

| Display Name | Test Class | Test Method | Coverage | Expected Outcome | Pass/Fail | Actual Outcome |
|---|--------------------|---|---|--|-----------|---|
| AD01 - Add Content in Null Course | AcademicTest | testAddContentWithNullCourse | Tests the method against null inputs | Attempts to add content to a null course and expects a NullPointerException | Pass | The test passes because a NullPointerException is correctly thrown, indicating proper null checks |
| AD02 - Add Assignment With Valid Course | AcademicTest | testAddAssignmentWithValidCourse | Tests the method's ability to correctly add assignments to a course | Adds an assignment to a course and checks if the assignment list size is correct | Fail | The test fails because the assignment is not correctly added to the course's assignment list |
| AD03 - Communicate Through Forum With Valid Forum | AcademicTest | testCommunicateThroughForumWithValidForum | Tests the method for correct message handling | Attempts to communicate through a forum and expects no exceptions | Pass | The test passes because no exception is thrown, indicating proper handling of forum communication |
| AM01 - Submit Null File | AssignmentTest | testSubmitNullFile | Tests the method against null inputs | Attempts to submit a null file and expects a NullPointerException | Pass | The test passes because a NullPointerException is correctly thrown, indicating proper null checks |
| AM02 - Submit Assignment Twice | AssignmentTest | testSubmitAssignmentTwice | Tests the handling of multiple submissions for the same student | Submits two assignments for the same student and checks if the latest submission is recorded | Pass | The test passes because the method correctly updates and records the latest submission |
| C01 - Add Null Student | CourseTest | testAddNullStudent | Tests the method against null inputs | Attempts to enroll a null student and expects a NullPointerException | Fail | The test fails because a NullPointerException is not thrown, indicating improper null checks |
| C02 - Add Null Content | CourseTest | testAddNullContent | Tests the method against null inputs | Attempts to add null content and expects a NullPointerException | Fail | The test fails because a NullPointerException isn't thrown, indicating a lack of null checks |
| C03 - Enroll Student Twice | CourseTest | testEnrollStudentTwice | Tests the handling of duplicate enrollments | Enrolls the same student twice and expects an IllegalArgumentException | Fail | The test fails because no exception is thrown, indicating that the method allows duplicate enrollments |
| S01 - Login Null User | SessionManagerTest | testLoginNullUser | Tests the method against null inputs | Attempts to log in a null user and expects a NullPointerException | Pass | The test passes because a NullPointerException is correctly thrown, indicating proper null checks |
| S02 - Logout Without Login | SessionManagerTest | testLogoutWithoutLogin | Tests the logout method | Attempts to log out without being logged in and expects no exceptions | Pass | The test passes because no exception is thrown, indicating proper handling of logout operations when no user is logged in |
| S03 - Login Twice | SessionManagerTest | testLoginTwice | Tests the login method for enforcing only a single session at once | Logs in the same user twice and expects an IllegalStateException | Fail | The test fails because no exception is thrown, indicating that the method allows multiple logins for the same user |

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| ST01 - Access Course Material | StudentTest | accessCourseMaterial | Tests access of course materials | Checks if an enrolled student can access course materials and if an unenrolled student cannot | Fail | The test fails because accessCourseMaterial does not correctly control access based on enrollment status, allowing both students to access materials |
| ST02 - Upload Assignment With Enrolled Student | StudentTest | uploadAssignmentWithEnrolledStudent | Tests the assignment upload functionality for enrolled students | Checks if an enrolled student can upload an assignment | Pass | The test passes because uploadAssignment correctly handles the upload process for enrolled students |
| ST03 - Upload Assignment With Unenrolled Student | StudentTest | uploadAssignmentWithUnenrolledStudent | Tests the assignment upload functionality for unenrolled students | Checks if an unenrolled student cannot upload an assignment | Fail | The test fails because uploadAssignment does not correctly check the enrollment status, allowing the unenrolled student to upload |
| ST04 - Check Grades With Enrolled Student | StudentTest | checkGradesWithEnrolledStudent | Tests the grade retrieval functionality for enrolled students | Checks if an enrolled student can access their grades | Pass | The test passes because checkGrades correctly retrieves grades for enrolled students |
| ST05 - Check Grades Unenrolled Student | StudentTest | checkGradesUnenrolledStudent | Tests the grade retrieval functionality for unenrolled students | Checks if an unenrolled student cannot access grades | Fail | The test fails because checkGrades does not correctly restrict access for unenrolled students |
| ST06 - Access Exam With Enrolled Student | StudentTest | accessExamWithEnrolledStudent | Tests the exam access functionality for enrolled students | Checks if an enrolled student can access an exam | Pass | The test passes because accessExam correctly grants access to exams for enrolled students |
| ST07 - Access Exam With Unenrolled Student | StudentTest | accessExamWithUnenrolledStudent | Tests the exam access functionality for unenrolled students | Checks if an unenrolled student cannot access an exam | Pass | The test passes because accessExam correctly restricts access to exams for unenrolled students |
| ST08 - Student Get Schedule | StudentTest | getSchedule | Tests the schedule retrieval functionality | Checks if the schedule of assignments and exams is correctly retrieved for an enrolled student | Fail | The test fails because getSchedule does not correctly compile the schedule |
| U01 - Test Authenticate | UserTest | authenticate | Tests the password authentication functionality for users | Checks the authentication mechanism for students and academic users with correct and incorrect passwords | Pass | The test passes because the authenticate method correctly handles password comparisons, including case sensitivity |
| U02 - Test Logout | UserTest | logout | Tests the session management's logout functionality | Checks if a logged-out student can still access their grades | Fail | The test fails because the logout method does not correctly update the session state, allowing the student to still access grades after logging out |