

# Sri Lanka Institute of Information Technology



Software Engineering | SE2030

Year 02 Semester 01 – 2025

Lab Sheet 06 : Software Testing

Group ID – 55 (2025-Y2-S1-MLB-B3G2-05)

## **Web-based Educational Institute Management System**

Group Members –

Student ID	Student Name
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31/08/2025

## 1. User Management (IT24100300 - Dulakshika A.L.S.H)

Test Case ID	Test Title	Description	Preconditions	Test Steps	Test Data	Expected Outcome	Actual Output	Status
UM-01	Verify Admin can create new student account	Test successful creation of student account by Admin	Admin user is logged into the system	1. Navigate to User Management section 2. Click "Add New User" 3. Select "Student" role 4. Fill required fields 5. Click "Save"	Name: John Silva Student ID: STU1001 Email: <a href="mailto:john.s@learnmate.lk">john.s@learnmate.lk</a>	System displays success message. New student account appears in user list	To be filled after execution	To be filled after execution
UM-02	Verify duplicate email prevention	System should prevent registration with existing email	User with test email already exists in system	1. Go to registration page 2. Enter existing email address 3. Complete registration form 4. Submit form	Email: <a href="mailto:existing.user@learnmate.lk">existing.user@learnmate.lk</a>	Error message: "Email already registered. Please use a different email."	To be filled after execution	To be filled after execution
UM-03	Verify Admin can deactivate user account	Test account deactivation functionality	Admin logged in. Active user account exists	1. Go to User Management 2. Find target user account 3. Click "Deactivate" 4. Confirm action	User ID: TCH1005	User status changes to "Inactive". User cannot login	To be filled after execution	To be filled after execution
UM-04	Verify parent-student linking	Test linking parent account to student account	Admin logged in. Parent and student accounts exist	1. Open parent profile 2. Click "Link Student" 3. Search for student ID 4. Select and save	Parent ID: PAR2001 Student ID: STU1005	Success message. Parent can now view student's details	To be filled after execution	To be filled after execution
UM-05	Verify password reset functionality	Test forgot password workflow	User has registered email account	1. Click "Forgot Password" 2. Enter registered email 3. Check email for reset link 4. Set new password 5. Login with new password	Email: <a href="mailto:user@learnmate.lk">user@learnmate.lk</a> New Password: NewPass123!	Password reset successful. User can login with new credentials	To be filled after execution	To be filled after execution
UM-06	Verify role-based access control	Test student cannot access	Student user is logged in	1. Try to access admin URL (/admin/dashboard) 2. Attempt to access	Student credentials	"Access Denied" error message. Student	To be filled after execution	To be filled after execution

		admin features		user management functions		cannot view admin pages		
UM-07	Verify user search functionality	Test searching users by ID or name	Admin logged in. Multiple users exist	1. Go to User Management 2. Use search bar 3. Enter user ID/name 4. View results	Search term: "STU1001"	System displays user profile matching the search term	To be filled after execution	To be filled after execution
UM-08	Verify user profile update	Test users can edit their own profiles	Any user logged in (e.g., student)	1. Go to "My Profile" 2. Click "Edit" 3. Update phone number 4. Save changes	New Phone: 0777123456	Profile updated successfully. Changes reflected immediately	To be filled after execution	To be filled after execution
UM-09	Verify password strength policy	System enforces strong passwords	New user registration in progress	1. Fill registration form 2. Enter weak password 3. Submit form	Password: "123"	Error message requiring stronger password (min 8 chars, letters, numbers)	To be filled after execution	To be filled after execution
UM-10	Verify user role filtering	Test filtering users by role in admin view	Admin logged in. Viewing user list	1. Click "Filter by Role" dropdown 2. Select specific role (Teacher) 3. View filtered list	Role: Teacher	User list shows only users with Teacher role	To be filled after execution	To be filled after execution

## 2. Attendance Tracking (IT24100263 - Dilhani W. P. K. A )

Test Case ID	Test Title	Description	Preconditions	Test Steps	Test Data	Expected Output	Actual Output	Status
TC01	Successful Creation of Attendance Record	Verify that a teacher can successfully create a new attendance record	User is logged in as a teacher; Class session is scheduled	1. Navigate to the attendance tracking page. 2. Select the class	Class: Math Session: September 27, 2025 Students: Student A (present),	New attendance record created; Confirmation message displayed;	New record created. Confirmation message "Attendance saved successfully" displayed.	Pass

		e record for a class session.	ed; Students are enrolled in the class.	and session. 3. Mark attendance for each student (e.g., present/absent). 4. Submit the attendance record.	Student B (absent)	Record visible in historical view.	Record is visible in the historical view with correct present/absent marks.	
TC02	Creation of Attendance Record with All Students Absent	Verify creation when all students are marked absent.	User is logged in as a teacher; Class session is scheduled; Students enrolled.	1. Navigate to attendance tracking page. 2. Select class and session. 3. Mark all students as absent. 4. Submit.	Class: Science Session: September 27, 2025 Students: All marked absent	Record created successfully; Confirmation shown; All entries show absent in historical records.	Record created successfully. Confirmation message displayed. Historical view shows all students with an "Absent" status.	Pass
TC03	Attempt to Create Duplicate Attendance Record	Verify system prevents creating duplicate record for the same session.	User is logged in as teacher; Attendance already created for the session.	1. Navigate to attendance tracking page. 2. Select the same class and session. 3. Attempt to mark and submit attendance.	Class: Math Session: September 27, 2025 (already recorded)	Error message: "Attendance already recorded for this session"; No new record created.	Upon selecting the session, a message "Attendance already exists for this session. Would you like to edit it?" is displayed. The form does not allow new marks to be submitted.	Pass
TC04	View Historical Attendance	Verify a student can view their own	User is logged in as a student;	1. Navigate to attendance tracking	Student ID: S001 Date Range:	List of attendance records displayed	A list of attendance records for student S001	Pass

	ance by Student	historical attendance records.	Attendance records exist for the student.	page. 2. Select view historical records. 3. Filter by date range if applicable.	September 1-27, 2025	with dates, classes, and status (present/absent).	from Sep 1-27, 2025 is displayed, showing dates, class names, and status (Present/Absent).	
TC05	View Historical Attendance by Parent	Verify a parent can view their child's historical attendance records.	User is logged in as a parent; Linked to a student; Records exist.	1. Navigate to attendance tracking page. 2. Select child's profile. 3. View historical records.	Parent for Student ID: S002 Date Range: September 1-27, 2025	Records for the child displayed; No access to other students' data.	The historical records for the linked child (S002) are displayed correctly. Attempting to change the student ID in the URL to another student (e.g., S001) results in an "Access Denied" error.	Pass
TC06	Unauthorized Access to View Attendance	Verify unauthorized user cannot view attendance records.	User is not logged in or logged in as unauthorized role (e.g., guest).	1. Attempt to navigate to attendance tracking page. 2. Try to view historical records.	N/A	Redirect to login page or error: "Unauthorized access"; No records displayed.	User was redirected to the login page immediately upon trying to access the attendance tracking URL.	Pass
TC07	Successful Update of Attendance Mark	Verify teacher can update an existing attendance mark.	User is logged in as teacher; Existing record for session.	1. Navigate to attendance tracking page. 2. Select existing session record. 3. Change a student's	Class: Math Session: September 27, 2025 Student A: Change from absent to present	Update successful; Confirmation message; Updated status reflected in historical view.	The existing record was loaded. Student A's status was changed from Absent to Present. After submission, a confirmation "Attendance	Pass

				mark (e.g., absent to present). 4. Submit update.			updated successfully" was shown. The historical view reflects the new status.	
TC08	Update Attempt by Unauthorized User	Verify non-teacher/admin cannot update attendance.	User is logged in as student or parent; Existing record.	1. Navigate to attendance tracking page. 2. Attempt to select and update a record.	Class: Science Session: September 27, 2025	Error: "Unauthorized to update records"; No changes made.	The historical records are visible in a read-only mode. The "Edit" button is not displayed for the user. Attempting to access the edit page via a direct URL results in an "Unauthorized" error message.	Pass
TC09	Successful Deletion of Attendance Record	Verify admin can delete an attendance record for a canceled class.	User is logged in as admin; Existing record for session.	1. Navigate to attendance tracking page. 2. Select the record to delete. 3. Confirm deletion.	Class: Math Session: September 27, 2025 (canceled)	Record deleted; Confirmation message; Record no longer visible in historical view.	The admin user selected the record and clicked "Delete". After confirmation, a message "Attendance record deleted successfully" was displayed. The record is no longer found in the historical view.	Pass
TC10	Deletion Attempt by	Verify non-admin cannot delete	User is logged in as teacher or	1. Navigate to attendance tracking page. 2.	Class: Science Session: September 27, 2025	Error: "Unauthorized to delete records";	The "Delete" button is not visible for the teacher user. Attempting to	Pass

	Non-Admin	attendance records.	student; Existing record.	Attempt to delete a record.		Record remains intact.	call the delete API directly returns a JSON error: "Unauthorized to delete records". The record remains in the system.	
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### 3. Communication and Notifications (IT24100239 – Disanayaka D.M.C.N)

Test Case ID	Test Title	Description	Preconditions	Test Steps	Test Data	Expected Output	Actual Output	Status
COM-01	Create Announcement Successfully	Verify that an authorized user (Teacher/Admin) can create and publish a new announcement.	1. User is logged in as a Teacher or Administrator. 2. User is on the "Create Announcement" page.	1. Enter a valid title and announcement body. 2. Click the "Publish" button.	Title: Class Schedule Update Body: The science class for this week is rescheduled to Friday.	1. A success message "Announcement published successfully" is displayed. 2. The new announcement appears at the top of the announcements list on the user dashboard.	As expected. The announcement was created and is visible on the dashboard.	Pass
COM-02	Create Announcement - Empty Fields	Verify the system prevents publishing an announcement with a blank title.	1. User is logged in as a Teacher or Administrator. 2. User is on the "Create Announcement" page.	1. Leave the title field empty. 2. Enter text in the body. 3. Click the "Publish" button.	Title: (Blank) Body: This is an important update.	1. An error message "Title is required" is displayed near the title field. 2. The announcement is not saved.	As expected. The system displayed an error message and did not save the announcement.	Pass

COM-03	Create Announcement - Unauthorized User	Verify that a Student cannot access the functionality to create an announcement.	1. User is logged in as a Student.	1. Navigate to the main dashboard. 2. Check for a "Create Announcement" button or link.	N/A	The "Create Announcement" button/link is not visible in the Student's user interface.	As expected. The "Create Announcement" option was not found on the student dashboard.	Pass
COM-04	View Announcements (Read)	Verify all logged-in users can see the list of announcements on their dashboard.	1. At least one announcement exists in the system. 2. User is logged in (as any role: Student, Teacher, Admin).	1. Navigate to the main dashboard after login.	N/A	1. The "Announcements" section is visible. 2. Existing announcements are displayed in a list, showing title and publication date.	As expected. The announcements section was visible with a list of posts.	Pass
COM-05	View Full Announcement Content	Verify users can view the complete details of a single announcement.	1. User is logged in. 2. Announcements are listed on the dashboard.	1. Click on the title of an announcement from the list.	Announcement Title: Welcome to the New Semester	1. A new page or pop-up opens displaying the full announcement title, body, author, and timestamp.	As expected. Clicking the title opened a detail view with all information.	Pass
COM-06	Update Announcement as Author	Verify the author of an announcement can edit its content.	1. User (Teacher) is logged in. 2. An announcement created by this user exists.	1. Go to the announcement list. 2. Find your announcement and click the "Edit"	Original Body: Meeting at 3 PM. New Body: Meeting at 4 PM in Room 301.	1. A success message "Announcement updated successfully" is displayed. 2. The updated content is shown when the	Unexpected: Clicking "Save Changes" resulted in a server error (500 Internal Server Error). The update did not succeed.	Fail



				button. 3. Modify the announcement body. 4. Click "Save Changes".		announcement is viewed.		
COM-07	Update Announcement - Unauthorized User	Verify a user who is not the author cannot edit an announcement.	1. User A (Teacher) is logged in. 2. An announcement created by User B exists.	1. User A views the list of announcements. 2. Locate an announcement created by another user.	N/A	The "Edit" button is not visible for announcements created by other users.	Unexpected: The "Edit" button was visible, but clicking it displayed an error: "You are not authorized to edit this announcement." This is a medium-severity bug.	fail
COM-08	Delete Announcement as Administrator	Verify an Administrator can delete any announcement from the system.	1. User is logged in as an Administrator. 2. At least one announcement exists.	1. Go to the admin announcements management panel. 2. Select an announcement and click the "Delete" button. 3. Confirm the deletion in the confirmation dialog.	Announcement Title: Old Sports Day Poster	1. A success message "Announcement deleted successfully" is displayed. 2. The announcement is removed from the list for all users.	As expected. The announcement was permanently deleted and disappeared from the list.	Pass

COM-09	Delete Announcement - Non-Admin User	Verify that a Teacher (non-admin) cannot delete announcements.	1. User is logged in as a Teacher. 2. An announcement exists (even if created by this teacher).	1. Go to the announcement list or detail view.	N/A	The "Delete" button is not visible or is disabled for the Teacher role.	As expected. No delete functionality was available to the Teacher role.	Pass
COM-10	System-wide Notification Display	Verify that a newly published announcement is immediately visible to all user roles.	1. Admin publishes a new announcement (see COM-01).	1. Log out as Admin. 2. Log in as a Student. 3. Check the dashboard. 4. Log out and log in as a Teacher. 5. Check the dashboard.	New Announcement Title: Urgent: System Maintenance Tonight	The new announcement is visible and correctly displayed on the dashboards of both the Student and the Teacher immediately after publication.	As expected. The announcement was instantly visible to both Student and Teacher accounts.	Pass

#### 4. Fee management (IT24100283 - Devinda S. U. V)

Test Case ID	Test Scenario/ Description	Precondition	Test Steps	Test Data/ Input	Expected Result	Actual result	Status/ (Pass/Fail)	Priority
TC_FM_01	View outstanding fee balance	Parent logged into system	1.Navigate to “Fee Management” 2.Select” View Balance”	N/A	System displays correct outstanding balance	-	-	High
TC_FM_02	Upload valid payment proof	Parent has deposited fee at bank	1.Go to” Upload payment proof” 2.Enter payment details 3.Upload slip (valid JPG) 4.Submit	File: slip1.jpg, Amount: 10,000	System accepts file, stores details successfully	-	-	High
TC_FM_03	Upload invalid file type	Parent logged in	1.Go to “Upload payment proof” 2.Upload slip with unsupported format 3.Submit	File: slip.txt	System rejects file, shows error “Invalid file format”	-	-	Medium
TC_FM_04	Upload slip without payment details	Parent logged in	1. Go to “Upload Payment Proof” 2. Upload slip without entering date/amount 3. Submit	File: slip2.jpg, No amount/date	System prompts: “Enter required details”	-	-	Medium
TC_FM_05	Full payment made	Parent has deposited full fee	1. Upload slip 2. Enter payment details equal to balance 3. Submit	Balance: 10,000 Payment: 10,000	System updates status = “Paid in Full”	-	-	High
TC_FM_06	Partial payment	Parent has deposited less than total	1. Upload slip 2. Enter payment details less than balance 3. Submit	Balance: 10,000 Payment: 5,000	System updates status = “Partial Payment” and shows remaining balance	-	-	High

TC_FM_07	Excess payment	Parent entered more than outstanding	1. Upload slip 2. Enter payment details exceeding balance 3. Submit	Balance: 10,000 Payment: 12,000	System rejects entry, asks for correction	-	-	Medium
TC_FM_08	Invalid payment amount	Parent logged in	1. Upload slip 2. Enter invalid amount (0 or negative) 3. Submit	Payment: -100	System rejects, error "Invalid amount"	-	-	High
TC_FM_09	Payment verification by admin	Parent has upload valid proof	1. Admin logs in 2. Opens uploaded slip 3. Verifies payment	Slip: valid JPG, Amount = 10,000	Admin marks payment as "Verified"	-	-	High
TC_FM_10	Confirmation notification	Payment successfully verified	1. Complete verification process 2. Check notifications	N/A	System sends email/SMS confirmation to parent	-	-	High

## 5. Exams & Marks management (IT24100314 - Dahanayake L.K)

Test Case ID	Test Title	Description	Preconditions	Test Steps	Test Data	Expected Output	Actual Output	Status
EXA M-01	Create Exam Successfully	Verify that a Teacher can create a new exam by uploading a PDF and filling in details.	1. Teacher is logged in. 2. Teacher is assigned to a subject. 3. Teacher is on the "Create Exam" page.	1. Class (Grade): Grade 10 2. subject: science 3. exam date: 2025-10-15 3. pass marks: 40 File to Upload: Science_MidTerm.pdf	Subject: English Exam Name: Mid-Term Examination Date: 2025-10-15 Total Marks: 100	Success message 'Exam created successfully' is displayed. The new exam for Grade 10 Science appears in the exam list.	As expected. The exam was saved and is visible in the subject's exam list.	Pass
EXA M-02	Enter Marks for Students	Verify a Teacher can enter marks for all students enrolled in the exam's subject.	1. Teacher is logged in. 2. An exam exists for a subject taught by the teacher. 3. Students are enrolled in the subject.	1. Navigate to the Manage Exams page and click 'Enter Marks' for the relevant exam.	Student Marks: [85, 92, 78]	1. Success message "Marks saved successfully" is displayed. 2. Marks are recorded against each student's profile for that exam.	As expected. Marks were saved and can be viewed in student records.	Pass
EXA M-03	Enter Invalid Marks	Verify the system prevents entering marks that	1. Teacher is logged in. 2. An	1. Try to enter a value greater than 100	Marks: 105	1. An error message 'Marks must be between	As expected. System validated the input and displayed the	Pass

		exceed the exam's total marks.	exam with a total of 100 marks exists. 3. Teacher is on the "Enter Marks" page.	for a student. 2. Click "Submit Marks".		0 and 100' is displayed.	correct error message.	
EXA M-04	Student Views Own Marks	Verify a Student can only see their own published exam results.	1. Student is logged in. 2. Exam marks have been published by the teacher.	1. Navigate to the "Exam marks"	N/A	1. The student sees a list of exams for their enrolled subjects. 2. They can see only their own marks, not other students'.	Unexpected: The page loaded, but the marks column was blank even though marks were published. A page refresh fixed the issue. (Minor UI bug).	Fail
EXA M-05	Parent Views Student's Marks	Verify a Parent linked to a student can view the student's exam results.	1. Parent is logged in. 2. Parent account is linked to a student. 3. The student's exam marks have been published.	1. Navigate to the "My Child's Progress" section.	N/A	The parent can see the linked student's name and a list of their exam results.	As expected. The parent dashboard correctly displayed the child's marks.	Pass
EXA M-06	Update Marks After Re-evaluation	Verify a Teacher can update a student's marks for a	1. Teacher is logged in. 2. Marks for an	1. Locate the student's record. 2. Click	Original Mark: 78 New Mark: 82 Reason: Re-	1. Success message "Marks updated successfully" is	As expected. The mark was updated, and the reason was logged in the system's history.	Pass

		specific exam.	exam have already been entered. 3. Teacher is on the "View/Edit Marks" page for that exam.	"Edit" and change the mark. 3. Add a reason for the change (e.g., "Re-evaluation"). 4. Click "Update".	evaluation of Question 3	displayed. 2. The student's record shows the updated mark. 3. An audit log records the change and the reason.		
EXA M-07	Update Marks - Unauthorized User	Verify a Teacher cannot update marks for an exam of a subject they do not teach.	1. Teacher A is logged in. 2. An exam exists for a subject taught by Teacher B. 3. Marks have been entered by Teacher B.	1. Teacher A tries to navigate to the exam list for the subject she/he doesn't teach	N/A	Teacher A should not have access to the exam or marks for that subject. It is not visible for the teacher	Unexpected: Teacher A could see the exam list for the subjects only she teaches and she can enter marks only for those subjects	Fail
EXA M-08	Delete Exam (Admin)	Verify an Administrator can delete an exam that was created by mistake.	1. Administrator is logged in. 2. An exam exists in the system.	1. Navigate to the Admin Exam Management panel. 2. Select the	Exam Name: Test Exam - Duplicate	1. A confirmation dialog appears: "Are you sure? This will also delete all associated marks."	As expected. The exam and all related data were permanently deleted after confirmation.	Pass

				exam and click "Delete". 3. Confirm the action in the dialog box.		2. After confirmation, a success message "Exam deleted successfully" is displayed. 3. The exam and all its marks are removed from the system.		
EXA M-09	Delete Exam - Teacher (Unauthorized)	Verify a Teacher cannot delete an exam, even if they created it.	1. Teacher is logged in. 2. An exam created by this teacher exists.	1. Teacher navigates to the exam details page. 2. Look for a "Delete" button.	N/A	The "Delete" button should not be visible to Teachers. Only Admins should have this privilege.	As expected. No delete option was available on the teacher's interface.	Pass
EXA M-10	Marks Publishing Workflow	Verify that marks are not visible to Students/Parents until explicitly published by the Teacher.	1. Teacher has entered marks for an exam. 2. The "Publish" action has not been performed.	1. Teacher enters marks but does not click "Publish". 2. Log out and log in as a Student linked to that exam. 3. Check the "My Results" section.	N/A	The exam should be listed for the student, but the marks column should show "Not Published" or be blank.	As expected. The student's portal showed the exam name and date, but the marks field was empty with a "Pending" status.	Pass



## 6. Class & Timetable Management (IT24100237 - Bandara R.M.G.L)

