



BARBER SHOP MANAGEMENT SYSTEM

Project Manager: Emad Abbasi

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



SPRING 2025

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CIS 4375 – Capstone Team | Spring 2025

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

WBS

1. Decide team cadence
 - a. Research Agile team cadence best practices
 - b. Schedule and confirm meeting times with the team
 - c. Document team cadence and share with all members
2. Design team branding
 - a. Brainstorm team name, colors, and branding styles
 - b. Create logo and branding assets
 - c. Finalize and approve branding design
3. Decide PM methodology
 - a. Research Agile methodologies (Scrum, Kanban, Hybrid)
 - b. Discuss and decide on the best methodology for the project
 - c. Document and share the selected methodology
4. Get a sponsor strategy
 - a. Research potential outreach methods for engaging the sponsor

- b. Draft and refine a sponsor outreach message
 - c. Assign a team member to initiate sponsor communication
5. Set up technical infrastructure
- a. Configure Azure DevOps board and assign team roles
 - b. Set up communication channels (Teams)
 - c. Ensure all members have access to necessary tools
6. Get a GitHub repository setup
- a. Create GitHub repository and define repository structure
 - b. Set up branching strategy (main, dev, feature branches)
 - c. Invite team members and test access permissions
7. Document SDLC process
- a. Draft SDLC document and share with the team
 - b. Research and define the Software Development Life Cycle (SDLC) approach
 - c. Finalize and store the document in a shared repository
8. Implement User Authentication
- a. Convert password to hash
 - b. Implement a token-based authentication
 - c. Implement role-based authentication for dashboard (Barber & Admin Role)
9. Implement Role-Based Access Control
- a. Admin role (Employer/Owner) – Full access on dashboard menus, including Appointment menu (Find/Create), Services (Find/Create) menu, Customer (Find/Create) menu, User menu, Payment menu, and Barbers (Find/Create) menu.
 - b. Customer role (Guest) – Restricted access on dashboard, Appointments menu via Website, Payment via Website

- c. Barber role (Employee) – Have access to the dashboard with restriction access like Barbers menu, User menu, and Payment menu.
10. Set Up Database Schema
- a. Design Entity-Relationship Diagram (ERD) for database structure
 - b. Define and create tables (Users, Appointments, Customers, etc.)
 - c. Implement relationships (foreign keys, constraints)
11. Create Appointment Scheduling UI
- a. Develop front-end form for booking appointments
 - b. Implement responsive UI for mobile and desktop
 - c. Integrate UI with backend API for appointment management
12. Develop Appointment CRUD Operations
- a. Create backend API for appointment creation, retrieval, update, and deletion
 - b. Implement appointment validation (e.g., no double booking, valid time slots)
 - c. Connect database with front-end UI for real-time updates
 - d. Test CRUD operations for data consistency and security
13. Customer Profile Management
- a. Develop UI for viewing and updating customer information
 - b. Implement backend logic for storing and retrieving customer data
 - c. Secure customer information with encryption for sensitive fields
 - d. Create customer history tracking for past appointments
14. Appointment Notifications
- a. Implement email notification system for appointment confirmations/cancellations
15. Reporting Dashboard
- a. Design and implement UI for analytics dashboard

- b. Add filters for customized reporting (date range, service type, revenue insights)

16. Conduct User Acceptance Testing (UAT)

- a. Define test scenarios and acceptance criteria based on requirements
- b. Perform UAT with sponsor and key stakeholders
- c. Collect feedback and document issues for improvement
- d. Resolve UAT-reported issues before final deployment

17. Finalize Documentation & Presentation

- a. Complete technical documentation (database schema, API docs)
- b. Prepare user guide for barbers and customers
- c. Create final capstone presentation slides
- d. Conduct a final review with the team before submission