TEST PLAN

1. Login Page Unit Tests:

Test Scenario 1: Valid Login Credentials

Objective: Verify that users can successfully login with correct credentials.
Test Steps:
Enter valid username and password.
Submit the login form.
Verify that the user is redirected to the dashboard or designated landing page.
Expected Result: User should be logged in and redirected to the appropriate page.

Test Scenario 2: Invalid Login Credentials

Objective: Ensure that users cannot login with incorrect credentials.

Test Steps:
Enter invalid username and/or password.
Submit the login form.
Verify that the appropriate error message is displayed.
Expected Result: User should not be logged in and an error message indicating invalid credentials should be displayed.

2. Course Management Unit Tests:

Test Scenario: Admin Course Creation

Objective: Verify that admin can successfully create courses.
Test Steps:
Admin logs in with valid credentials.
Navigate to the course creation page.
Enter course details (e.g., title, description, duration).
Submit the form to create the course.
Expected Result: Course should be created successfully and appear in the list of available courses.

Test Scenario: Admin Enrollment of Students

Objective: Ensure that admin can enroll students in courses.
Test Steps:
Admin logs in with valid credentials.
Navigate to the student enrollment page for a specific course.
Select students to enroll in the course.
Confirm the enrollment.
Expected Result: Selected students should be successfully enrolled in the course.

3. Assignment Creation Unit Tests:

Test Scenario: Teacher Assignment Creation

Objective: Validate that teachers can create different types of assignments (quizzes and essays).
Test Steps:
Teacher logs in with valid credentials.
Navigate to the assignment creation page.
Choose the assignment type (quiz or essay).
Enter assignment details (e.g., title, instructions, deadline).
Save or submit the assignment.
Expected Result: Assignment should be created successfully and accessible to students.
Test Environment:

4) UNIT TEST FOR TEACHER CREATING THE ASSIGNMENT

Test Scenario 1: Quiz Creation

Test Steps:
Log in as a teacher using valid credentials.
Navigate to the assignment creation page.
Choose the quiz assignment type.
Enter assignment details such as title, instructions, and deadline.
Save or submit the assignment.
Expected Result: The quiz assignment should be successfully created and visible on the teacher's dashboard.

5. UNIT TEST FOR STUDENTS ENROLLING IN COURSE

Test Scenario : Adding a Course
Test Steps: Student logins with valid credentials.
Navigate to the "Add a Course" button.
Click on the Search for Course Option.
Select the desired course.
Click on the Register button.
Expected Result: The course should be successfully added and become visible on the student's dashboard.

6. UNIT TEST FOR STUDENTS SUBMITTING ASSIGNMENTS

Test Scenario: Submitting Assignment
Test Steps:
The students clicks on Assignments button visible on the Dashboard

Click on the Assignment to be submitted.
Click upload Assignment.
Select the assignment to be uploaded.
Click on the Submit button.
Expected Result: The assignment should be successfully submitted and become visible under submitted assignments.

7. **UNIT TEST FOR TEACHERS GRADING ASSIGNMENTS:**
Test Scenario; grading an assignment
Test steps;
Teacher logins with valid credentials.
Click on the assignment to be graded.
A list of names of the students in the class shows up.
The professor is able to enter a grade for the student.
Expected result; the assignment should be successfully graded and the grades should show up on the students canvas.

8. **UNIT TEST FOR STUDENTS TO VIEW GRADES;**
Test scenario; viewing grades
Test steps;
The student logins with valid credentials.

INTEGRATION TESTING -
Test Scenario 1: Professor Grading Assignment

Test Steps:
Log in as a professor using valid credentials.
Access the assignment grading interface.
Select an assignment to grade.
Enter grades and feedback for students.
Save or submit the grades.
Expected Result: The grades and feedback should be successfully saved for the selected assignment.

Test Scenario 2: Student Viewing Grades

Test Steps:
Log in as a student using valid credentials.
Navigate to the grades or assignments section.
Find the relevant assignment and view grades and feedback provided by the professor.
Expected Result: The student should be able to view their grades and feedback for the assignment.

Tools: Python unittest framework.
Setup: Mock data for user accounts, courses, and assignments.