



Classync - Virtual Classroom Platform

GUI Testing Report

Group - 33

Course: Software Engineering

Professor: Prof. Saurabh Tiwari

Mentor: Shyam Patel

Team Members:

Role	Name (ID)
Team Leader	ATIK VOHRA - 202301447
Member	KANANI TANUJ - 202301474
Member	SANAGADHIYA RADHIKA - 202301184
Member	PATEL JAY - 202301430
Member	CHOVATIYA AYUSH - 202301461
Member	OM PATEL - 202301163
Member	BADRESIYA ANSH - 202301477
Member	PREM KUKADIYA - 202301452
Member	RAMOLIYA SHUBHAM - 202301442
Member	GAJERA MANTHON - 202301488

Objectives

The objective of GUI testing for the Virtual Classroom Platform is to ensure that all graphical user interface components function as intended and provide a seamless user experience. This includes verifying:

- **Responsiveness:** Ensuring the platform's UI adapts properly to various screen sizes and orientations.
 - **Navigation:** Confirming smooth transitions between screens and accurate functionality of navigation elements like buttons, tabs, and menu items.
 - **Functionality:** Testing the usability of features such as chat, screen sharing, whiteboard, AI-tools, submission, authentication, enrollment.
 - **Visual Design:** Checking for consistent alignment, color schemes, fonts, and overall aesthetic appeal.
 - **Error Handling:** Ensuring that appropriate error messages are displayed for invalid actions.
 - **Performance:** Verifying that the UI responds quickly and without lags under normal and heavy usage scenarios.
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Major UI Components in the App

- Sign Up
 - Login
 - Forgot Password
 - Join Course
 - Submit Assignment
 - Chat Space
 - Notifications
 - WhiteBoard
 - AI-Tools
 - View Progress
 - Logout
-

Test Scenarios

1) Sign Up

Test Case ID: TC_001

Test Objective: Verify that the sign-up functionality works correctly and displays all necessary validations.

Steps:

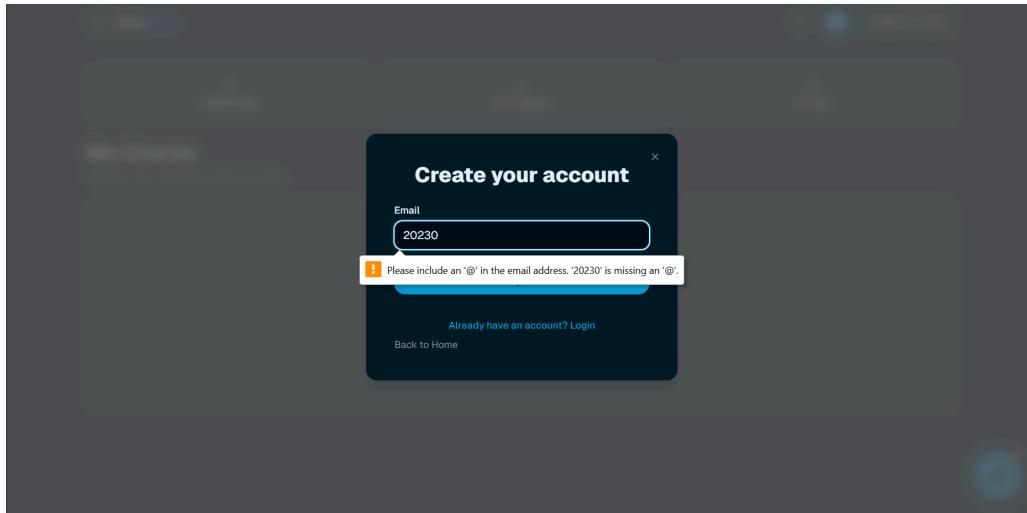
1. Opened App: Navigated to <https://se-virtual-classroom-platform.vercel.app/>
2. Valid Inputs: Entered valid name, email, and password; clicked Sign Up.
3. Invalid Inputs:
 - o Empty fields: Error messages displayed.
 - o Invalid email: "Invalid email format" error.
4. Button Behavior: Sign Up disabled for invalid inputs; enabled for valid inputs.
5. Navigation: Verified Log In link redirects correctly.
6. Usability: Password toggle works; elements aligned properly.
7. Error Handling: Errors cleared after corrections.

Expected Result:

- On valid input, the user should be successfully registered and redirected to the dashboard or login screen.
- On invalid input, appropriate error messages should be displayed.

Actual Result:

Invalid input response-



Video Link:[link](#)

Pass/Fail: PASS

2) Log in

Test Case ID: TC_002

Test Objective: Verify that the login functionality works correctly with valid and invalid credentials.

Steps:

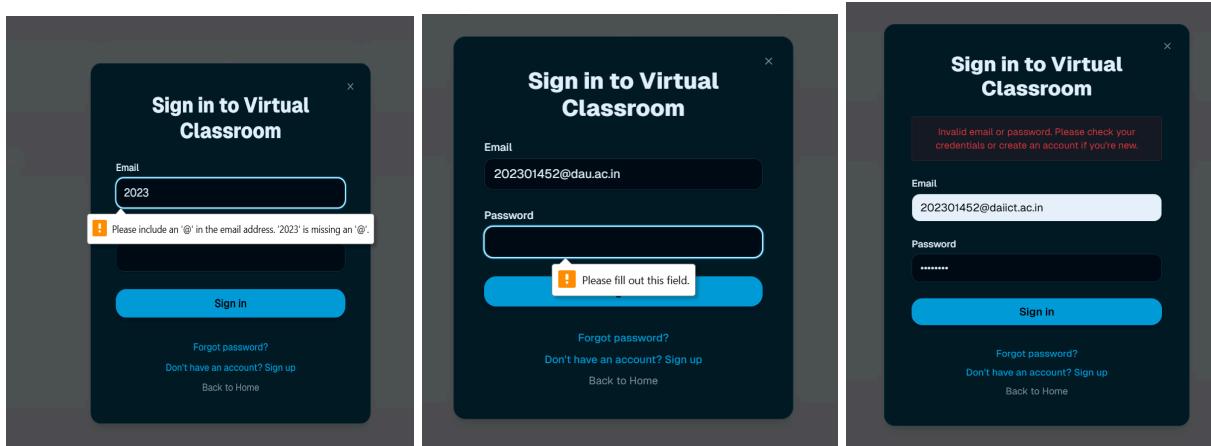
1. Opened App: Navigated to the Login screen.
2. Valid Inputs: Entered valid email and password; clicked Login; if password is correct redirected to Dashboard.
3. Invalid Inputs:
 - Empty fields: Error messages displayed.
 - Invalid email: "Invalid email format" error.
 - Wrong password: "Incorrect password" error.
4. Button Behavior: Login disabled for invalid inputs; enabled for valid inputs.
5. Navigation: Verified Login button redirects correctly.
6. Error Handling: Errors cleared after corrections.

Expected Result:

- On valid input, the user should be successfully logged in and redirected to the dashboard.
- On invalid input, an appropriate error message should be displayed.

Actual Result:

Invalid inputs response-



Video Link:[link](#)

Pass/Fail: PASS

3) Forget Password

Test Case ID: TC_003

Test Objective: Verify that the "Forgot Password" functionality allows users to reset their password correctly via Email.

Steps:

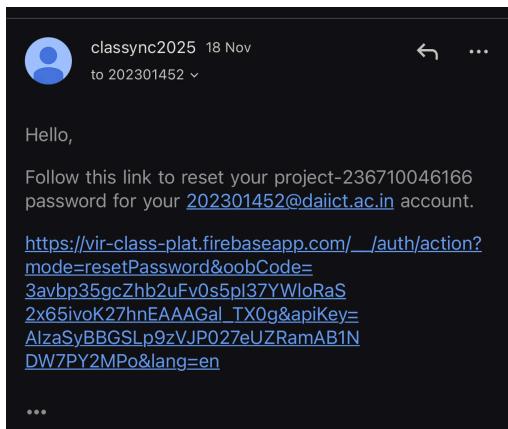
1. Opened App: Navigated to Login screen; clicked "Forgot Password?" and entered a registered email.
2. Valid Inputs: Reset link sent to email; updated password successfully; logged in with the new password.
3. Button Behavior: Submit button disabled for invalid inputs; enabled for valid ones.
4. Navigation: Verified flow from "Forgot Password" to reset and login screens.

Expected Result:

- On valid input, a reset password email should be sent, and a confirmation message (e.g., "Reset link sent to your email") should appear.

Actual Result:

Reset link sent-



Video link:[link](#)

Pass/Fail: PASS

4) View Progress

Test Case ID: TC_004

Test Objective: Verify the functionality, UI elements, and data accuracy on the View Progress page for a student.

Steps:

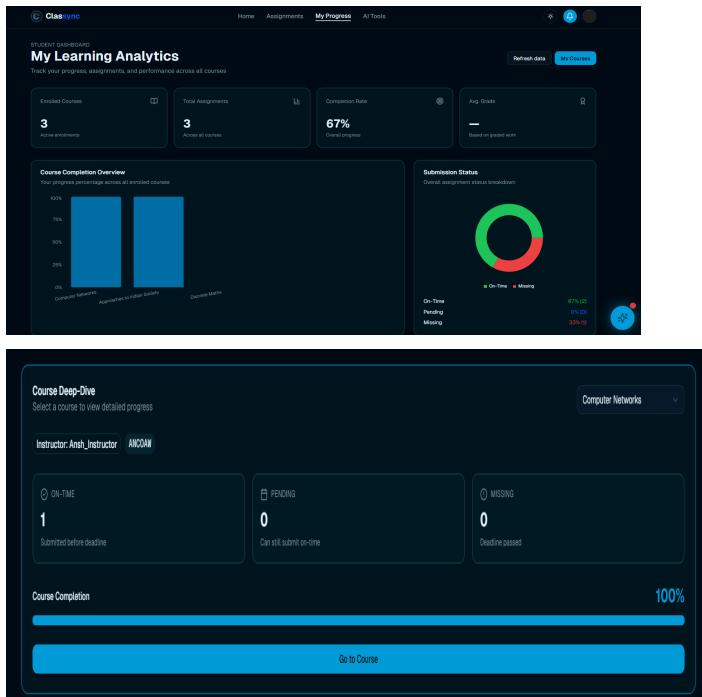
1. Opened App: Navigated to Dashboard; clicked "View Progress".
2. Select Course: Choose a course from the dropdown (e.g., Computer Networks).
3. Load Progress: Verified that course statistics (On-Time, Pending, Missing) load correctly.
4. Instructor Details: Confirmed instructor name and course code are displayed.
5. Progress Bars: Checked course completion percentage and progress bar rendering.
6. Navigate Course: Clicked "Go to Course" and verified navigation to the respective course page.
7. Dynamic Update: Changed course selection and confirmed values update dynamically without page refresh.

Expected Result:

- Progress metrics should load correctly for the selected course.
- Instructor information and course code should be accurate.
- The progress bar should reflect the correct completion percentage.
- "Go to Course" should navigate to the appropriate course.

- Dropdown change should instantly refresh stats without errors.

Actual Result:



Video Link:[link](#)

Pass/Fail:PASS

5) Join Course

Test Case ID: TC_005

Test Objective: Verify the functionality and UI of the "Join Course" screen.

Steps:

1. Opened App: Navigated to Dashboard; clicked "Join Course".
2. Valid Inputs: Entered classroom id
3. Join Classroom: Clicked "Join" button.
4. VerifyJoin: Confirmed classroom appears in the dashboard classroom list.
5. View Details: Verified ability to view classroom details after joining.
6. Error Handling: Confirmed error messages for invalid inputs (e.g., invalid id).
7. Navigation: Verified smooth navigation from join to classroom view.

Expected Result:

- On valid input, the classroom should be successfully created and appear in the classroom list.

Actual Result:

Showing courses-

The screenshot shows the 'My Course' section of a learning management system. It displays three course cards:

- Computer Networks**: Instructor Prof. Ansh_Instructor, 3 Students. Progress: 1/1 (100%).
- Approaches to Indian Society**: Instructor Prof. Ansh_Instructor, 3 Students. Progress: 1/1 (100%).
- Discrete Maths**: Instructor Prof. Ansh_Instructor, 3 Students. Progress: 0/1 (0%).

Each card includes course details like subject and code, and a 'Unenroll' button.

Video Link:[link](#)

Unenroll from course-[link](#)

Pass/Fail: PASS

6) AI-Chatbot

Test Case ID: TC_006

Test Objective: Verify the functionality of the "Ask a Question" feature including input fields, submission, and response handling.

Steps:

1. Opened App: Navigated to the "Ask a Question" section from the dashboard.
2. Enter Topic: Typed a valid topic into the topic field (e.g., Physics, Math, History).
3. Enter Question: Enter a detailed question in the description text area.
4. Submit Query: Clicked the "Get Answer" button.
5. Verify Response: Confirmed that the system generates an answer below the form.
6. History Check: Clicked "Show History" to verify that previous questions and answers are displayed.

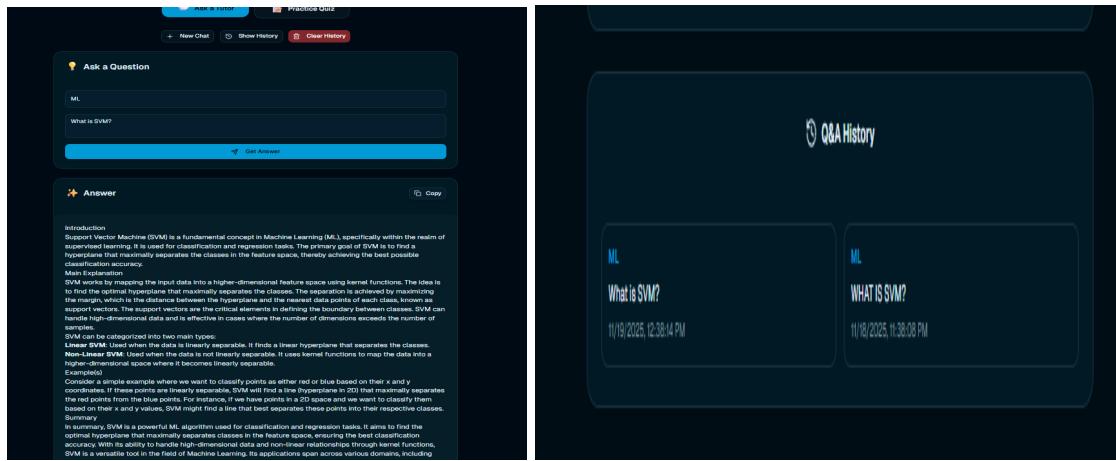
7. Clear History: Clicked "Clear History" and confirmed that history is removed.
8. New Chat: Used the "New Chat" button to reset fields and start a fresh session.
9. Error Handling: Verified that empty fields trigger appropriate validation messages.

Expected Result:

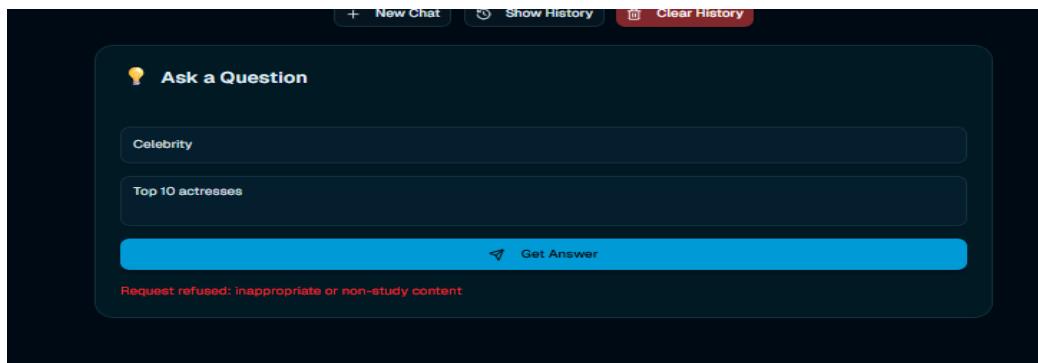
- Users should be able to enter a topic and a question smoothly.
- The "Get Answer" button should generate a valid response.
- History should display all previous queries and answers.

Actual Result:

Minor Issue- There is a delay in fetching the answer.



Invalid Input(Like celebrity, drugs turned off) response-



Video link:[link](#)

Pass/Fail:PASS

7) AI-Quiz Generator

Test Case ID: TC_007

Test Objective: Verify the functionality of generating quizzes based on topic, question type, grade level, and number of questions.

Steps:

1. Opened App: Navigated to the "Generate Quiz" section from the dashboard.
2. Enter Topic: Typed a valid topic into the quiz topic field.
3. Select Type: Choose the quiz type (MCQ or True/False).
4. Select Grade: Selected the grade level from the dropdown (e.g., Grade 9).
5. Select Count: Choose the number of questions from the dropdown.
6. Generate Quiz: Clicked the "Generate Quiz" button.
7. Verify Quiz: Confirmed that a quiz is generated with the selected number of questions.
8. History Check: Clicked "Show History" and verified previously generated quizzes are listed.
9. New Quiz: Clicked "New Quiz" to reset inputs for generating another quiz.
10. Error Handling: Verified that missing inputs trigger proper validation messages.

Expected Result:

- Quiz should be generated based on the entered topic, selected type, grade, and number of questions.
- Generated quizzes must contain accurate and complete questions.
- History should correctly show previously generated quizzes.
- "New Quiz" should reset all fields.
- Empty or invalid inputs should show error messages.

Actual Result:

True or False- MCQ-

The image displays two side-by-side screenshots of a web-based quiz generator. The left screenshot shows the configuration page where users can specify parameters like topic ('ML'), question type ('MCQ'), difficulty ('Undergraduate'), and the number of questions ('5'). The right screenshot shows the resulting quiz in a test format, consisting of five true/false questions related to machine learning concepts.

Video Link:[link](#)

Pass/Fail: PASS

8) AI Assistant

Test Case ID: TC_008

Test Objective: Verify the functionality of the AI Assistant chat widget, including message input, response generation, and UI behavior.

Steps:

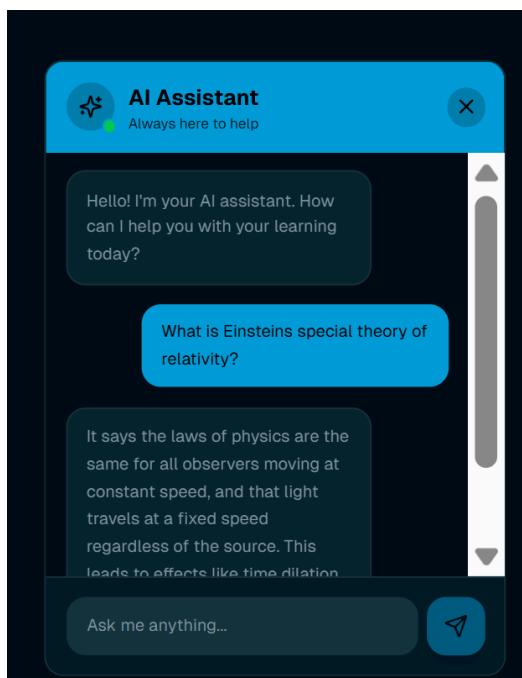
1. Opened App: Navigated to the dashboard and opened the AI Assistant widget.
2. Initial Message: Verified that the assistant displays a welcome message.
3. Enter Query: Typed a valid question into the input field.
4. Send Message: Clicked the send icon to submit the query.
5. Verify Response: Confirmed that the assistant replies with a relevant response.
6. Chat Continuity: Asked follow-up questions and verified conversation consistency.
7. Close Assistant: Clicked the close icon and confirmed the widget closes smoothly.
8. Reopen Assistant: Opened the widget again to verify previous chat state or reset behavior.
9. Error Handling: Verified validation message when attempting to send an empty message.

Expected Result:

- AI Assistant should display a welcome message on launch.
- User inputs should be accepted and processed without delay.
- Responses should appear correctly in the chat window.
- The assistant should maintain conversation flow across multiple queries.
- Close and reopen actions should work smoothly.
- Empty messages should not be allowed.

Actual Result:

Successful short answer displayed-



Video Link:[link](#)

Pass/Fail:PASS

9) AI-Summary Generator

Test Case ID: TC_009

Test Objective: Verify the functionality of the summary generator, including file upload, grade/branch input, summary type selection, and summary generation.

Steps:

1. Opened App: Navigated to the "Generate Summary" section from the dashboard.
2. Upload File: Clicked "Choose File" and selected a valid document (PDF, DOCX, TXT, PPTX).
3. Enter Grade/Branch: Typed the grade or branch details into the input field (e.g., 10th Grade, Biology).
4. Select Summary Type: Choose a summary format from the dropdown (e.g., Quick overview – 5 min read).
5. Generate Summary: Clicked the "Generate Summary" button.
6. Verify Output: Confirmed that the system processes the file and generates a summary.
7. History Check: Verified that previously generated summaries appear in the history (if available).
8. Error Handling: Attempted to submit without uploading a file or without entering required details to confirm proper validation messages.

Expected Result:

- The system should accept supported file formats and display the selected filename.
- Summary should be generated based on the uploaded document and selected preferences.
- Dropdown should allow choosing the summary format.
- Validation messages should appear for missing or invalid inputs.
- Output summary should load without errors.

Actual Result: Issue-Only generates summary of Word Document.

Successful summary for word document-

The screenshot shows the application's user interface for generating a summary. At the top, there is a file upload section with a 'Choose File' button and a selected file path: 'IT314_Lab8_report_202301452.docx'. Below it is a dropdown for 'What's your grade or branch?' with 'UG' selected. A note says 'Help us customize the summary for you'. Under 'How do you want your summary?', the 'Quick overview (5 min read)' option is checked. A large blue 'Generate Summary' button is at the bottom. The 'Your summary' section contains static code analysis results from SonarQube, including sections for 'Lab Assignment', 'Static Code Analysis', 'Student Name', 'ID', and 'Task 1: Buggy Python Code'. It also lists several issues found in the provided code, such as unused imports and variables.

Not generating for PDF-

The screenshot shows the application's user interface for generating a summary. The file upload section shows a selected file path: 'Lec_19_DC_25_26.pdf'. Below it is a dropdown for 'What's your grade or branch?' with 'UG' selected. A note says 'Help us customize the summary for you'. Under 'How do you want your summary?', the 'Quick overview (5 min read)' option is checked. A large blue 'Generate Summary' button is at the bottom. A red error message box at the bottom right states: 'Failed to extract text from PDF: pdfParse is not defined'.

Video Link:[link](#)

Pass/Fail: FAIL

10) Assignment Submission

Test Case ID: TC_010

Test Objective: Verify the functionality and UI elements of the Assignment Submission feature for students.

Steps:

1. Open Classroom: Logged into the app → navigated to the classroom → opened the Assignments section.
2. Open Assignment: Selected a specific assignment from the list → viewed assignment details such as title, instructions, and due date.
3. Upload File: Clicked "Upload" → selected a file from the system → verified file name appears in the upload preview area.
4. Submit Assignment: Clicked "Submit" button → confirmed submission popup (if any) → checked if the system shows "Submitted Successfully".
5. Error Handling: Tried uploading unsupported file format / oversized file → validated proper error message appears.
6. View Submission Status: Checked if the submission status updates → displays filename, timestamp, and submission status (Submitted / Pending).

Expected Result:

- Assignment details (title, instructions, due date) load correctly.
- Upload area should allow acceptable file types (PDF/Image/Docs).
- After clicking Submit, the assignment should show the Submitted Successfully message.
- Submitted assignment should display:
 - File name
 - Submission timestamp
 - Status indicator
- Invalid uploads should show clear error messages.

Actual Result: Successfull submission showing-

The screenshot shows a dark-themed assignment dashboard with three tabs at the top: 'Pending (0)', 'Submitted (2)', and 'Overdue (1)'. The 'Submitted (2)' tab is selected. Below it, there are two cards: 'Lab-1' and 'Quiz 1'.
Lab-1: Description: You all have to do this lab in Windows. In this lab you have to explore Wireshark. Tasks: Computer Networks (Due: November 28th, 2025 8:32 PM). Status: Submitted (green checkmark). Submitted on: November 18th, 2025 11:45 PM. Action: View Your Submission.
Quiz 1: Description: This is the sample quiz for practice. Tasks: Approaches to Indian Society (Due: November 20th, 2025 2:35 AM). Status: Submitted (green checkmark). Submitted on: November 18th, 2025 10:15 PM. Action: View Your Submission.

Overdue Assignments showing(Also cannot submit now)-

The screenshot shows a dark-themed assignment dashboard with three tabs at the top: 'Pending (0)', 'Submitted (2)', and 'Overdue'. The 'Overdue' tab is selected. Below it, there is one card: 'Tutorial 1'.
Tutorial 1: Description: Try to solve by your self. Tasks: Discrete Maths (Due: November 18th, 2025 2:33 AM). Status: Overdue (red circle with exclamation mark). Message: Cannot submit - deadline has passed.

Assignment dashboard video:[link](#)

Video Link:[link](#)

Pass/Fail:PASS

11) Chat Space

Test Case ID: TC_011

Test Objective: Verify the functionality and UI elements of the Chat feature during a classroom session.

Steps:

1. Opened App: Joined a classroom; opened chat panel.

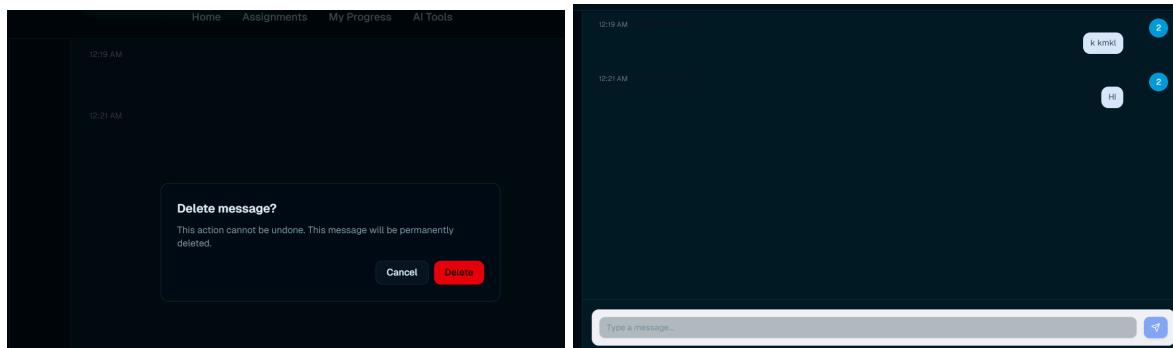
2. Send Message: Typed a message in the chat box; clicked Send; verified message appears in chat window.
3. Error Handling: Make sure messages can be deleted

Expected Result:

- Sent messages should appear instantly, and incoming messages should load dynamically.
- Chat should display sender names and timestamps.
- Delete functionality works.

Actual Result:

Delete Functionality and showing message details-



Video Link:[link](#)

Pass/Fail: PASS

12) Whiteboard Feature

Test Case ID: TC_012

Test Objective: Verify the functionality and UI elements of the Whiteboard feature.

Steps:

1. Opened App: Joined a classroom; opened a whiteboard tool.
2. Drawing Tools:
 - Selected pen tool; drew on whiteboard.
 - Selected shapes (circle, rectangle, line); confirmed they render correctly.
 - Selected text tool; added text.
3. Color Selection: Changed colors for different elements; verified color changes apply.
4. Eraser Tool: Used eraser to remove content; confirmed erasing works.

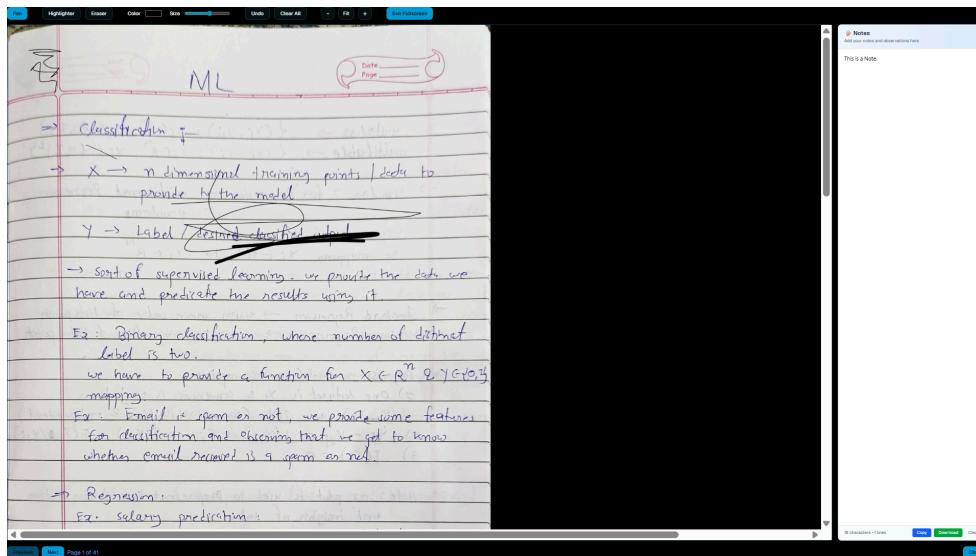
5. Clear Board: Clicked "Clear All" button; verified board cleared completely.
6. Undo/Redo: Tested undo and redo functionality; confirmed actions reverse/restore correctly.
7. Collaboration: Verified multiple users can draw simultaneously; changes appear in real-time.
8. Save/Export: Tested saving or exporting whiteboard content (if applicable).
9. Error Handling: Confirmed smooth performance with multiple elements.
10. Cross-Browser Testing: Tested whiteboard on different browsers.

Expected Result:

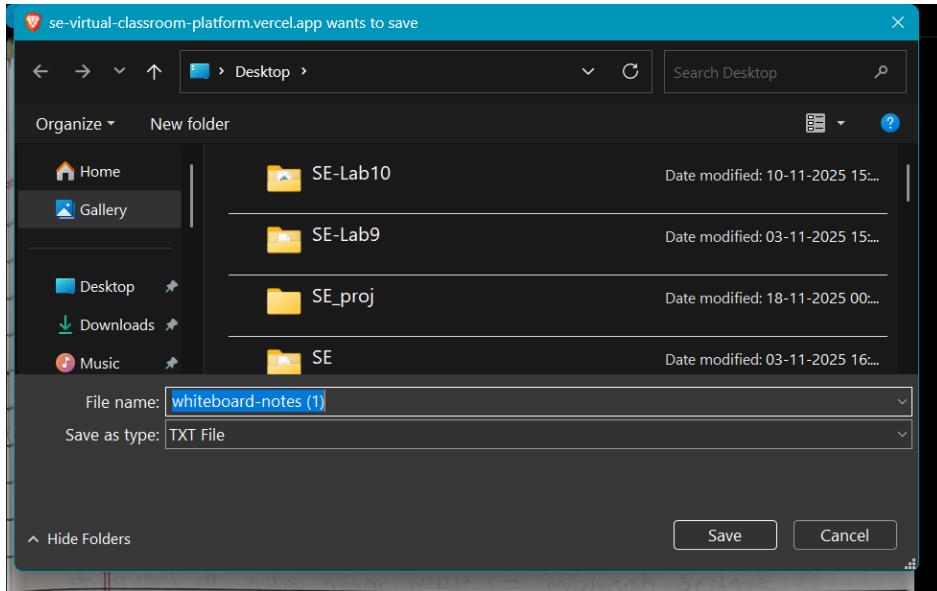
- All drawing tools should work smoothly.
- Multiple users should be able to collaborate in real-time.
- Undo/redo should work correctly.
- The whiteboard should remain responsive with multiple elements.
- Clear board should remove all content immediately.

Actual Result:

Successful whiteboard working-



Notes successfully downloadable-



Video Link:[link](#)

Pass/Fail: PASS

13) User Profile and Update Profile

Test Case ID: TC_013

Test Objective: Verify the functionality and UI elements of the User Profile and Settings screen.

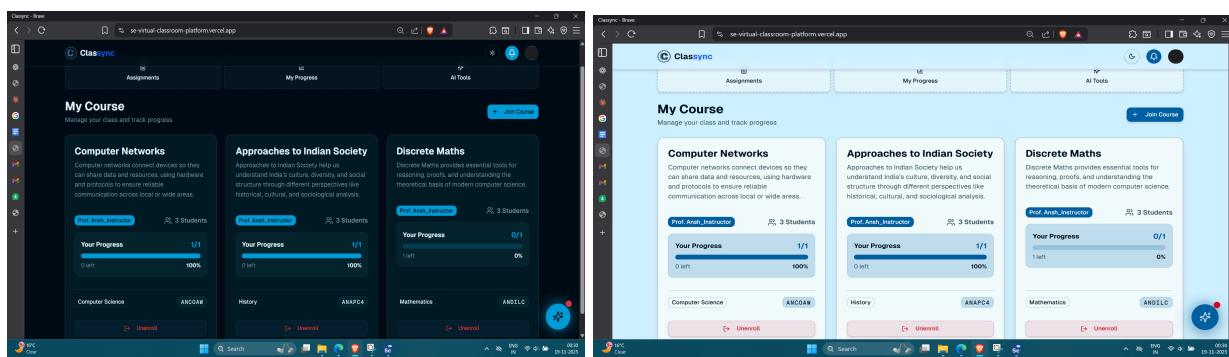
Steps:

1. Opened App: Logged in; navigated to Profile/Settings by clicking profile icon.
2. View Profile: Verified display of user information (name, email, profile picture, bio).
3. Edit Profile:
 - o Clicked the "Edit Profile" button.
 - o Updated name and bio.
 - o Uploaded a new profile picture by selecting from the gallery.
 - o Saved changes.
 - o Verified updates reflected immediately.
4. Change Password:
 - o Navigated to "Change Password".
 - o Entered current password and new password.
 - o Confirmed password change; verified password updated successfully.
5. Theme Selection: Changed UI theme (light/dark mode); theme applied immediately.
6. Navigation: Verified smooth navigation back to dashboard.

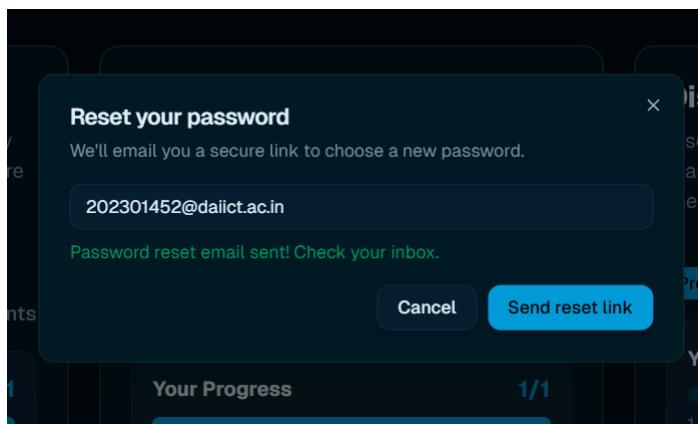
Expected Result:

- The user's profile picture, name, status, and bio should be displayed correctly.
- Clicking on the profile picture should allow changing or viewing the full-size image (if applicable).
- The "Edit Profile" button should allow the user to update their details, and changes should be saved successfully.
- The "Change Password" functionality should navigate to the password change screen and allow for successful password updates.
- Additional options like "Logout," "Delete Account," should work as expected.
- Profile updates (e.g., new picture or bio) should reflect immediately after saving.

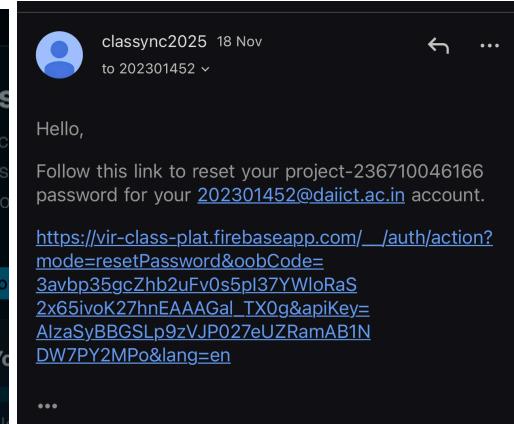
Actual Result: Light mode vs Dark mode -



Change password UI



Reset link sent-



Video Link:

Change username-[link](#)

Add profile picture-[link](#)

Pass/Fail: PASS

14) Logout

Test Case ID: TC_014

Test Objective: Verify that the logout functionality works correctly.

Steps:

1. Opened App: Logged in successfully to the platform.
2. Locate Logout: Found logout button in profile dropdown menu or settings.
3. Click Logout: Clicked logout button.
4. Confirmation: Verified logout confirmation prompt appears (if applicable); clicked "Yes" to confirm.
5. Session Cleared: Confirmed user redirected to login screen.
6. Multiple Tabs: Opened platform in multiple browser tabs; clicked logout in one tab; verified all tabs logged out.
7. Navigation: Verified cannot access protected pages without logging in again.

Expected Result:

- Users should be logged out successfully with the session cleared completely.
- Users should be redirected to the login page immediately.
- Cannot access protected pages without logging in again.
- The browser back button should not allow access to authenticated pages.
- All active sessions should be terminated.

Actual Result:

Successfully log's out of all tab if logging out from one tab- [link](#)

Video Link:[link](#)

Pass/Fail: PASS

Observations and Summary

Test Case ID	Test Case Name	Status	Observations
TC_001	Sign Up	PASS	All form validations functioning properly. Password toggle feature works well. Error messages clear on empty/invalid fields.
TC_002	Log In	PASS	Login redirects to the dashboard on correct credentials. Error handling for wrong password and invalid email format working as expected.
TC_003	Forget Password	PASS	Reset link successfully sent to registered email. Password update and subsequent login with new credentials verified.
TC_004	View Progress	PASS	Course statistics (On-Time, Pending, Missing) displaying correctly. Dropdown updates dynamically without page refresh. Progress bars rendering accurately.
TC_005	Join Course	PASS	Classroom successfully appears in the dashboard after joining. Invalid classroom ID shows appropriate error message. Navigation smooth throughout.
TC_006	AI-Chatbot	PASS	Noticeable delay observed while fetching answers. History feature working correctly. Invalid inputs (celebrity names, drugs) properly restricted.
TC_007	AI-Quiz Generator	PASS	Both MCQ and True/False quiz types generate successfully. Quiz history maintained properly. New quiz button resets all fields correctly.
TC_008	AI Assistant	PASS	Welcome message displays on launch. Response generation working with good conversation flow. Empty message validation in place.
TC_009	AI-Summary Generator	FAIL	PDF files not processing - only Word documents generate summaries successfully. Feature advertises support for PDF, DOCX, TXT, PPTX but PDF functionality not working.

TC_010	Assignment Submission	PASS	File upload and submission working correctly. Overdue assignments clearly marked and submission disabled as expected. Submission status displayed with filename and timestamp.
TC_011	Chat Space	PASS	Messages appear instantly. Delete functionality tested and working. Sender names and timestamps displayed correctly.
TC_012	Whiteboard Feature	PASS	All drawing tools (pen, shapes, text) are functional. Real-time collaboration verified with multiple users. Notes successfully downloadable. Undo/redo working properly.
TC_013	User Profile and Update Profile	PASS	Light/dark mode toggle working instantly. Profile picture and username update reflected immediately. Password change functionality verified with reset link sent.
TC_014	Logout	PASS	Session cleared successfully across all open tabs when logging out from one. Redirect to the login screen immediately. Protected pages inaccessible after logout.

Summary Statistics

- **Total Test Cases:** 14
- **Passed:** 13
- **Failed:** 1
- **Pass Rate:** 92.86%

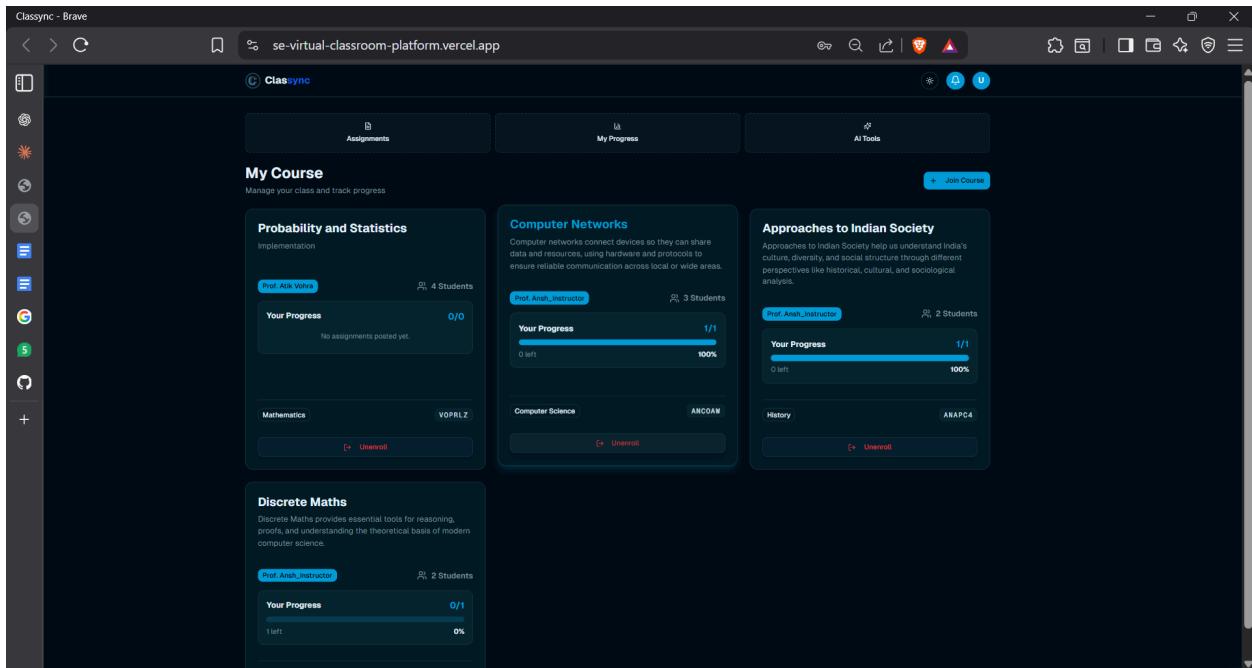
Cross browser working test

In this test case we will test if the deployed website works on various browsers or not.

Browsers taken in account-

1. Chrome
2. Brave
3. Edge

Brave-



Chrome-

The screenshot shows the Classsync platform interface in a Chrome browser window. At the top, there's a dark header bar with the Classsync logo and a search bar containing the URL "se-virtual-classroom-platform.vercel.app". Below the header, a dark navigation bar features three main buttons: "Assignments" (with a document icon), "My Progress" (with a bar chart icon), and "AI Tools" (with a gear icon). A red banner at the top displays a "Assignment Deadline Reminder" stating "You have 1 assignment due within 24 hours." and a "View Assignments" button. The main content area is titled "My Course" and includes a sub-instruction "Manage your class and track progress". Three course cards are listed:

- Probability and Statistics**: Implementation. Taught by Prof. Atik Vohra. 4 Students. Your Progress: 0/0. No assignments posted yet.
- Computer Networks**: Computer networks connect devices so they can share data and resources, using hardware and protocols to ensure reliable communication across local or wide areas. Taught by Prof. Ansh_Instructor. 3 Students. Your Progress: 1/1. 0 left. 100%.
- Approaches to Indian Society**: Approaches to Indian Society help us understand India's culture, diversity, and social structure through different perspectives like historical, cultural, and sociological analysis. Taught by Prof. Ansh_Instructor. 2 Students. Your Progress: 1/1. 0 left. 100%.

A blue "Join Course" button is located in the top right corner of the main content area. The bottom of the page shows the URL "https://se-virtual-classroom-platform.vercel.app/ai-tools".

Edge-

The screenshot shows the Classsync platform interface in a Microsoft Edge browser window. The layout is identical to the Chrome version, with a dark header bar, a dark navigation bar with "Assignments", "My Progress", and "AI Tools" buttons, and a red "Assignment Deadline Reminder" banner. The main content area is titled "My Course" and includes a sub-instruction "Manage your class and track progress". One course card is listed:

- Software Engineering**: Great Course for the development part. Taught by Prof. Atik Vohra. 5 Students. Your Progress: 1/1. 0 left. 100%.

A blue "Join Course" button is located in the top right corner. The bottom of the page shows the URL "https://se-virtual-classroom-platform.vercel.app".

Summary-

Browser	Pass/Fail
Brave	Pass
Chrome	Pass
Edge	Pass