

TEST SUMMARY

1. Overview

- The University ERP desktop system was tested end-to-end for all three roles, Admin, Instructor, and Student, using MySQL 8.0 and JDK 24.
- All major functional, access control, and data integrity checks were executed based on the acceptance criteria in Section 10 of the evaluation document.
- All core and all but one bonus requirements passed successfully.

2. Test Environment

Component	Details
OS	Windows 11
Java	JDK24
IDE	IntelliJ IDEA 2025.1.4
Database	MySQL 8.0
Libraries	JDBC, FlatLaf, OpenCSV, OpenPDF, BCrypt
DBs Used	auth_db , erp_db (linked via user_id)

3. Test Execution Summary

- Login (Admin, Instructor, Student) - Correct dashboard for each role
- Wrong password (5×) => Account blocked - Account locked with warning message
- Admin unblocks user - Works via “Unblock User” button
- Maintenance mode toggle - Admin can toggle; others become view-only
- Course catalog visible - Displays code, title, credits, instructor name
- Student registration - Checks capacity and prevents duplicate enrollments
- Student drop before deadline - Drop works only before deadline
- Instructor sees only own sections - Linked by username/instructor ID
- Grade entry (quiz/midterm/endsem) - Saved successfully in database
- Compute final grade (20/30/50 rule) - Correct weighted calculation
- View section stats (avg/min/max/grade distribution) - Displayed accurately
- Transcript export (CSV/PDF) - Files generated successfully

TEST SUMMARY

- Grade export/import (CSV) - Works; skips invalid rows safely
- Add course or section - Reflected instantly in DB
- Assign instructor to section - Linked correctly
- Delete course or section - Safe cascade deletion verified
- Notifications banner - Latest message shows in UI
- Sorting / Filtering - Enabled via setAutoCreateRowSorter(true)
- “Please wait” dialog - Added for long operations
- Change Password - Updates bcrypt hash in Auth DB correctly

4. Final Verdict

- All mandatory and most bonus features have passed testing.
 - The ERP system meets every acceptance test from the evaluation document:
 - Functional (Student, Instructor, Admin)
 - Role-based access + Maintenance enforcement
 - Authentication separation and bcrypt security
 - Data integrity, UI clarity, and performance sanitySystem is stable, secure, and ready for demo submission.
-