



IUT CafeCache

Cafeteria E-Token & Wallet Management System

SOFTWARE PROJECT LAB-1

Team-12

Members:

Mahmudul Hossain Samir(230042101)

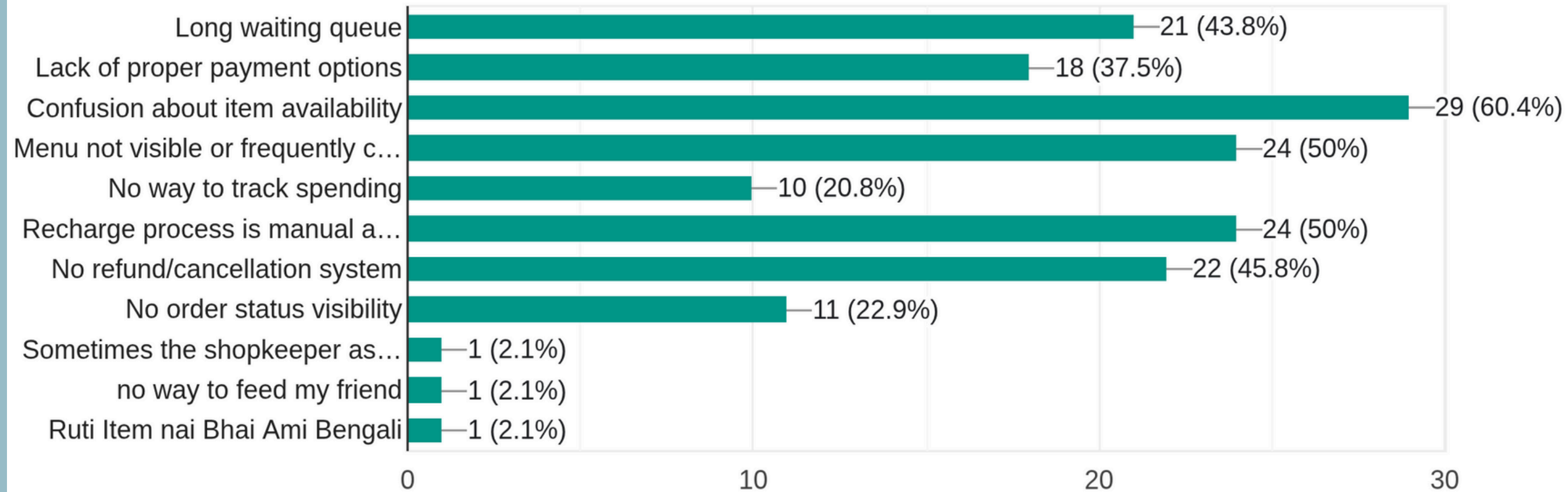
Tamjidur Rahman(230042109)

S.M Raiyan Al Arafat(230042134)

Problem Statement

3. What problems do you usually face in the cafeteria?(Multiple selections allowed)

48 responses



Main Points:

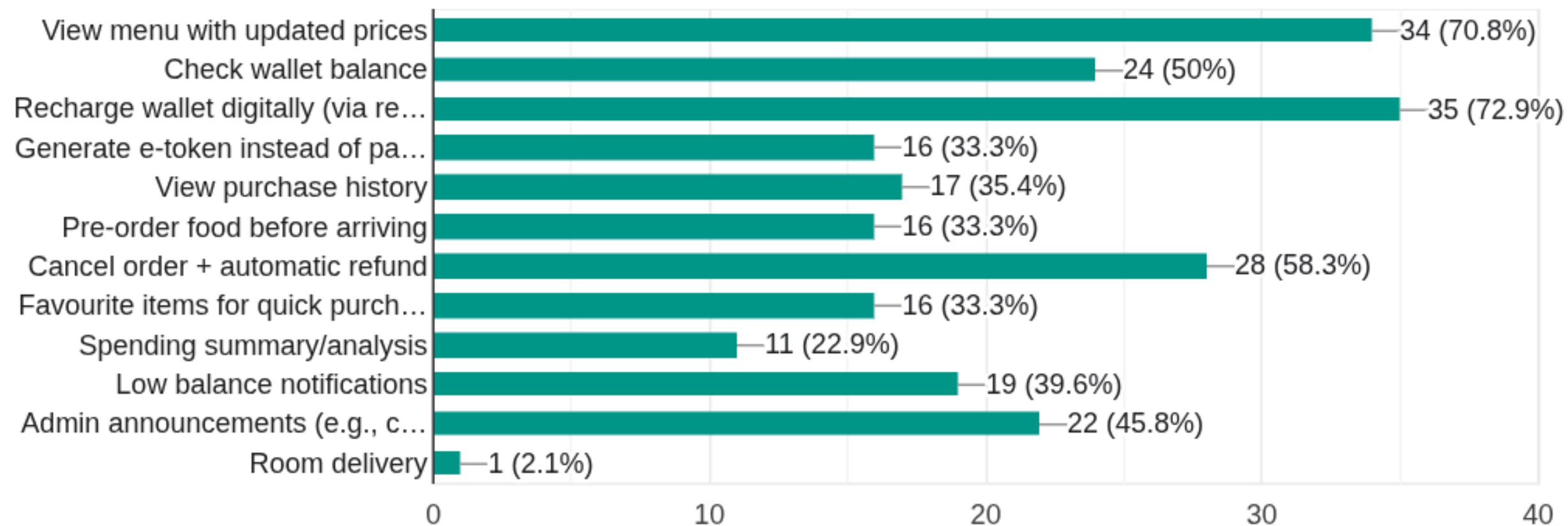
1. Long Queues
2. Unclear Menu
3. Less Transparency
4. Less Payment options

User Requirement Analysis

Evaluating Proposed Features

6. Which features would be most useful to you?

48 responses



**They want Transparent, Time efficient Cafe System !!!
with Flexible Payment Option**



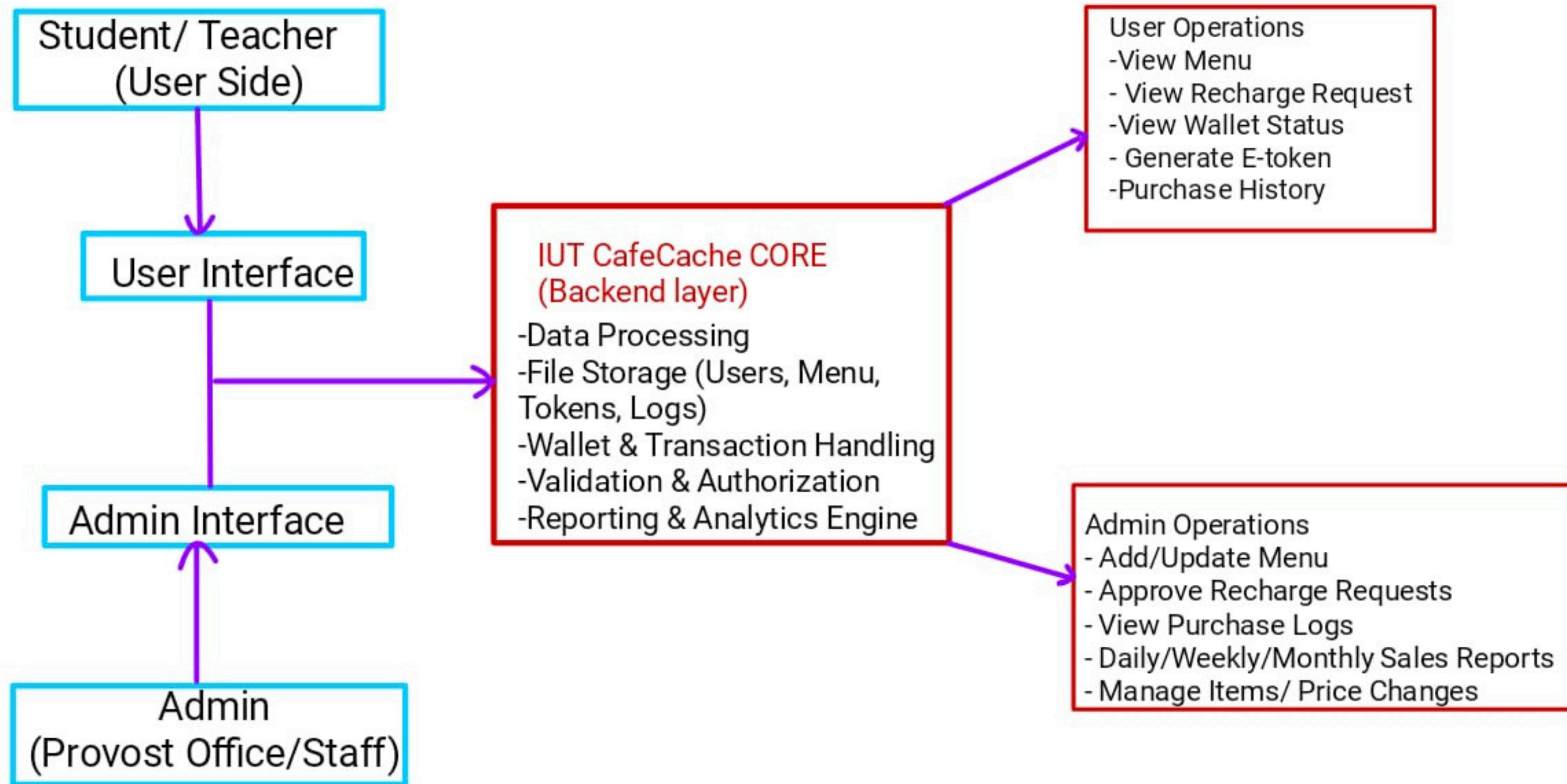
Motivation

User Centric Motivation: Long queues, manual tokens, cash handling issues, and no real-time insights. CaféCache solves these through a fully digital workflow.



Our Motivation: Building this system gives us hands-on experience with understanding a complete backend workflow from scratch.

Introduction to CafeCache



Key Features

User & Role Management Module

- Secure access with login, registration, profiles, and sessions.
- Role-based control with dashboards and permissions.

Menu Management Module

- Menu CRUD: add, edit, delete, and view items with live availability updates.
- Food categories: organize items into breakfast, lunch, and dinner.

Token & Order Management Module

- Token & Orders: generate digital tokens, track status, and view order history.
- Cancellations & Refunds: users can cancel; staff/admin manage refunds.

Key Features

Payment & Billing Module

Wallet with balance, recharge, auto-debit, and transaction history.

FILE-BASED DATABASE SYSTEM

Structured text files, auto-save/load, fully persistent and human-readable.

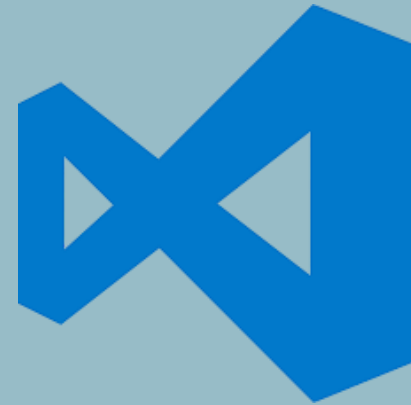
TRANSACTION & REPORTS

Logs, token tracking, analytics, revenue/item reports, and ASCII charts for item popularity, revenue trends, and hourly sales.

Key Technologies



PROGRAMMING LANGUAGE
C++



Development Environment
VS Code



Version Control
Git



TESTING
GOOGLE TEST FRAMEWORK



Github



Documentation
Google Docs

Proposed Timeline

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	
Requirements & Architecture + Class & File Design														
Project Skeleton & Folder Setup + Basic CLI UI														
User & Role Management Module														
Menu Management Module														
Wallet & Payment System (Student Side)														
Wallet Recharge Workflow + Refund / Cancel Token Setup														
Token & Order System														
Transaction & Logging + File-Based Database Integration														
Analytics, Reports, and UI Polishing														

MAYBE SUBJECTED TO CHANGES**

THANK YOU

Feel free to ask questions.