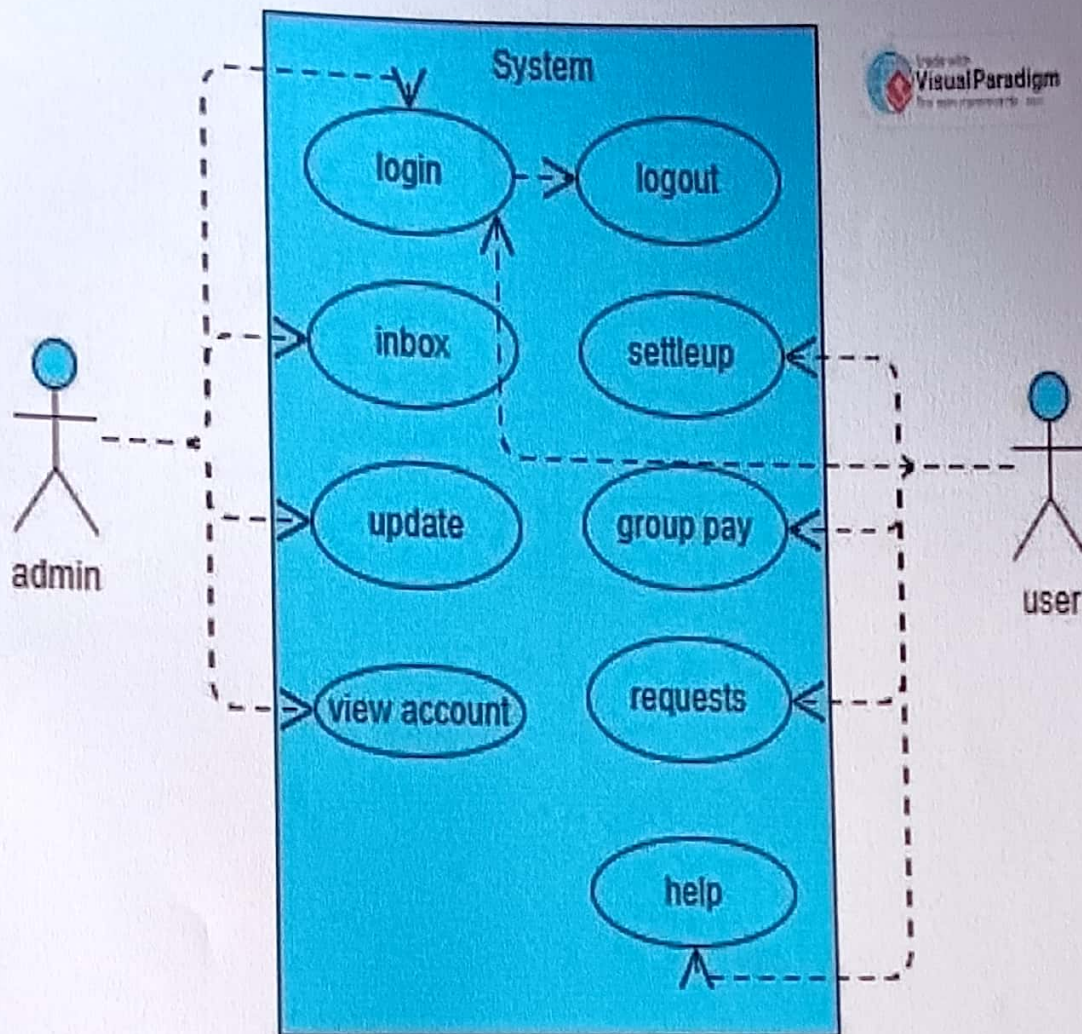
4.1 Flow chart



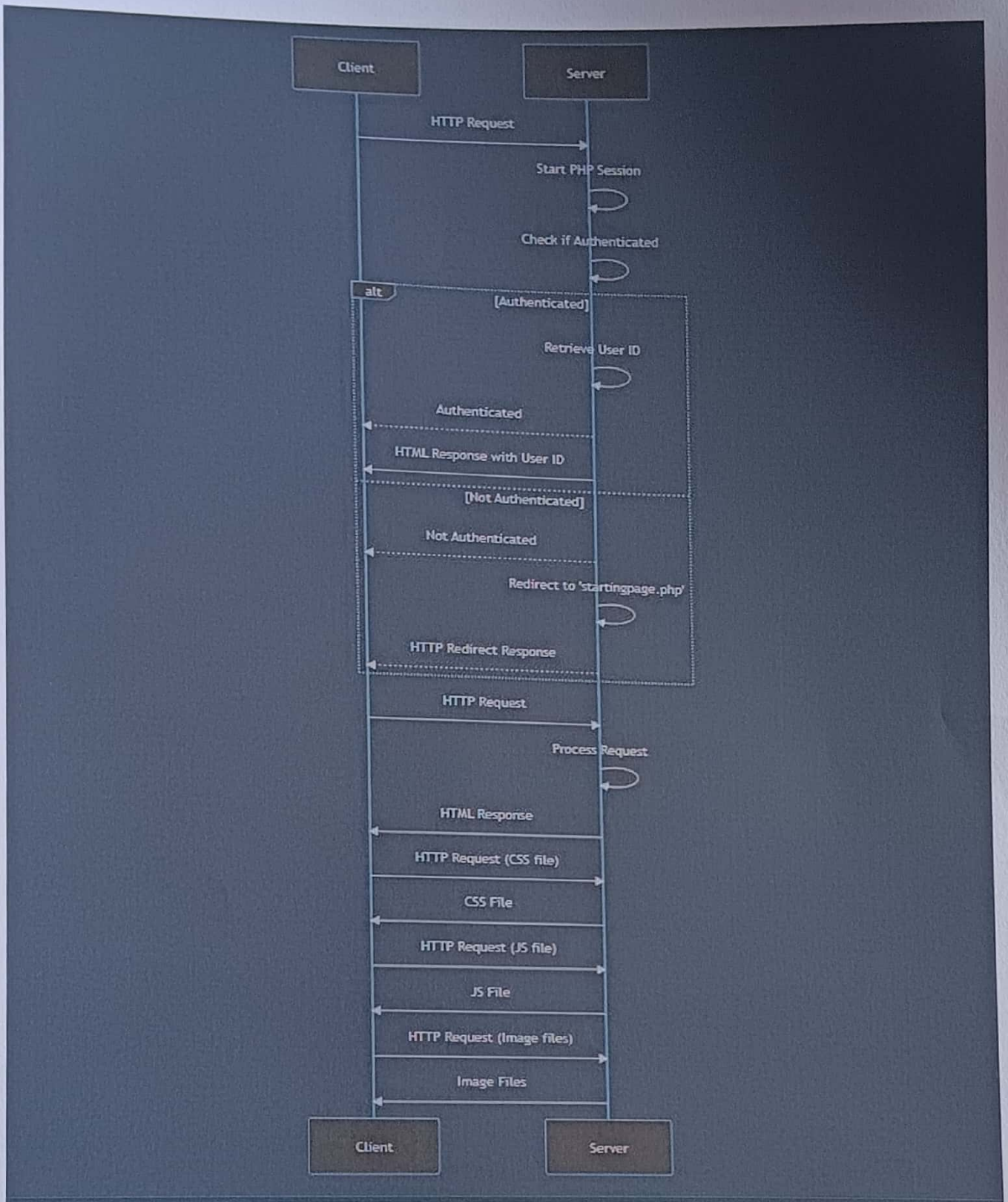
4.3 ER Diagram



4.4 USE CASE DIAGRAM



4.5 Sequence Diagram



CHAPTER V

IMPLEMENTATION

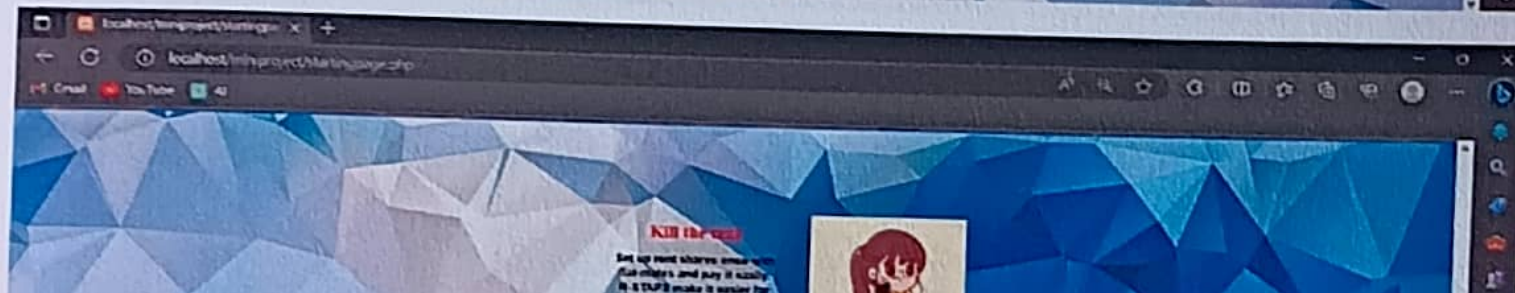
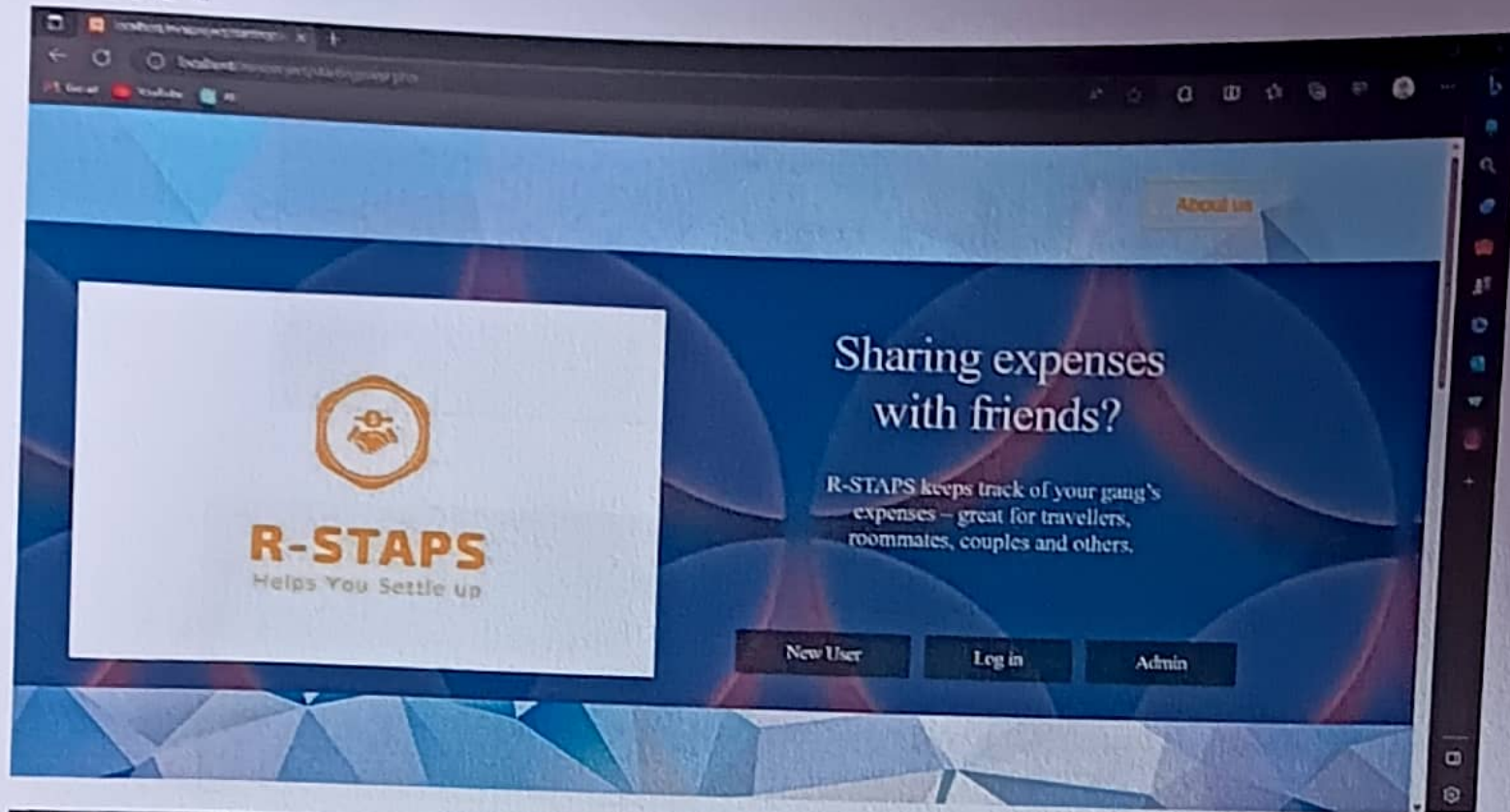
5.1 Partial code

Main page

```
<?php
session_start();
if(isset($_SESSION['IS_AUTHENTICATED']) && $_SESSION['IS_AUTHENTICATED']
== 1){
$user = $_SESSION['USER_ID']; echo
"<html>
<head>
<link rel='stylesheet' media='screen' type='text/css' href='projectstyle.css' />
</head>
<body>
<div class='head'>
<div class='head-in'>
<a class='logo' href='index.html' title=''></a>
<div class='menu-whole'>
<a class='mobile-menu' href='/' title=''></a>
<ul class='menu'>
<li class='web-app'><a href='log_out.php' title=''>Log out</a></li>
<li class='web-app'><a href='help.php' title=''>Help</a></li>
<li class='web-app'><a href='account_info.php' title=''>My account</a></li>
</ul>
</div>
</div>
```


5.2 Screen shots

OUTPUT



CHAPTER VI

CONCLUSION AND FUTURE ENHANCEMENT

6.1 Conclusion:

In conclusion, the project "Room-mates Spending Tracking and Payment Settlement Website" aims to provide a comprehensive and user-friendly platform for roommates to effectively track shared expenses and settle payments in a transparent and efficient manner.

The website allows roommates to input and track their shared expenses, categorize them, and allocate costs among the cohabitants. It facilitates the settlement of payments by offering various payment options. Automated reminders for overdue payments help ensure timely settlement, reducing conflicts and misunderstandings.

By combining expense tracking, payment settlement, collaboration, reporting, and analytics features, the Room-mates Spending Tracking and Payment Settlement Website streamlines the management of shared living expenses, simplifies the settlement process, and promotes harmonious financial relationships among roommates.

6.2 Future Enhancement:

There are potential drawbacks and areas for future improvement that could enhance the project:

1. User Experience:

The website should prioritize a seamless and intuitive user experience. Simplifying the interface, providing clear instructions, and ensuring smooth navigation can make it more userfriendly for individuals with varying levels of technical expertise.

2. Mobile Optimization:

As more people rely on smartphones for daily tasks, optimizing the website for mobile devices through a responsive design or dedicated mobile application can enhance accessibility and convenience for users on the go.

3. Reporting and Analytics:

The website might generate detailed expense reports, summarizing individual and collective spending patterns, to help roommates analyse their financial habits and make informed decisions.

4. Security and Privacy:

The website would prioritize robust security measures, such as encryption, secure data storage, and user authentication, to protect personal and financial data.

5. Integration and Extensibility:

The project might explore integrations with popular online payment platforms like PayPal, Venmo, or banking APIs to streamline the payment process.

6. Localization and Multi-Language Support:

Providing localization options and multi-language support would allow the website to cater to a broader user base and accommodate roommates from different regions and cultural backgrounds.

7. Notifications and Reminders:

The system sends notifications and reminders to roommates regarding new expenses, settlement due dates, and payment updates. Notifications can be delivered through email, in-app notifications, or SMS.

CHAPTER VII

References

1. **PHP Documentation:** The official PHP website provides comprehensive documentation, including language reference, installation instructions, function references, and user-contributed notes. You can access it at: <https://www.php.net/manual/>
2. **MySQL Documentation:** The official MySQL documentation offers detailed information on the MySQL database management system, including installation, usage, syntax, and configuration. It can be found at: <https://dev.mysql.com/doc/>
3. **CSS Documentation:** Similar to HTML, the MDN also offers a comprehensive CSS guide with detailed explanations of CSS properties, selectors, and examples. You can find it at: <https://developer.mozilla.org/en-US/docs/Web/CSS>
4. **W3Schools:** W3Schools is a popular online platform that offers tutorials and references on various web technologies, including PHP, MySQL, HTML, CSS, and JavaScript. It provides clear explanations and interactive examples. You can find it at: <https://www.w3schools.com/>
5. **Stack Overflow:** Stack Overflow is a question-and-answer community for programming. It has a vast collection of questions and answers related to PHP, MySQL, HTML, CSS, and JavaScript, which can be helpful when you encounter specific issues or need practical examples. You can visit it at: <https://stackoverflow.com/>

