



SL-1 Mini Project Report

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Submitted by

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Abstract

There is a tremendous rise in cashless payments everywhere so it's difficult for retailers or small shop owners to track their total business income through cash and cashless payments added directly into their accounts. It's necessary for them to keep a track as to know if they are making a profit or not, so we decided to design a small application for our college which will keep a record of all transactions made by any person at any particular location(canteen, xerox, library). No, manual book entries will be needed because of this application. Our project will also help the person making cashless payments as it will keep his record of transactions.

Acknowledgement

We are overwhelmed in all humbleness and gratefulness to acknowledge our sincere gratitude to all those who have helped us put our ideas to perfection and have assigned tasks well above the level of simplicity and into something concrete and unique. We wholeheartedly thank **Prof. J. K. Kamble** for having faith in us, and for continually motivating us to do better.

We thank **Dr. A. M. Bagade** for providing us with the opportunity to work on this project, and for his valuable suggestions. With the help of his brilliant guidance and encouragement, we were able to complete our tasks correctly and were up to the mark in all the assigned tasks. During the process, we got a chance to see the stronger side of our technical and non-technical aspects and strengthen our concepts.

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Introduction

1.1 Purpose

- Help students keep track of payments in campus on a daily basis
- Make campus payments cashless
- Help canteen/xerox/library know their money collection
- Save time of students and staff

1.2 Scope

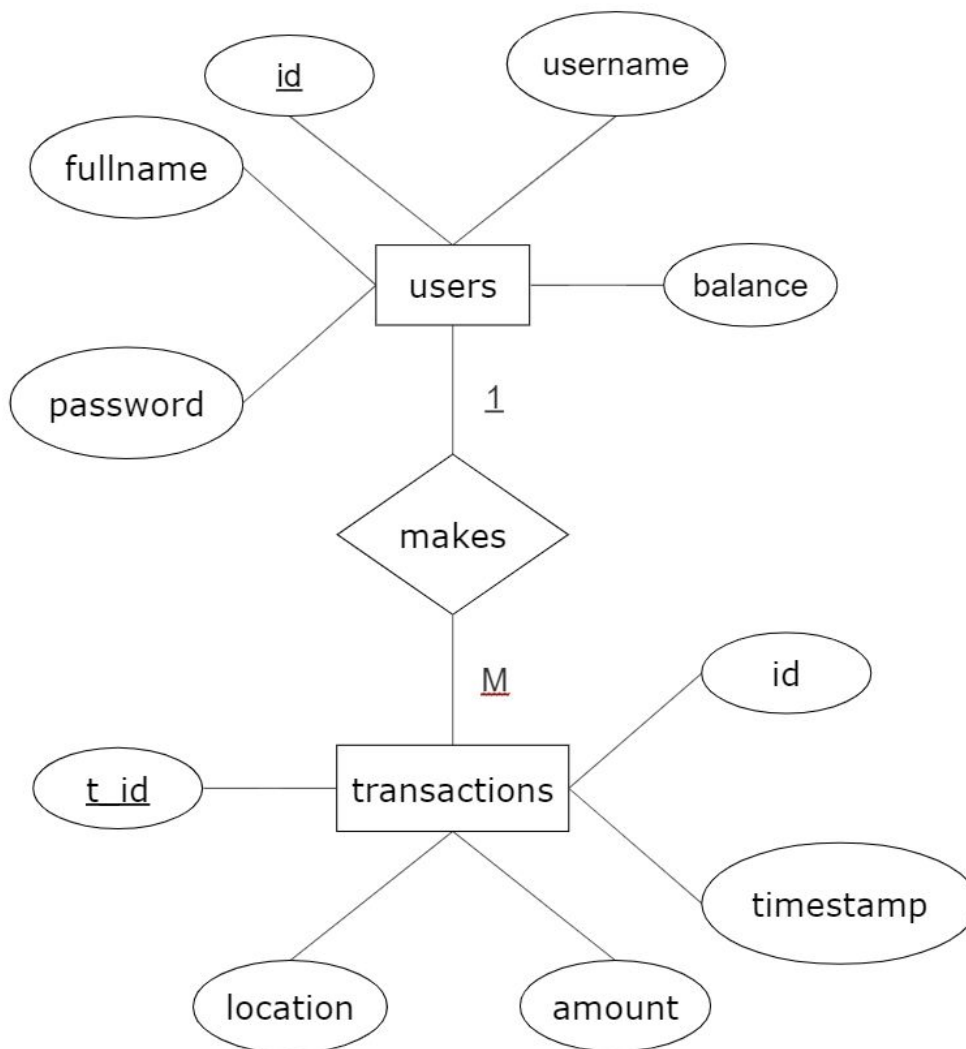
- System for both students and staff
- Efficient record keeping for users
- Easy and fast transaction

1.3 Developers' Responsibilities: An Overview

- Researching, designing, implementing and managing software programs.
- Testing and evaluating the program(s).
- Identifying areas for modification in existing programs and subsequently developing these modifications.
- Writing and implementing efficient code
- Deploying software tools, processes and metrics
- Maintaining and upgrading existing systems

System Design

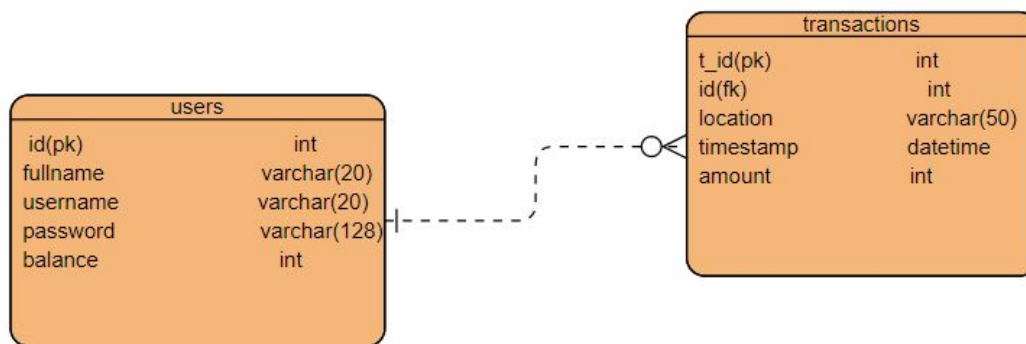
2.1 ER Model



2.2 Schema Description

- users (id, username, fullname, password, balance)
- transactions (t_id, id, amount, location, timestamp)

2.3 Table Description



2.4 User Interface Design

1) Register and Login Page :

E-Wallet

Login Form

Username

Password

Submit

Register Form

Username

Fullname

Password

Confirm Password

Submit

2) Home Page :

E-Wallet

Home About Log out

Name: Mihir Kulkarni

id: 2

username: mihir

Balance: 1000

Transaction Form

Id:

Amount:

Location:

Submit

No.	Id	Amount	Location	Timestamp
10	2	50	canteen	12/4/2020, 11:39:49 PM

3) About Page :

E-Wallet

Home About Log out

Campus E-Wallet

There is a tremendous rise in cashless payments everywhere so it's difficult for retailers or small shop owners to track their total business income through cash and cashless payments added directly into their accounts. It's necessary for them to keep a track as to know if they are making a profit or not, so we decided to design a small application for our college which will keep a record of all transactions made by any person at any particular location(canteen, xerox, library). No, manual book entries will be needed because of this application. Our project will also help the person making cashless payments as it will keep his record of transactions.

Tools Used:-

1) Frontend

- HTML, CSS, Javascript
- Bootstrap
- Handlebars

2) Backend

- NodeJS
- ExpressJS
- MomentJS
- Bcrypt
- Express-session

2) Database

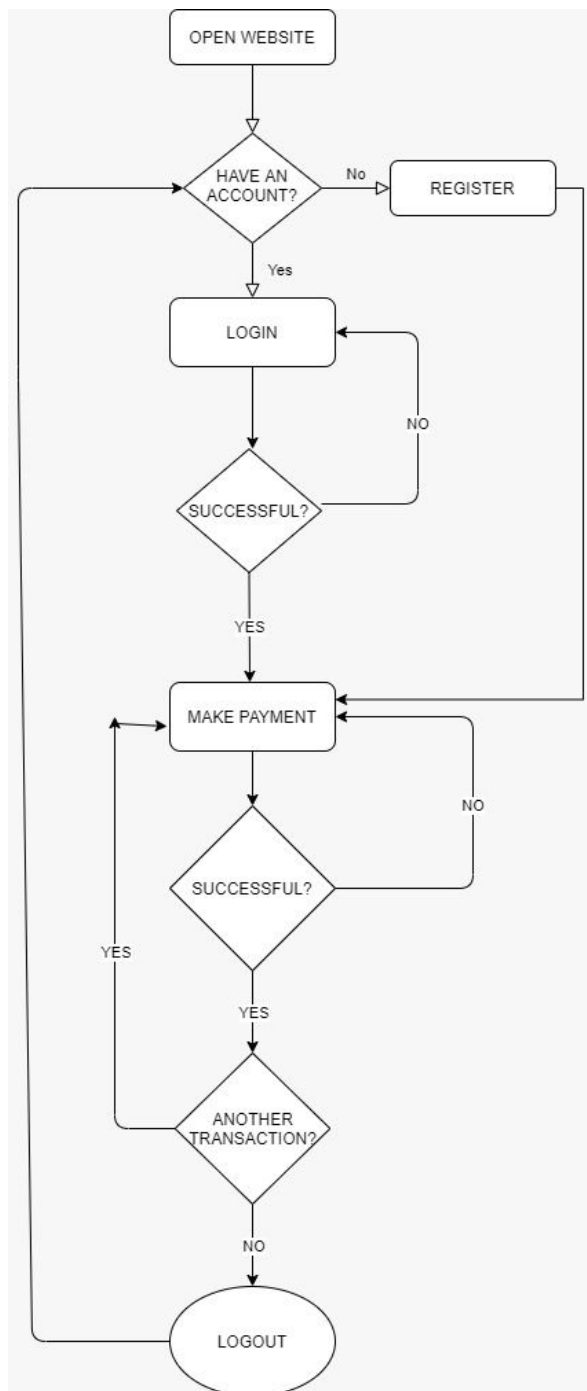
- MySQL Database

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Thank You !

2.5 System Flow Chart / Activity Diagram



System Implementation

3.1 Hardware & Software Platform Description

Hardware Platform Description

- 1 GB RAM
- 1 GB HDD

Software Platform Description

- Hosted via Ubuntu 20.04 LTS
- Up to date browser

3.2 Tools Used

Frontend:

- HTML, CSS, Javascript
- Bootstrap
- Handlebars

Backend:

- NodeJS
- ExpressJS
- MomentJS
- Bcrypt
- Express-session

Database:

- MySQL Database

3.3 System Verification & Testing

System is manually tested and verified on many test cases. Bugs have been removed and error handling is also implemented.

3.4 Future Work / Extension

Future Work:

- Pay by Scanning QR code.
- Transaction tracking of retailers & superadmin.
- Request payment facility for payments.

Extension:

- We can connect the E-wallet to the parent portal of our college so that parents will know about expenses and add money if needed.
- We can implement projects outside the college campus.
- Cross-platform development

Conclusion

We have successfully implemented a Full Stack Web Development mini project, with an aim to help the students and teachers in the campus to keep record of transactions. We learned many new concepts while implementing our mini project and understood the industry standards that are used.

References

1. https://www.w3schools.com/nodejs/nodejs_mysql.asp
2. www.youtube.com
3. <https://nodejs.org/api/>
4. <https://handlebarsjs.com/guide/>