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Overview

This report documents the security improvements and template updates implemented in the course enrollment system, focusing on authentication, authorization, and user interface enhancements.

Changes Implemented
Security Enhancements
1. Password Encryption Strength

- Increased BcryptPasswordEncoder cost factor from default (10) to 12
- Impact: Stronger password hashing with increased computational complexity, improving resistance to brute-force attacks

2. Authentication & Session Management

- Fixed logout functionality to properly clear authentication tokens
- Implemented CSRF (Cross-Site Request Forgery) protection for session management
- Prevented "remember-me" functionality for denied access attempts
- Impact: Enhanced security against unauthorized session persistence and CSRF attacks

3. Access Control Improvements

- Permitted error pages and page icons to all users (unauthenticated access allowed)
- Impact: Better user experience while maintaining security boundaries
  Service & Template Refactoring

4. Registration Service

- Refactored registration service for improved code quality and maintainability

Welcome back

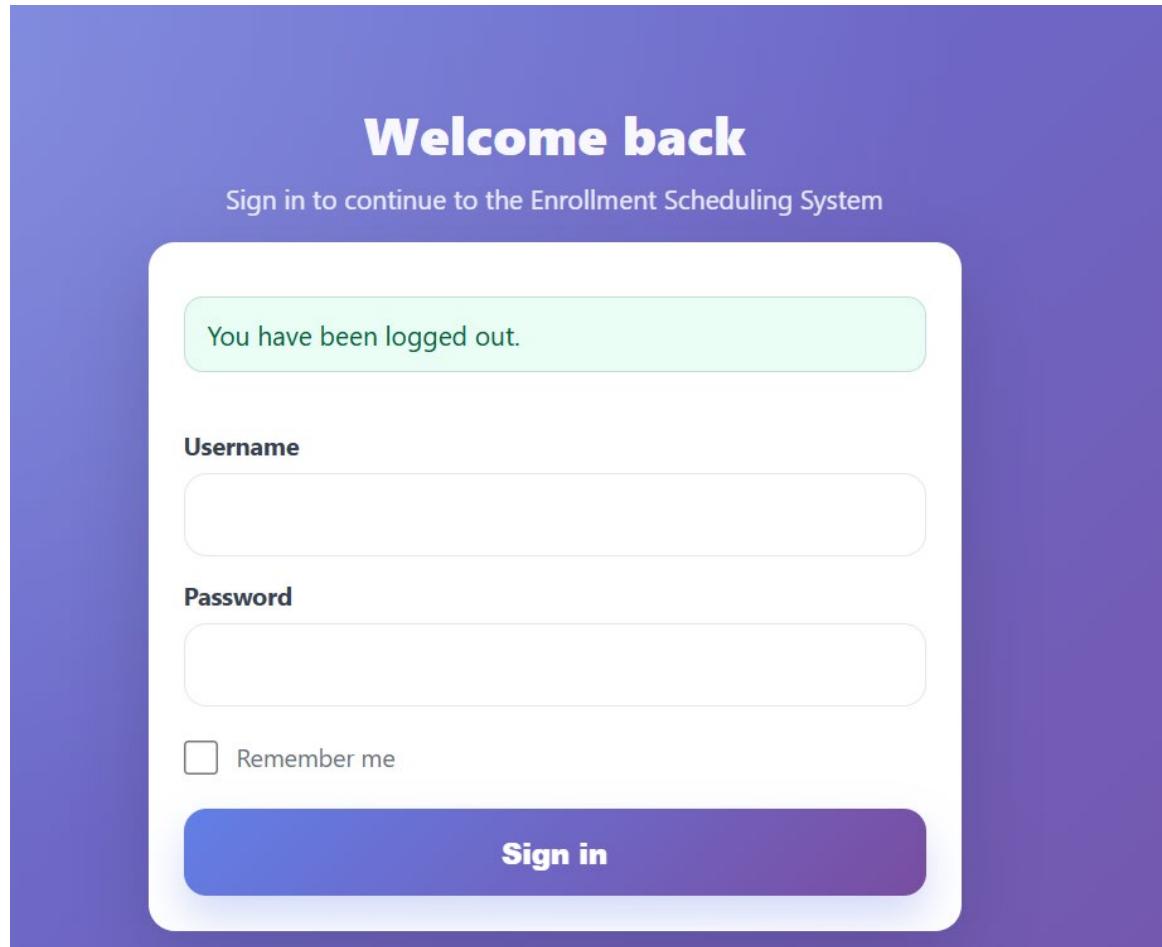Sign in to continue to the Enrollment Scheduling System

Registration successful. Please log in.

Username

Password

☐ Remember me

Sign in

5. Template Updates

- Login page: Restyled for better UX and security messaging
- Register page: Restyled with improved form validation
- Dashboard templates: Added logout option across all dashboard pages
- Impact: Consistent UI/UX and improved user navigation
- Logout in dashboards

Welcome back

Sign in to continue to the Enrollment Scheduling System

Username

Password

☐ Remember me

Sign in

If you are an admin, you can add users via **Register**