Course : **CSC 2101 – Professional Software Development and Team Project**

Title : **Customer Day 1 (Requirements Gathering)**

Group : **15**

Topic : **Integrated Accounting ERP Systems in Small and Medium Enterprises (SMES)**

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Introduction

Brief overview of project

The accounting system is a Progressive Web Application (PWA) designed to cater to Small and Medium Enterprises (SMEs). The system includes modules for tracking inventory and capturing/organizing receipts, providing users with essential financial tools accessible on both mobile and web-based platforms. The main objectives are to streamline accounting processes, enhance mobility with offline functionality and ensure real-time data synchronization when online. It can also be used to automate recurring tasks and provide insights into business performance.

The purpose of the requirement gathering meeting was to understand the customer's business needs, gather critical functional and non-functional requirements and define the scope of the system. The meeting aimed to clarify key features and expectations ensuring that the final system aligns with the customer's objectives.

Objectives

Description of the requirements

The customer expressed the need for a comprehensive accounting solution with the following modules:

- Track income & expenses
- Send custom invoices & quotes
- Insights & reports
- Capture & organize receipts
- Progress invoicing
- Manage bills & payments
- Track employee time
- Multi-currency support
- Recurring transactions and bills
- Track inventory
- Manage budgets

Key insights and observations

- The system must be intuitive for non-technical users
- Mobile accessibility is crucial for users in remote work settings

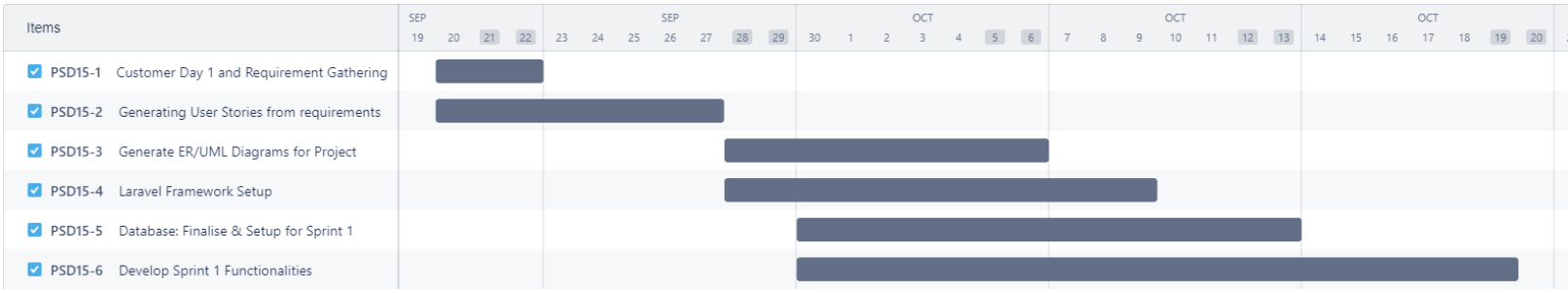
- The program should have some offline features that are persistent

Project Plan

Work Division: Roles and responsibilities

- Farm: Scrum Master
- Stephen: Product Owner
- Lin Feng: Designer
- Virgil: Developer
- Chee Jian: Developer
- Teren: Quality Assurance
- Xieng Hua: Quality Assurance

Project Timeline: Sprint 1



Technical Feasibility

Key technologies

- Backend: Laravel 11 (PHP) for the API development.
- Frontend: Bootstrap/ Inertia
- Database: MySQL for structured data storage
- Cloud: Microsoft Azure Cloud Services (Azure App Service, Azure Database for MySQL)

Potential Challenges

- Offline Syncing: Ensuring that Laravel communicates seamlessly for offline-first behavior and resolving conflicts during data synchronization
- Security: Maintaining strong encryption for data transmission and storage, especially sensitive financial data.
- Receipt capturing: The compatibility across different devices due to camera access limitations, particularly on iOS Safari.

Known Issues and Risk Assessments

Capturing & organizing receipts

- Reliance on third-party libraries for OCR could introduce vulnerabilities.
- Potential performance issues with image processing on lower-end devices.

Mitigations:

- Choose reputable libraries for OCR and regularly update dependencies.
- Conduct performance testing on multiple devices to identify bottlenecks.

Data Security

- Parts of the company's financial data may be exposed to the risk of data breaches.
- Data loss could affect the company operations.

Mitigations:

- Implement user authentication, multifactor authentication.
- Ensure proper data encryption whenever necessary.
- Limiting access of sensitive data to users.

Communication methods and Protocol

- **Team collaboration:** Weekly meetings via Discord or face-to-face meetings to discuss progress, assigned tasks and resolve issues.
- **Customer communication:** Bi-weekly status updates with customers via GitHub repository and email to gather feedback and discuss any adjustments.
- **Advisor interactions:** Bi-weekly updates in GitHub repository and email to gather feedback and assess milestones and technical challenges.

File Handling and Document Control

- **GitHub for Code Management**
  The development team will use GitHub to manage source code with version control, using pull requests and a branching model to handle updates and changes.
- **Microsoft OneDrive for Documentation**
  All project documentation including meeting notes and requirement documents will be stored in Microsoft OneDrive for easy reference and retrieval.
- **Microsoft Azure Services**
  All data will be stored using Microsoft Azure Services to help support the architecture and functionality of the system.

Conclusion

Summary of key findings

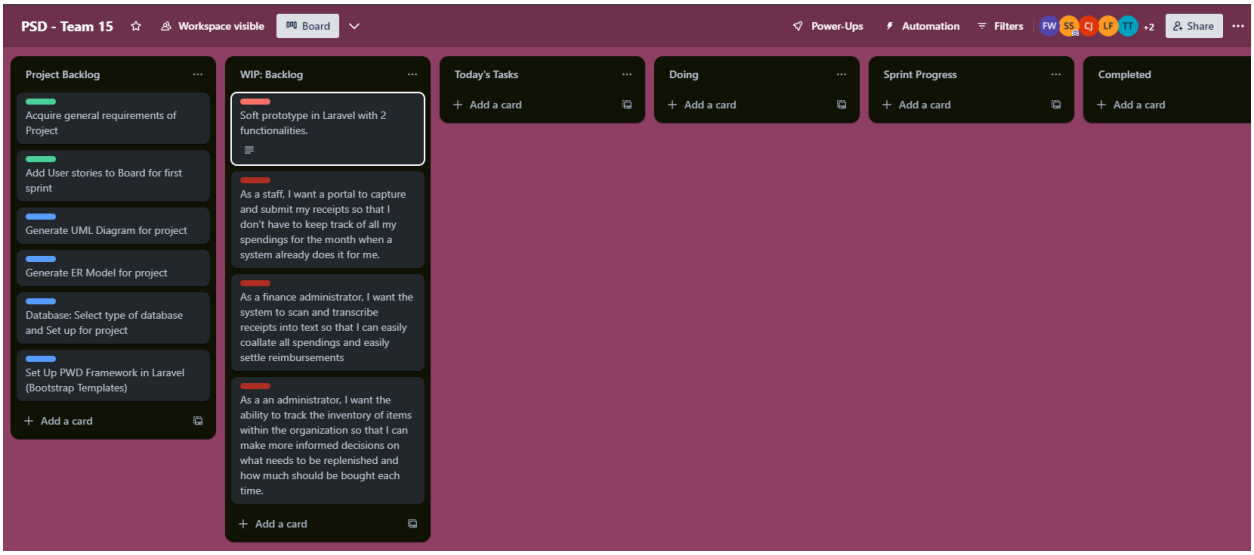
This project will deliver a Progressive Web Application (PWA) using Laravel 11 as the backend framework. This application will enable users to track inventory and organize receipts within a streamlined, responsive system. One of the key features is its ability to support offline functionality and real-time synchronization, ensuring a seamless user experience across a wide range of devices. The development approach will utilize Laravel's robustness to ensure scalability and maintainability.

Next Step

The next step to this project is to finalize the system architecture which involves outlining the structure of both the backend and frontend components, defining database models and determining the necessary services for managing inventory and receipts. Once the architecture and database are in place, the team will proceed with backend API development in Laravel, developing workable portions of our 2 key components in our first sprint. (Inventory Tracking and Capturing & Organizing Receipts)

Appendices

Supporting documents, meeting notes, or any relevant diagrams



Team Trello Board