

Test Summary

Functional Test Summary for University ERP System

This section summarizes the tests executed on the completed University ERP application, including authentication, role-based dashboards, CRUD operations, grading workflow, CSV export, and maintenance-mode behavior. All tests were executed on the final integrated build using MySQL databases (auth_db and erp_db) with seeded data.

A. Passed Test Cases

Authentication & Security

- Correct login for Admin / Instructor / Student — Passed
- Incorrect password → remaining attempts shown — Passed
- 5 consecutive incorrect attempts → temporary lock message — Passed
- Password hashing using BCrypt — Passed
- Change Password dialog functionality — Passed

Admin Module

- Add new User (Student / Instructor / Admin) — Passed
- Edit Course (code/title/credits) — Passed
- Add Section & Edit Section — Passed
- Maintenance Mode toggle — Passed
- When Maintenance Mode ON → Students & Instructors become read-only — Passed
- Settings save/update (deadlines) — Passed

Instructor Module

- Load "My Sections" correctly — Passed
- Load enrolled students for a section — Passed
- Add/Update scores (Quiz/Midterm/End-sem) — Passed
- Set custom Final Grade Weights — Passed
- Compute Final Grades button — Passed
- Export Section Gradebook to CSV — Passed

- Statistics page showing min/max/average — Passed

Student Module

- Course Catalog loads all courses — Passed
- Register for a section (capacity check included) — Passed
- Drop section (within drop deadline) — Passed
- Timetable auto-generation — Passed
- Grades page shows Quiz/Mid/Midterm/Final grade — Passed
- Export Transcript CSV — Passed

Database Tests

- Auth DB & ERP DB seeded correctly — Passed
- All CRUD operations reflected in DB immediately — Passed
- Foreign Key relations between sections, courses, instructors, students working — Passed

B. Known Issues / Limitations

- Lockout duration not time-based (resets after app restart).
- Statistics page shows empty values when no grades exist.

Overall Result

The University ERP system is fully functional with all major assignment features working, including:

- Two-DB design
- Role-based dashboards
- Maintenance mode
- Dynamic final-grade weighting
- Timetable visualization
- CSV export (Instructor + Student)
- Lockout warning
- CRUD operations for Users, Courses, Sections