



BARBER SHOP MANAGEMENT SYSTEM

Project Manager: Emad Abbasi

Team Members: Emad Abbasi, Sarah Yao, Trinity Klein, Jeremiah Jarina, Anthony Perla, Elias
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Barber Shop Management System – Project

Charter

CIS 4375 – Capstone Team | Spring 2025

Project Manager: Emad Abbasi

Team Members: Emad Abbasi, Sarah Yao, Trinity Klein, Jeremiah Jarina, Anthony Perla, Elias Moshood, Isiah Morales

Sponsor: Carlos "El Tigre" Zuniga Cuts, Local Barber (*Contact via Product Owner, Anthony Perla*)

Project History

The Barber Shop Management System project was initiated by the CIS 4375 Capstone Team. Team formation was based on a self-assessment of technical and project management skills. Once assembled, the team members were assigned roles that aligned with their individual strengths and interests.

The project was proposed by Product Owner Anthony Perla, who facilitated a collaboration with a local barber seeking a digital solution to manage appointments and customer information. After evaluating various project ideas, the team collectively selected this opportunity to develop a web-based Barber Shop Management System aimed at improving operational efficiency through digital tools. Following the selection, planning began for software architecture, development sprints, and Agile implementation.

Client Organization

The client is a local barber, Carlos "El Tigre" Zuniga Cuts, based in Houston, Texas. The barber provides grooming services to a consistent clientele and has expressed the need for a digital appointment and customer management system to optimize scheduling and enhance customer satisfaction. The business operates as a small enterprise and is represented by the owner, who also serves as the primary stakeholder. The client expects a secure, scalable, and easy-to-use platform that allows appointment booking, stores customer service history, and generates reports to support business insights. Client contact information is as follows: The business name is Carlos "El Tigre" Zuniga Cuts. It operates as a barber shop and small business located at 8200 Wilcrest Dr Ste 5, Houston, TX 77072. The primary point of contact is Carlos Zuniga, who can be reached by phone on 713-258-0191 or via email at c.zuniga85@yahoo.com.

Key Stakeholders

Several stakeholders are involved in the success of this project. The local barber, serving as the sponsor, will provide requirements, ongoing feedback, and final approval of the system. Anthony Moises Perla, acting as the Product Owner, serves as the liaison between the team and the client and is responsible for gathering and clarifying business needs. Emad Muhammed Abbasi holds the position of Project Manager and Scrum Master, guiding Agile practices, overseeing sprint planning, and maintaining the product backlog.

Trinity L. Klein supports project coordination and manages communication with the sponsor in her role as Assistant Project Manager. Moshood Taiwo Elias serves as the System Architect, designing the technical structure, database, and security protocols. Isaiah D. Morales takes on the responsibility of Lead Developer, ensuring system integration and code quality while also mentoring developers. Jeremiah Sangalang Jarina is focused on front-end development and user interface design, while Sarah J. Yao leads back-end development,

handling data storage and API implementation. The Instructor and Instructional Assistant oversees the capstone course, offering academic guidance and evaluation.

Key stakeholders table:

Stakeholder	Role	Responsibility
Local Barber (Sponsor)	Business Owner	Provides project requirements, feedback, and final approval.
Anthony Moises Perla	Product Owner	Liaison between the team and sponsor, manages business requirements.
Emad Muhammed Abbasi	PM / Scrum Master	Manages Agile workflows, sprint planning, and backlog prioritization.
Trinity L Klein	APM / Product Owner Liaison	Assists PM in backlog management, sponsor communications.
Moshood Taiwo Elias	Architect	Designs system architecture, database structure, and security protocols.
Isaiah D Morales	Lead Developer	Oversees code quality, system integration, and development mentoring.
Jeremiah Sangalang Jarina	Developer #1 (Front-end Focus)	Implements UI/UX, ensures responsive design, front-end development.
Sarah J Yao	Developer #2 (Back-end Focus)	Develops backend APIs, manages data storage, implements authentication.
Instructor / IA	Course Facilitator	Reviews progress, provides guidance, and evaluates deliverables.

Project Purpose and Objectives

This project seeks to replace manual processes with a digital platform that enhances appointment booking and customer relationship management. The team aims to deliver a user-friendly web application that simplifies the scheduling process, securely stores customer information, and provides essential business metrics through a reporting dashboard.

Additionally, the application must support secure user authentication and be accessible on both desktop and mobile devices. The team will follow Agile development practices to ensure timely delivery within the capstone semester timeline.

Business Needs

Currently, the barber uses handwritten records and verbal communication to manage appointments and client details. This approach leads to inconsistencies, inefficiencies, and missed opportunities to engage returning clients. The proposed system will digitalize the scheduling process, provide centralized access to client data, and automate record-keeping. It will also improve service delivery by allowing the barber to track customer preferences and service history. Through data collection and visualization, the barber will gain insights into client frequency and revenue performance.

Project Justification

The proposed solution will streamline the barber's daily operations by reducing scheduling conflicts and minimizing time spent managing appointments manually. It will enhance customer service by allowing the barber to recall past visits and tailor services to

individual preferences. In addition, the reporting functionality will offer visibility into key performance indicators such as appointment trends and peak hours. From the academic standpoint, this project offers a valuable opportunity for the development team to demonstrate practical skills in full-stack development, Agile delivery, and client collaboration.

Project Scope Statement

The scope of the project includes the development of the front-end and back-end systems, a relational database, and user authentication features. It also encompasses implementation of appointment booking features, customer record storage, and a reporting dashboard. The team will use Agile methods, including sprint planning and backlog grooming. However, the current version of the project will not include payment processing integration, advanced analytics features, or post-capstone system maintenance.

High-Level Requirements

The application will provide secure login and role-based access for barbers and staff. Users will be able to schedule, cancel, and reschedule appointments through a user-friendly interface. A centralized database will store customer contact information, service history, and notes. A dashboard will display basic performance metrics related to appointment frequency and business activity. The system will be mobile-responsive and will follow the best practices in data security and encryption.

Key Milestones

The project charter will be finalized and approved by early February 2025. Database design and setup are scheduled for mid-February. By early March, the authentication system will be implemented. Appointment management features will be completed by mid-March, followed by the reporting dashboard in late March. Final testing and sponsor user acceptance testing will be conducted in mid-April. The final project presentation is scheduled for the end of April.

Key Milestones Table:

Milestone	Due Date
Project Charter Approval	Feb 3, 2025
Database Design & Setup	Feb 17, 2025
Authentication System Complete	Mar 2, 2025
Appointment Management Implemented	Mar 16, 2025
Reporting Dashboard Ready	Mar 30, 2025
Final Testing & Sponsor UAT	Apr 13, 2025
Final Capstone Presentation	Apr 28, 2025

Assumptions and Constraints

The team assumes that the client will be available for regular feedback throughout the development process. It is also assumed that team members will have consistent access to tools such as Azure DevOps and GitHub. All work must be completed within the ten-week capstone schedule. Constraints include a fixed team size, limited hosting budget, and adherence to data security best practices.

Success Criteria

Project success will be evaluated based on the deployment of a fully functional appointment scheduling system with all core features. The system must meet the expectations of the sponsor and be validated through user acceptance testing. The application should perform reliably, with minimal downtime or scheduling errors. It must also be ready for presentation in a professional and demonstrable format by the capstone deadline.

Change Control for Payment API Integration

Although payment processing is currently excluded from the project scope, it may be considered for future integration based on client needs. If the sponsor requests this feature, a formal change control process will be initiated. This process will begin with a change request submitted by the sponsor or product owner. The development team will then evaluate the feasibility, including the time and resources required for implementation. Upon review, the project manager, product owner, and sponsor will determine whether to approve the request. If accepted, the scope, timeline, and resource plans will be adjusted accordingly, and the change will be documented in the project backlog. No scope changes will be implemented without completing this formal process.

Authorization and Approvals

This document will be finalized upon the review and approval of the individuals listed below:

Emad Muhammed Abbasi, serving as the Project Manager and Scrum Master

Trinity L. Klein, in the role of Assistant Project Manager

Anthony Moises Perla, acting as the Product Owner

The local barber, representing the project sponsor and primary stakeholder

The course instructor or instructional assistant, serving as the academic evaluator