


Course and Grading Management System

A full-stack Course & Grading Management System designed for three user roles: Admin, Professor, and Student.

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Grade Management

Sign in to your account

Email Address

Password

[Forgot password?](#)

Sign In

Grade Management System • IIT Gandhinagar



Problem Statements

An online platform to automate and streamline the grading process for academic courses enabling instructors to define grading criteria, upload assessment scores, and automatically compute final grades, while students can securely access their course results in real time.



Interactive UI

Dashboard for course creation and grade matrix setup.



Secure Access

Role-based login for Students and Instructors



Grade Calculation

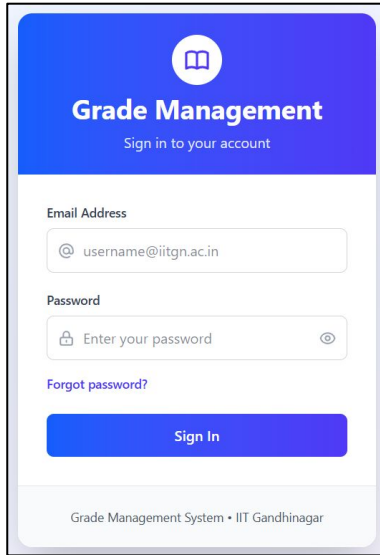
Automated Letter Grade assignment to students by calculating Z-score.



Toolkits and Utility

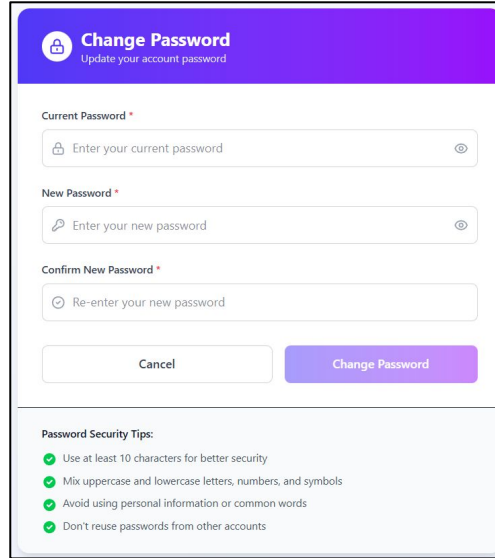
HTML, JavaScript, Node.js, MongoDB

Secure Login



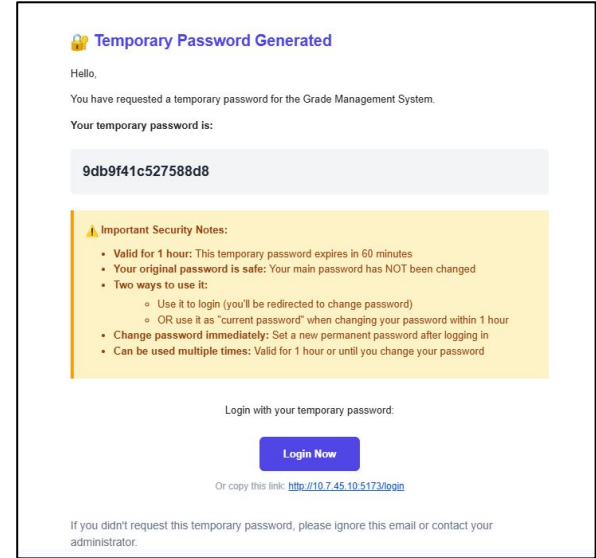
The login page features a blue header with a book icon and the text "Grade Management" and "Sign in to your account". Below the header, there are two input fields: "Email Address" with the placeholder "username@iitgn.ac.in" and "Password" with the placeholder "Enter your password". A "Forgot password?" link is located below the password field. A blue "Sign In" button is at the bottom. The footer contains the text "Grade Management System • IIT Gandhinagar".

Login Page



The change password page has a purple header with a lock icon and the text "Change Password" and "Update your account password". It contains three input fields: "Current Password" with placeholder "Enter your current password", "New Password" with placeholder "Enter your new password", and "Confirm New Password" with placeholder "Re-enter your new password". There are "Cancel" and "Change Password" buttons. A "Password Security Tips" section at the bottom lists four tips with green checkmarks: "Use at least 10 characters for better security", "Mix uppercase and lowercase letters, numbers, and symbols", "Avoid using personal information or common words", and "Don't reuse passwords from other accounts".

Change Password Page



The email notification page has a yellow header with a key icon and the text "Temporary Password Generated". It starts with "Hello," and "You have requested a temporary password for the Grade Management System." It then displays "Your temporary password is:" followed by a grey box containing the password "9db9f41c527588d8". A yellow box titled "Important Security Notes:" contains four bullet points: "Valid for 1 hour: This temporary password expires in 60 minutes", "Your original password is safe: Your main password has NOT been changed", "Two ways to use it:" (with sub-points "Use it to login (you'll be redirected to change password)" and "OR use it as 'current password' when changing your password within 1 hour"), and "Change password immediately: Set a new permanent password after logging in". It also states "Can be used multiple times: Valid for 1 hour or until you change your password". Below this, it says "Login with your temporary password:" and a blue "Login Now" button. A link "Or copy this link: <http://10.7.45.10:5173/login>" is provided. The footer says "If you didn't request this temporary password, please ignore this email or contact your administrator."

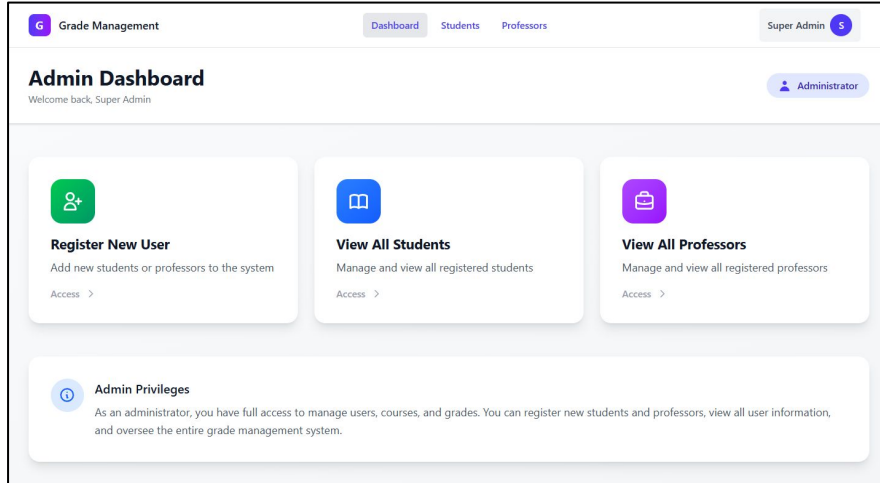
Email notification for Forgot Password

Forgot Password Features:

- A randomly generated secure password is generated and sent to the linked email.
- The random password acts as the account's original password for 60 minutes before expiry.
- On login with this secure password, the user is prompted to immediately and mandatorily change their password.

Super Admin Features

- Has access to every other utility on the management system



- Can register single or multiple students and professors using bulk CSV files
- On creation of multiple accounts, a random password is generated and sent to the linked email address

The screenshot shows the 'Register New Users' form. It has a 'Back to Dashboard' link and a 'Register New Users' title with the subtitle 'Add students or professors individually or in bulk'. There are two tabs: 'Single Registration' (active) and 'Bulk Upload (CSV)'. The 'User Role' section has two buttons: 'Student' (selected) and 'Professor'. The form includes fields for 'Full Name *', 'Email Address *', and 'Password *'. The 'Email Address' field contains 'username@iitgn.ac.in'. The 'Password' field has a hint 'Create a secure password' and a note 'Minimum 6 characters recommended'. A green '+ Register User' button is at the bottom.

Professor Features

- Create and manage courses with custom grading policies

Create a New Course

Fill in the details below to create a new course

Course Name *

e.g., Computer Networks

Course Code *

e.g., CS301

Course Description *

Describe the course content and objectives...

Grading Policy * (Must total 100%)

Midsem (%)

0

Endsem (%)

0

Quizzes (%)

0

Project (%)

0

Assignment (%)

0

Attendance (%)

0

Participation (%)

0

Current total: 0%

Create Course

Cancel

Quiz Management

Configure the number of quizzes for this course. Each quiz will be weighted equally.

TOTAL WEIGHTAGE

15%

ACTIVE QUIZZES

3

WEIGHT PER QUIZ

5.00%

+ Add Quiz

- Remove Quiz

Professor Features

- Bulk grade entry interface

Student	MIDSEM (52%) Max: 100	ENDSEM (21%) Max: 100	Quiz 1 (13.50%) Max: 100	Quiz 2 (13.50%) Max: 100
test_student t@iitgn.ac.in ID: 93b600	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

Bulk Upload Grades

Upload a CSV file to update grades for multiple students at once



Download Sample CSV



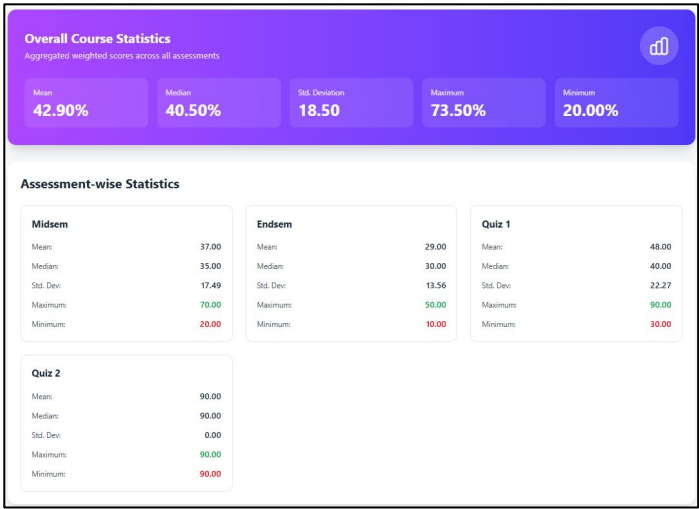
Upload CSV

- Individual student grade updates

Student	MIDSEM (52%) Max: 100	ENDSEM (21%) Max: 100
test_student t@iitgn.ac.in ID: 93b600	<input type="text" value="030"/>	<input type="text" value="0"/>

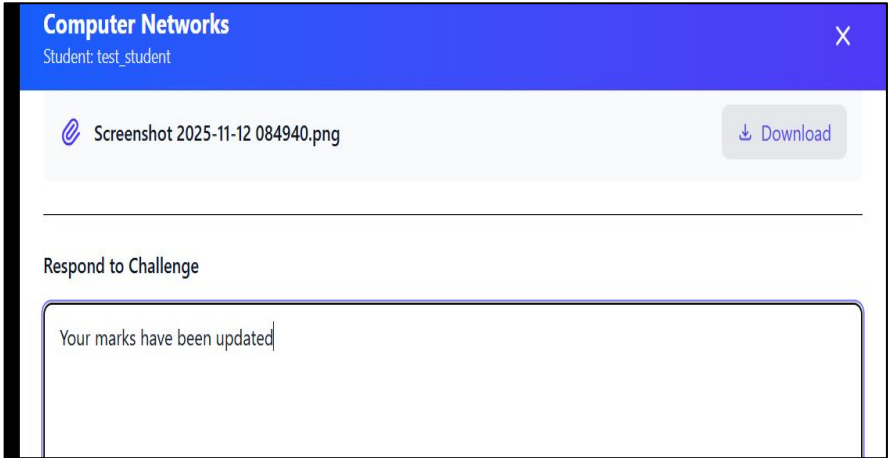
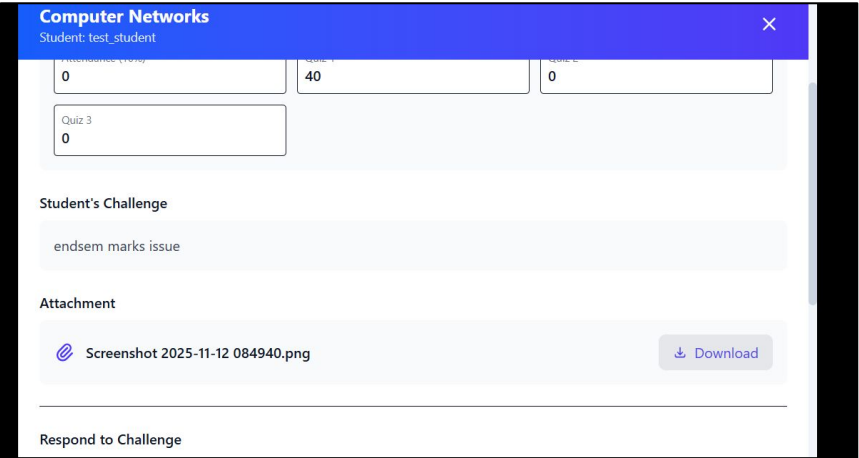
Professor Features

- Automatic overall as well as assessment wise statistics calculation



Professor Features

- Review student submissions with attachments
- Respond with detailed feedback and optional attachments



- Track challenge resolution status

Grade Challenges

Review and respond to student grade challenges

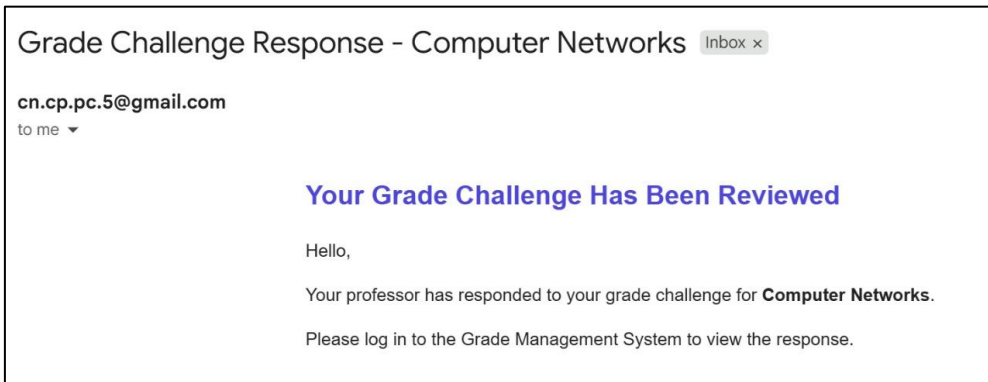
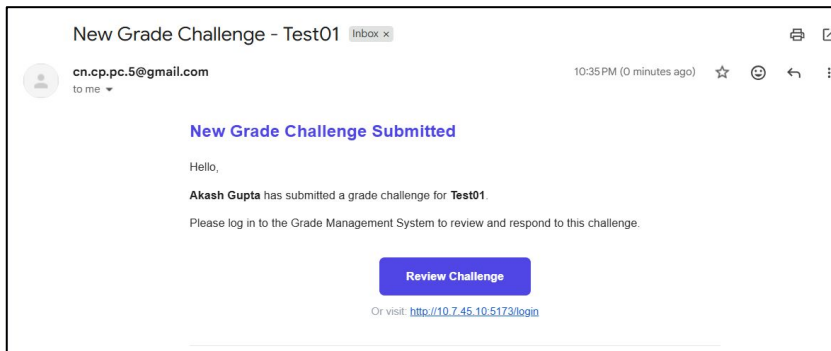
All (6)

Pending (2)

Reviewed (4)

Professor Features

- Automatic notifications for new challenges and responses



Professor Features

- Automated Letter Grade calculation from mean and z-score.
- Option to publish/unpublish grades on demand.

Computer Networks - Grade Management

 Publish Grades

 View Statistics

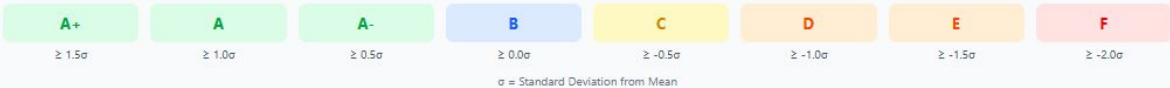
 Set Max Marks

Grade Distribution (Gaussian Curve)

Letter grades assigned using standard deviation from mean

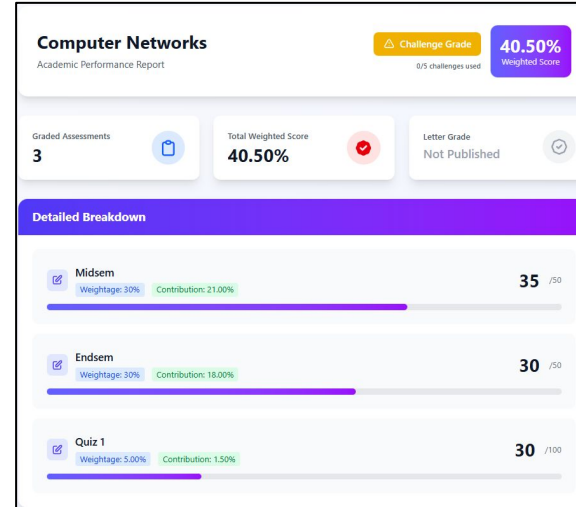
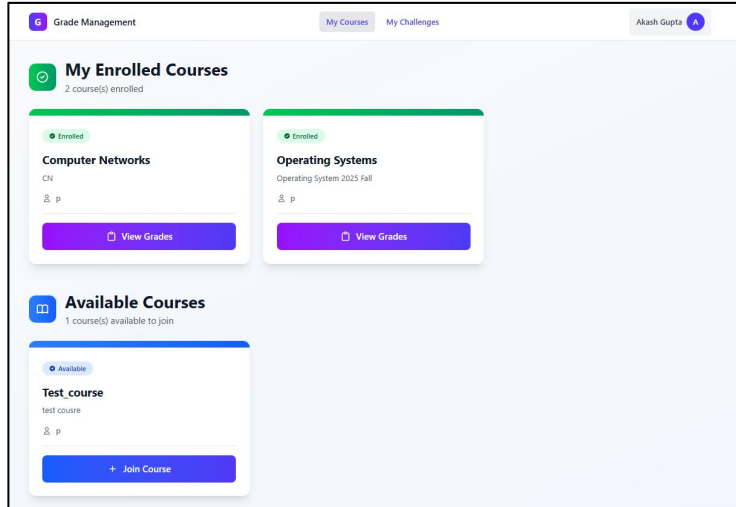
Student Name	Weighted Score	Z-Score	Letter Grade
k	29.50%	-0.72	D
test_student	20.00%	-1.24	E
Akash Gupta	40.50%	-0.13	C
Rachit	73.50%	1.65	A+
Prat	51.00%	0.44	B

Grading Scale (Based on Standard Deviation)



Student Features


- Can register for one or more of the available courses.
- On successful registration, students can see the grades assigned to them



- Automated weighting and aggregation of scores received as per the weightage of each assessment defined by the instructor
- Section to view automated letter grades once published by the instructor

Student Features

- Option to challenge received grades upto a total of 5 times per course
- Students can describe their grievances and attach necessary attachments for the same
- Dashboard to view feedback on challenges submitted by the student.

 5 challenges remaining

You have used 0 out of 5 challenges for this course.

Challenge Grade

Course

Computer Networks

Course Code

CS 330

Current Grades

Midsem (30%)

35

Endsem (30%)

30

Assignment (15%)

0

Attendance (10%)

0

Quiz 1

30

Quiz 2

0

Quiz 3

0

G

Grade Management

My Courses

My Challenges

Akash Gupta

A

My Grade Challenges

Track your grade challenge submissions and professor responses

Test01

test

Less marks in midsem

Submitted 11/12/2025


Pending

Describe your concern *

Please explain why you believe your grade should be reconsidered...

Be specific and provide detailed reasoning.

Attach supporting document (optional)



Click to upload or drag and drop

PDF, JPG, JPEG, PNG (max 25MB)

Cancel

Submit Challenge

Challenges Faced

- Handling incomplete/partial marks while computing means, standard deviations, and z-scores without skewing the distribution
- Marks of one student are getting allocated to all.
- Keeping grading policy totals at exactly 100% while allowing dynamic quiz/assignment counts and per-component max marks.
- Developing on a shared network with specific IPs required careful CORS whitelisting.

Future Work

- Enable Two-factor Authentication for even secure login
- Create a new role/privilege - Teaching Assistant (TA)
- Ensure TAs and multiple professors can manage a single course.
- Cache expensive statistics and add background jobs for heavy CSV imports.
- Add pagination and server-side filtering for large user/course lists.