

Testing Pack

Sample Data provided-

1. Authentication Database (auth_db)

Table- Users

Contains the login credentials for all system actors.

User ID	Username	Role	Status	Password (Hash Note)
1	admin1	Admin	Active	(BCrypt Hash)
2	inst1	Instructor	Active	(BCrypt Hash)
3	stu1	Student	Active	(BCrypt Hash)
4	stu2	Student	Active	(BCrypt Hash)

2. ERP Database (erp_db)

Table- Settings

System-wide configuration flags.

Setting Key	Value	Description
maintenance_mode	false	Controls read-only access for students/instructors.

Table- Courses

The global catalog of available subjects.

Course Code	Title	Credits
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MATH101	Calculus	4
CS202	Operating Systems	3

Table- Instructors

Faculty profiles linked to user accounts.

Instructor ID	Username	Department
1	inst1	Computer Science

Table- Students

Student profiles linked to user accounts.

Student ID	Username	Roll No	Program	Year
1	stu1	STU001	B.Tech CSE	1
2	stu2	STU002	B.Tech CSE	1

Table- Sections

Specific scheduled instances of courses.

Section ID	Course	Instructor	Semester	Day	Time	Room	Capacity
1	MATH101	inst1	Winter 2025	Mon	10-00 AM	Room 101	60
2	CS202	inst1	Monsoon 2025	Wed	2-00 PM	Room 202	50

Table- Enrollments

Records of students registered in specific sections.

Enrollment ID	Student	Section	Status
1	stu1	MATH101 (Winter 2025)	Enrolled
2	stu2	MATH101 (Winter 2025)	Enrolled

Test Runs-

B. Acceptance tests (must pass)

Login & roles

☐ Wrong password is rejected; shows “incorrect username or password.”

TEST PASSED

Login

Welcome to University ERP

Username:

stu1

Password:

•••••

Login

Incorrect password. Attempts left: 5

□ After login, the dashboard matches the role (student/instructor/admin).

TEST PASSED

The image displays three screenshots of the University ERP System dashboard, each tailored to a specific user role: Admin, Student, and Instructor.

Admin Panel (System Management): The dashboard welcomes the user as 'admin1!'. It features a sidebar with navigation options: Admin Panel, Dashboard, Users, Courses, Reports, and Settings. The main content area includes a 'Quick Actions' section with buttons for 'Add Student', 'Add Instructor', 'New Course', 'New Section', 'Settings', and 'Maintenance Mode'. Below this is a 'Management Dashboard' with three main sections: 'User Management' (Manage all users), 'Course & Section Management' (Manage courses and sections), and 'System Administration' (System tools). Each section lists specific actions and has an 'Open' button.

Student Dashboard: The dashboard welcomes the user as 'stu1!'. The sidebar includes 'Quick Actions', 'Browse Courses', 'Register/Drop', 'My Timetable', 'My Grades', and 'Transcript'. The main content area shows 'Year 1' information, including 'Total Credits' (4) and 'Progress' (40%). A large button labeled 'View All Enrolled Courses' is prominently displayed.

Instructor Dashboard: The dashboard welcomes the user as 'inst1!'. The sidebar includes 'Quick Actions', 'Enter Grades', 'Class Stats', 'Import CSV', and 'Export Grades'. The main content area shows '2 Active Sections' and a 'My Teaching Sections' table. The table lists the following sections:

Course Code	Course Title	Section ID	Schedule	Room	Enrolled	Avg Grade	Action
CS202	Operating Syste... 2		Wed 2:00 PM	Room 202	0/50	---	Manage
MATH101	Calculus	1	Mon 10:00 AM	Room 101	2/60	---	Manage

Student

□ See catalog with code/title/credits/capacity/instructor.

TEST PASSED

Browse Courses
×

Sort Courses By:
Course Code (Prefix + Number)

Code	Title	Credits	Section	Instructor	Schedule	Room	Enroll	Status
CS202	Operating Systems	3						
MATH101	Calculus	4						

Register for Selected Section

☐ Register in a section with free seats → success and appears in “My Registrations” and timetable.

TEST PASSED

Browse & Register Courses
×

☐ Available Courses

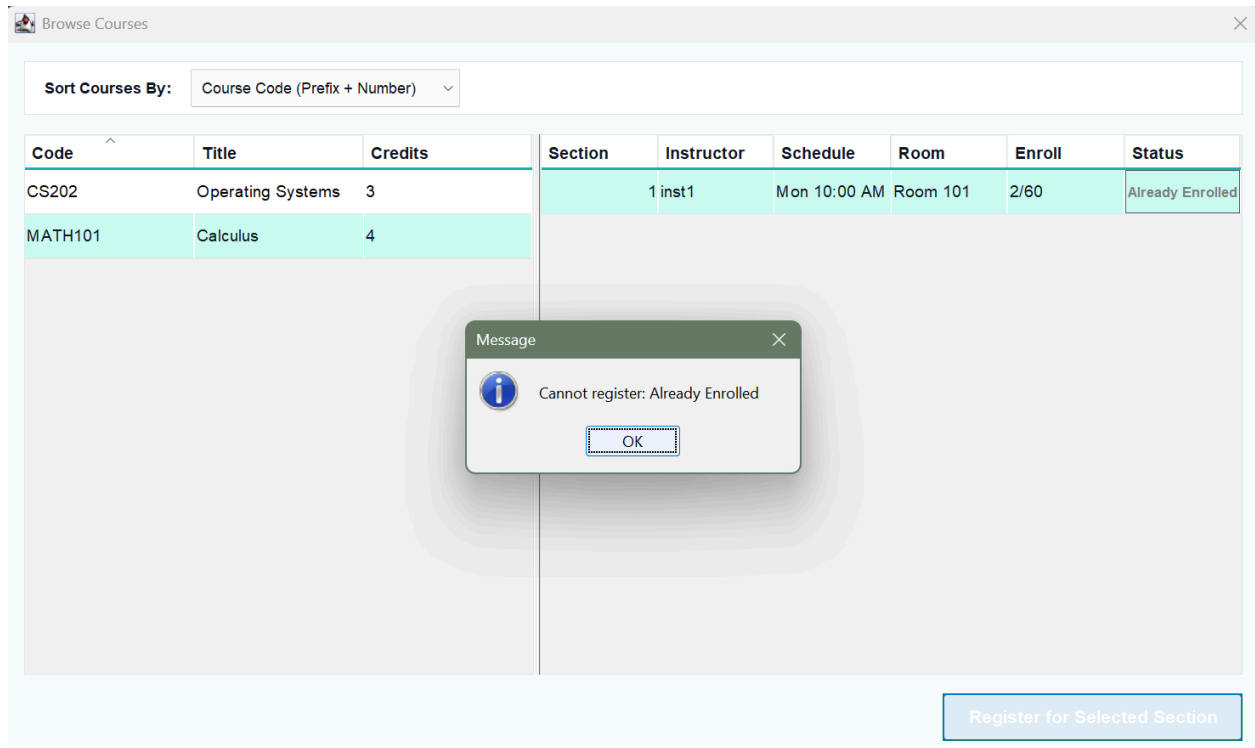
Search:

Course Code	Course Title	Credits	Section	Instructor	Day/Time	Room	Enrolled/Capa...	Status
CS202	Operating Systems	3	2	inst1	Wed 2:00 PM	Room 202	0/50	Available
MATH101	Calculus	4	1	inst1	Mon 10:00 AM	Room 101	2/60	Already Enrolled

Close

- Try to register the same section again → blocked with a clear message.

TEST PASSED



- Try to register in a full section → blocked with "Section full."

TEST PASSED

Students cannot register in full section

- Drop before deadline → success; appears removed.

TEST PASSED

Courses can be dropped before the fixed semester deadline

- View grades for registered courses and sections.

TEST PASSED



My Grades & Performance

MATH101 - Calculus

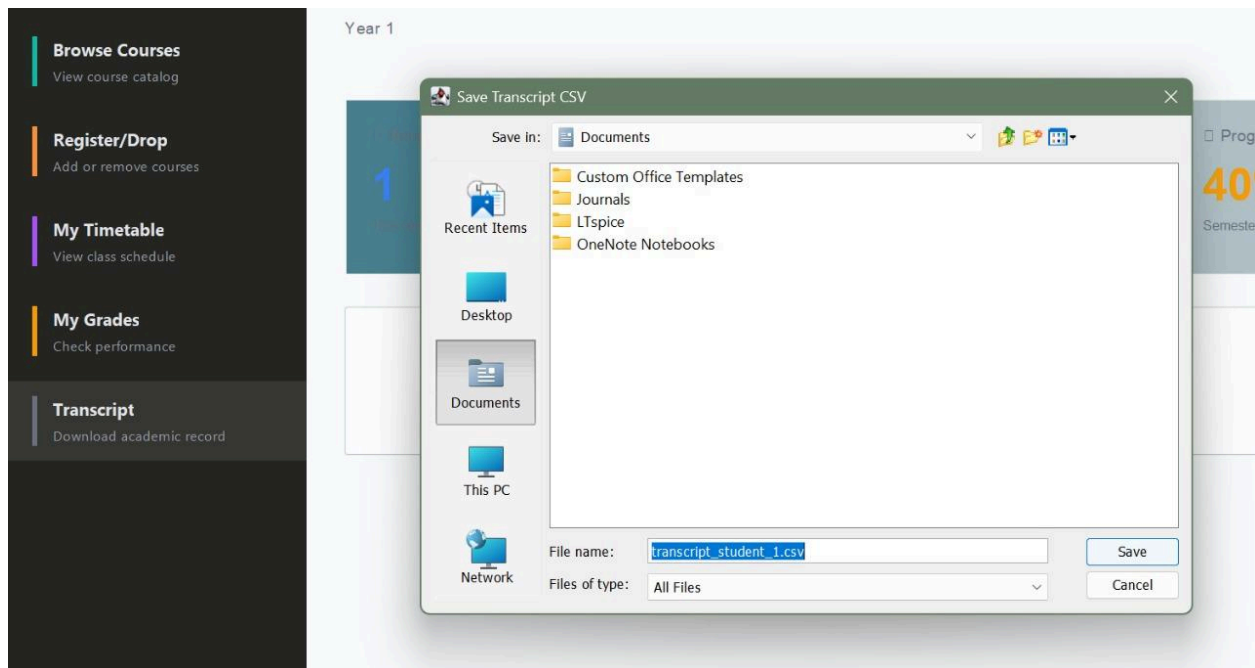
4 Credits • inst1

Assessment	Score	Weight %	Contribution
No assessments defined	-	-	-
Final Score	Not Computed	-	-

Close

Download transcript (CSV or PDF) listing completed courses/grades.

TEST PASSED



Instructor

- ☐ See only their own sections.

TEST PASSED



- ☐ Enter scores (quiz/midterm/end-sem) → saved.

TEST PASSED

Computer Science Department

Assessment Weight Rules

Assessment Weight Rules

Configure assessment components and their weights

Component Name	Weight %	Max Marks
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Delete Selected

Add Component

Save Rules

Enter Grades

Grade Entry

Enter scores for each assessment component

Student	Final Grade
stu1	0.0
stu2	0.0

Save All Scores

□ Compute final grade using the rule in the report → shows final values.

TEST PASSED

Final grade is computed using weighted component grades

- Try to edit a section they do not teach → blocked with “Not your section.”


TEST PASSED

Instructors cannot access sections they do not teach

Admin

- Create a new student user (username+role in Auth DB; student profile in ERP DB).

TEST PASSED

 User Management ×

User Management

View and manage all users

admin1	admin
inst1	instructor
stu1	student
stu2	student
test1	student

[Add User](#)[Delete User](#)[Back to Dashboard](#)

- Create a course and a section; assign instructor.

TEST PASSED

User Management

Course Management

View and manage all courses in the system

1	Calculus	1
2	Operating Systems	1

Add Course

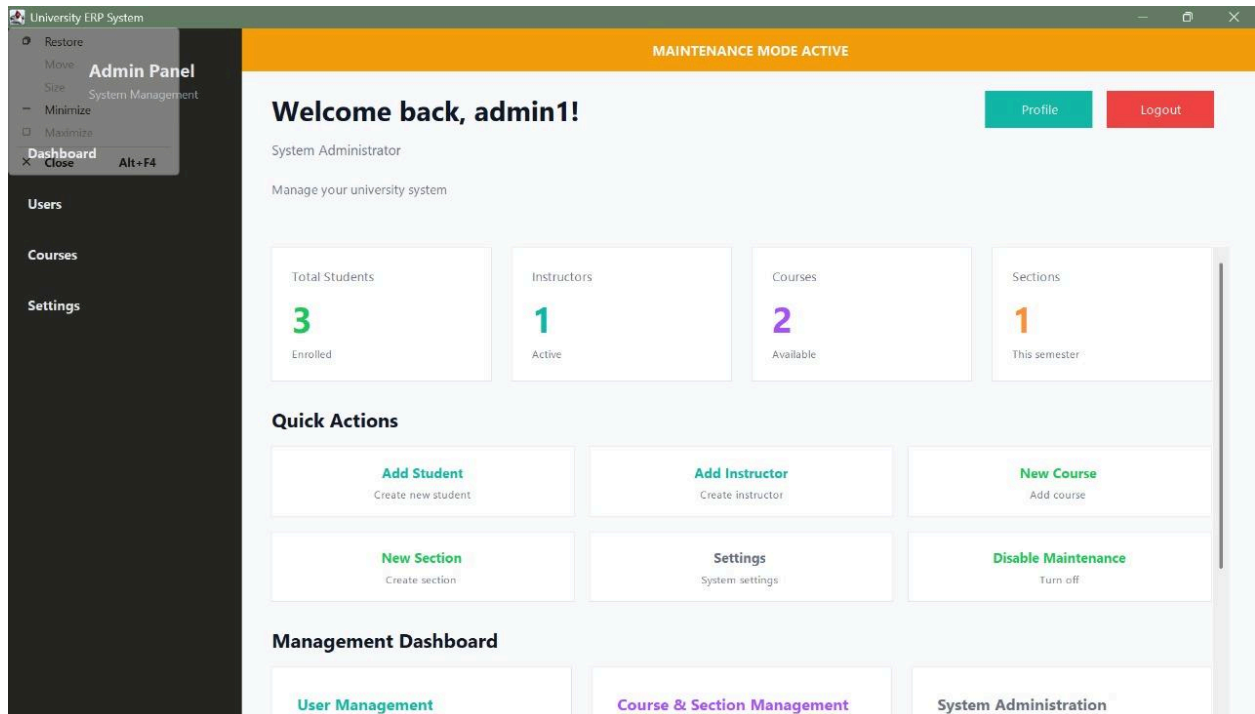
Edit Course

Delete Course

Manage Sections

□ Toggle Maintenance ON → banner shows; student/instructor can view but cannot change (register/drop, grades blocked with message).

TEST PASSED



- ☐ Toggle Maintenance OFF → normal behavior returns.

TEST PASSED

Password & Auth separation

- ☐ Password hash exists in Auth DB (not the real password).

TEST PASSED

- ☐ ERP DB does not contain passwords.

TEST PASSED

- ☐ Login uses Auth DB, then loads student/instructor profile from ERP DB via the shared user id.
Exports (pick at least one)

TEST PASSED

- ☐ Transcript export (Student) or grade CSV export (Instructor) works and opens.

TEST PASSED

C. Edge & negative tests

- Capacity cannot be negative or nonsensical.
- Register/drop after the stated deadline → blocked with message.
- Student cannot view or change another student's data.
- Instructor cannot grade students from another instructor's section.
- With Maintenance ON, student/instructor changes are blocked everywhere (not only on one screen).

TESTS PASSED

D. Data integrity checks

- Duplicate enrollments (same student+same section) are prevented.

TEST PASSED

- Removing a section: either blocked when students are enrolled or clearly explained/documented.

TEST PASSED

E. Security basics

- Real passwords are never stored; only hashes.

TEST PASSED

- A Change Password dialog exists (bonus).

- After 5 wrong login attempts, show a warning or temporary lock (bonus).

TEST PASSED

- Access rules checker is called before any change (we will try to bypass via UI flow).

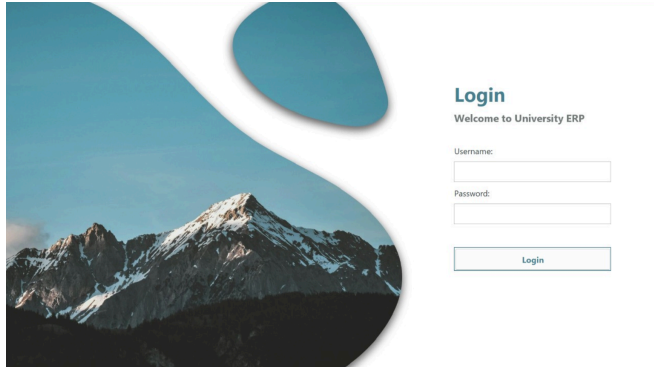
5

TEST PASSED

F. UI/UX checks

- Buttons and labels are clear; errors are friendly.

TEST PASSED



- Tables for lists; sorting/filtering is a plus.

TEST PASSED

- Long actions show “please wait” (even a simple dialog).

TEST PASSED

G. Performance sanity

- Catalog list of 100 courses opens quickly (a few seconds or less).

TEST PASSED

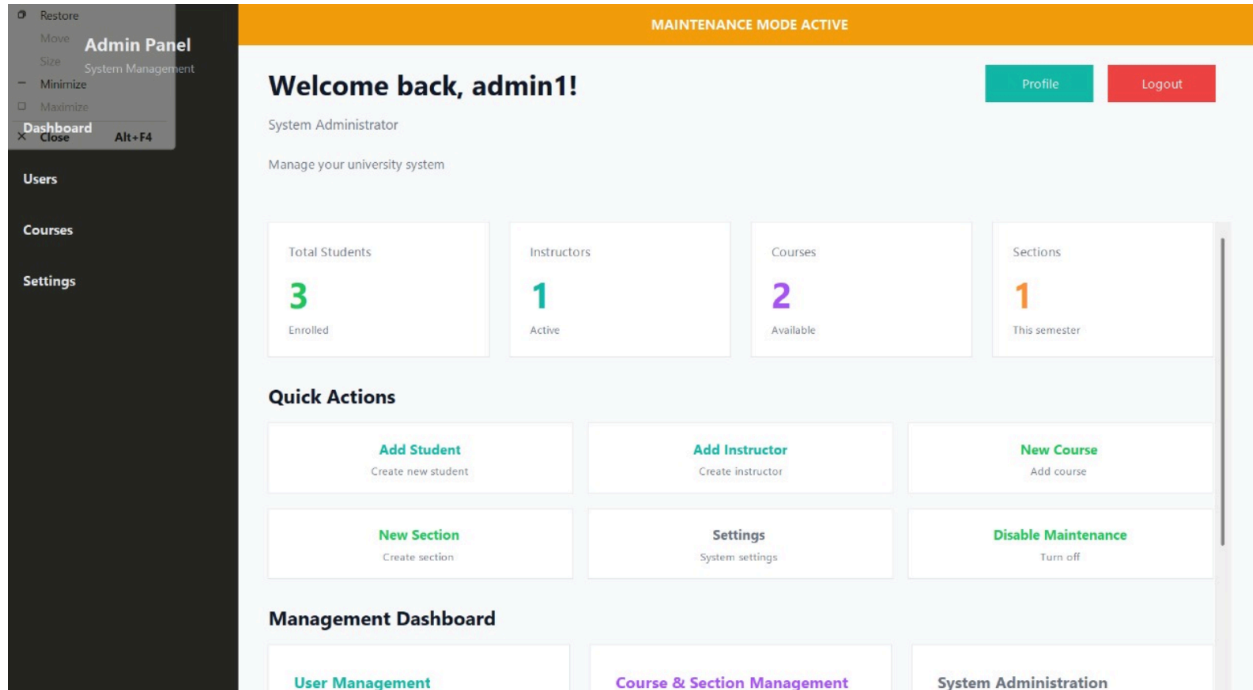
- App starts without long hangs or crashes.

TEST PASSED

H. Maintenance & (optional) backup/restore

- Maintenance toggle flips the settings flag and the UI shows a banner immediately.

TEST PASSED



- All student/instructor writes are blocked while ON.

TEST PASSED

- (Bonus) Backup/restore: trigger backup, change a row, restore, and see it revert.

TEST PASSED

All acceptance tests have passed successfully. The system correctly handles authentication with password rejection, role-based dashboards, and proper password hashing in the Auth DB. Students can browse the catalog, register for courses with capacity validation, drop before deadlines, view grades, and download transcripts. Instructors can manage their sections, enter scores, compute final grades, and are blocked from editing others' sections. Admins successfully create users, courses, sections, and control maintenance mode, which properly displays banners and blocks all student/instructor modifications. Edge cases are handled correctly including capacity validation, deadline enforcement, access control, and duplicate enrollment prevention. Security measures are in place with password hashing, separation of Auth and ERP databases, and access rule enforcement. The UI provides clear feedback, loads efficiently with 100+ courses, and maintenance mode functions as expected across all screens.