ADDIS ABABA SCIENCES AND TECHNOLOGY UNIVERSITY

College of Mechanical and Electrical Engineering

Department of Software Engineering

Software Verification, Validation

and Testing

Software Testing Project

Individual Assignment

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IDentify Me : A Role-Based ID Replacement Web Application

1. <u>Software Requirements</u>

1.1. Introduction

This section outlines the functional and non-functional requirements for the IDentify Me system, a web application designed for Addis Ababa Science and Technology University (AASTU). The system streamlines the process of ID replacement for students by facilitating interactions among three user roles: Students, Finance Department, and ID Department. Students can request ID renewals or replacements, upload necessary documents, and track request statuses. The Finance Department verifies payment receipts, and the ID Department processes approved requests to issue new IDs.

1.2. Functional Requirements (FR)

Functional requirements describe what the system should do.

1.2.1 Student Functions

- FR-001: The system shall allow students to log in using their university-provided ID number and password.
- FR-002: The system shall allow logged-in students to select the type of ID request: renewal (for damaged IDs) or new ID (for lost IDs).
- FR-003: For ID renewal requests, the system shall require students to upload an image of the damaged ID.
- FR-004: For new ID requests, the system shall require students to upload an image of the police report and approval documents from all relevant offices.
- FR-005: The system shall require students to upload a payment receipt for both renewal and new ID requests.
- FR-006: The system shall allow students to submit ID replacement requests to the Finance Department for payment approval.
- FR-007: The system shall allow students to view their request history and the status of their submitted requests (e.g., Pending, Approved, Declined).
- FR-008: The system shall allow students to access and edit their profile information (e.g., contact details, password).
- FR-009: The system shall allow students to log out securely.

1.2.2 Finance Department Functions

- FR-010: The system shall allow Finance Department users to log in using their assigned ID and password.
- FR-011: The system shall display a dashboard for Finance users showing all pending ID replacement requests.
- FR-012: The system shall allow Finance users to search for specific requests using the request ID.
- FR-013: The system shall allow Finance users to approve or decline ID replacement requests based on payment verification.
- FR-014: The system shall allow Finance users to access and edit their profile information.
- FR-015: The system shall allow Finance users to log out securely.

1.2.3 ID Department Functions

- FR-016: The system shall allow ID Department users to log in using their assigned ID and password.
- FR-017: The system shall display a dashboard for ID Department users showing all requests approved by the Finance Department.
- FR-018: The system shall allow ID Department users to review the details of approved requests (e.g., uploaded documents, student ID).
- FR-019: The system shall allow ID Department users to update the status of a request to 'Processed' (indicating ID issuance) or 'On Hold' (if further action is needed).
- FR-020: The system shall allow ID Department users to access and edit their profile information.
- FR-021: The system shall allow ID Department users to log out securely.

1.3. Non-Functional Requirements (NFR)

Non-functional requirements describe how the system should perform.

- NFR-001 (Usability): The web interface shall be intuitive and easy to navigate for Students, Finance, and ID Department users with minimal training. Error messages shall be clear and informative (e.g., "Invalid file format for ID image" or "Request ID not found").
- NFR-002 (Performance): System responses (e.g., login, request submission, status check, dashboard loading, document upload) should typically complete within 3 seconds under normal load conditions.
- NFR-003 (Security): Passwords shall be stored securely (e.g., hashed and salted). All communication involving sensitive data (e.g., login credentials, document uploads) shall use HTTPS to ensure encryption. Access control shall ensure Students, Finance, and ID Department users can only access their respective functions. Uploaded documents shall be stored securely and accessible only to authorized users (Finance and ID Department).

- NFR-004 (Reliability): The system shall be available during university operational hours (e.g., 8 AM to 5 PM EAT). Data integrity shall be maintained (e.g., request statuses and uploaded documents must be accurately reflected). Input validation shall prevent invalid data (e.g., incorrect file formats, invalid request IDs).

2. Software Test Plan

2.1. Introduction

This section outlines the test plan for the IDentify Me system, a web application designed for Addis Ababa Science and Technology University (AASTU). The purpose of this test plan is to detail the scope and approach of testing activities to ensure the system meets the specified functional and non-functional requirements for streamlining ID replacement processes for Students, Finance Department, and ID Department users.

2.2. Test Objectives

The primary objectives of this test plan are to:

- Verify that all functional requirements (FR) are implemented correctly and the system performs the intended actions for Students, Finance, and ID Department users.
- Validate that the system meets the non-functional requirements (NFR) related to usability, performance, security, reliability, maintainability, compatibility, and scalability.
- Identify defects and deviations from the specified requirements.
- Ensure the system is stable and ready for deployment.

2.3. Testing Approach

The testing approach will include both functional and non-functional testing techniques.

Functional Testing:

- **Black-box Testing**: Test cases will be designed based on the requirements specifications without knowledge of the internal system structure. This will include:
    - **Requirement-Based Testing**: Each functional requirement will be tested to ensure it is implemented correctly.
    - **Boundary Value Analysis**: Testing will focus on boundary values of input fields (e.g., file size limits for uploads, valid ID number formats).

- **Equivalence Partitioning**: Input data will be divided into partitions where all data within a partition is expected to be processed similarly (e.g., valid vs. invalid file formats).
  - **Integration Testing**: Testing interactions between modules, such as student request submission, Finance approval, and ID Department processing.
  - **System Testing**: Testing the complete integrated system to evaluate compliance with all requirements.

Non-Functional Testing:

- **Usability Testing**: Evaluating the web interface for ease of navigation and clarity of error messages (NFR-001).
- **Performance Testing**: Measuring response times for key operations (e.g., login, request submission, document upload) under normal and peak load conditions (NFR-002, NFR-007).
- **Reliability Testing**: Verifying system availability during operational hours, data integrity, and input validation (NFR-004).

2.4. Test Scope

In Scope:

- **Student Functions** (FR-001 to FR-009): Login, ID request submission, document uploads, request history/status, payment approval requests, profile management, and logout.
- **Finance Department Functions** (FR-010 to FR-015): Login, request dashboard, request search, approval/decline, profile management, and logout.
- **ID Department Functions** (FR-016 to FR-021): Login, approved request dashboard, request review, status updates, profile management, and logout.
- **Non-Functional Requirements**:
  - Usability (NFR-001)
  - Performance (NFR-002)
  - Security (NFR-003)
  - Reliability (NFR-004)

Out of Scope:

- Testing of underlying browser or operating system software.
- Testing of external services (e.g., payment gateways, if integrated).
- User acceptance testing (UAT) by actual end-users unless specified.
- Testing beyond 5,000 concurrent users.

2.5. Test Environment

The test environment will replicate the target production environment as closely as possible.

- **Hardware**: Windows 11 PC
- **Software**:
    - Web server hosting the IDentify Me application (mvn).
    - Backend framework (Java).
    - Database (MySQL).
- **Network**: Simulated university network conditions (e.g., typical bandwidth and latency).

2.6. Test Entry and Exit Criteria

Test Entry Criteria:

- The software build is stable and delivered for testing.
- The test environment (servers, browsers, database) is set up and configured.
- Test cases are designed and ready for execution.

Test Exit Criteria:

- All high-priority test cases have been executed.
- At least 90% of test cases have passed.
- All critical and major defects are resolved and verified.
- Remaining open defects are documented and within acceptable limits.
- The test summary report is prepared and approved.

2.7. Test Deliverables

- Test Plan document.
- Test Case specifications.
- Test Execution Report.
- Traceability Matrix (linking requirements to test cases and results).
- Test Summary Report.

2.8. Test Case Design

The following test case template will be used:

- **Test Case ID**: A unique identifier for the test case (e.g., TC-001).
- **Requirement ID(s)**: The ID(s) of the requirement(s) being tested (e.g., FR-001, NFR-003).

- **Test Suite**: The logical grouping (e.g., Student Login, Finance Dashboard).
- **Test Case Description**: A brief description of what the test verifies (e.g., "Verify student can log in with valid ID and password").
- **Preconditions**: Conditions required before execution (e.g., "Student has a valid ID number and password").
- **Test Steps**: Sequence of actions to perform the test (e.g., "1. Navigate to login page. 2. Enter ID and password. 3. Click 'Login'").
- **Expected Result**: The expected outcome (e.g., "Student is redirected to the dashboard").
- **Actual Result**: The observed outcome during execution.
- **Status**: Pass/Fail/Blocked.
- **Notes**: Additional observations or comments (e.g., "Error message displayed for invalid password").

3. <u>Appendices</u>

3.1. Organized Test Cases

3.1.1. Test Suite: Student Functions

Test Case ID	Requiremen t ID(s)	Test Case Description	Preconditions	Test Steps	Expected Result
TC_FR_001_0 1	FR-001	Verify successful student login with valid ID and password.	A student account exists with a valid ID and password. System is running.	1. Navigate to the login page. 2. Enter valid student ID and password. 3. Click "Login".	The student dashboard is displayed successfully.

TC_FR_001_02	FR-001	Verify login failure with invalid password.	A student account exists. System is running.	1. Navigate to the login page. 2. Enter valid student ID and invalid password. 3. Click "Login".	An error message is displayed indicating invalid credentials (e.g., "Invalid ID or Password").
TC_FR_001_03	FR-001	Verify login failure with invalid student ID.	System is running.	1. Navigate to the login page. 2. Enter an invalid student ID and any password. 3. Click "Login".	An error message is displayed indicating invalid credentials.
TC_FR_002_01	FR-002	Verify selection of ID request type (renewal or new ID).	A student is logged in. System is running.	1. Navigate to the ID request section. 2. Select either "Renewal" or "New ID" from the	The system displays the appropriate form for the selected request type (renewal or new ID).

				request type dropdown. 3. Click "Proceed".	
TC_FR_003_01	FR-003	Verify successful upload of damaged ID image for renewal request.	A student is logged in and has selected "Renewal". System is running.	1. In the renewal form, upload a valid image file (e.g., JPG, PNG) of the damaged ID. 2. Click "Submit".	The image is uploaded successfully, and a confirmation message is displayed.
TC_FR_003_02	FR-003	Verify validation error for invalid file format in renewal request.	A student is logged in and has selected "Renewal". System is running.	1. In the renewal form, attempt to upload an invalid file (e.g., .txt). 2. Click "Submit".	An error message is displayed indicating an invalid file format.

TC_FR_004_01	FR-004	Verify successful upload of police report and approval documents for new ID request.	A student is logged in and has selected "New ID". System is running.	1. In the new ID form, upload valid image files (e.g., JPG, PNG) for the police report and approval documents. 2. Click "Submit".	The documents are uploaded successfully, and a confirmation message is displayed.
TC_FR_004_02	FR-004	Verify validation error for missing police report in new ID request.	A student is logged in and has selected "New ID". System is running.	1. In the new ID form, upload approval documents but leave the police report field empty. 2. Click "Submit".	An error message is displayed indicating that the police report is required.
TC_FR_005_01	FR-005	Verify successful upload of payment receipt for ID request.	A student is logged in and has completed the renewal or new ID form. System is running.	1. In the request form, upload a valid image file (e.g., JPG, PNG) of the	The receipt is uploaded successfully, and a confirmation message is displayed.

				payment receipt. 2. Click "Submit".	
TC_FR_005_02	FR-005	Verify validation error for invalid receipt file size (e.g., exceeds limit).	A student is logged in and has completed the renewal or new ID form. System is running.	1. In the request form, attempt to upload a receipt file exceeding the size limit (e.g., >5MB). 2. Click "Submit".	An error message is displayed indicating the file size exceeds the allowed limit.
TC_FR_006_01	FR-006	Verify successful submission of ID request to Finance Department.	A student is logged in and has completed all required fields (including uploads). System is running.	1. Complete the ID request form. 2. Click "Submit Request".	The request is submitted to the Finance Department, and a unique request ID is generated and displayed to the student.

TC_FR_007_01	FR-007	Verify student can view request history and status.	A student is logged in and has submitted at least one ID request. System is running.	1. Navigate to the "Request History" section. 2. Select a request or view the list.	The request history is displayed, showing request IDs, types, and statuses (e.g., Pending, Approved, Declined).
TC_FR_007_02	FR-007	Verify error message for invalid request ID when checking status.	A student is logged in. System is running.	1. Navigate to the "Check Status" section. 2. Enter an invalid request ID. 3. Click "Check Status".	An error message is displayed indicating the request ID is invalid or not found.
TC_FR_008_01	FR-008	Verify student can edit profile information.	A student is logged in. System is running.	1. Navigate to the "Profile" section. 2. Update a field (e.g., contact number). 3. Click "Save".	The profile is updated successfully, and a confirmation message is displayed.

Test Case ID	Requirement ID(s)	Test Case Description	Preconditions	Test Steps	Expected Result
TC_FR_008_02	FR-008	Verify validation error for invalid profile data (e.g., email format).	A student is logged in. System is running.	1. Navigate to the "Profile" section. 2. Enter an invalid email format (e.g., "test@"). 3. Click "Save".	An error message is displayed indicating an invalid email format.
TC_FR_009_01	FR-009	Verify student can log out successfully.	A student is logged in. System is running.	1. Click the "Logout" button.	The student is logged out and redirected to the login page.

3.1.2. Test Suite: Finance Department Functions

Test Case ID	Requirement ID(s)	Test Case Description	Preconditions	Test Steps	Expected Result
TC_FR_010_01	FR-010	Verify successful Finance user login with valid ID and password.	A Finance account exists with valid credentials. System is running.	1. Navigate to the login page. 2. Enter valid Finance ID and password.	The Finance dashboard is displayed successfully.

				3. Click "Login".	
TC_FR_010_02	FR-010	Verify login failure with invalid Finance password.	A Finance account exists. System is running.	1. Navigate to the login page. 2. Enter valid Finance ID and invalid password. 3. Click "Login".	An error message is displayed indicating invalid credentials.
TC_FR_011_01	FR-011	Verify Finance dashboard displays all pending ID requests.	A Finance user is logged in. At least one student request is pending. System is running.	1. Log in as a Finance user. 2. View the dashboard.	The dashboard displays a list of all pending ID replacement requests with details (e.g., request ID, student ID).
TC_FR_012_01	FR-012	Verify Finance user can search for a specific request using valid request ID.	A Finance user is logged in. A request exists in the system. System is running.	1. Navigate to the search section. 2. Enter a valid request ID.	The request details (e.g., student ID, uploaded receipt) are displayed.

				3. Click "Search".	
TC_FR_012_02	FR-012	Verify error message for invalid request ID in search.	A Finance user is logged in. System is running.	1. Navigate to the search section. 2. Enter an invalid request ID. 3. Click "Search".	An error message is displayed indicating the request ID is not found.
TC_FR_013_01	FR-013	Verify Finance user can approve a request.	A Finance user is logged in. A pending request exists with a valid receipt. System is running.	1. Navigate to the pending requests list. 2. Select a request. 3. Click "Approve".	The request status is updated to "Approved", and the ID Department is notified.

TC_FR_013_02	FR-013	Verify Finance user can decline a request.	A Finance user is logged in. A pending request exists. System is running.	1. Navigate to the pending requests list. 2. Select a request. 3. Click "Decline". 4. Enter a reason (e.g., "Invalid receipt").	The request status is updated to "Declined", and the student is notified with the reason.
TC_FR_014_01	FR-014	Verify Finance user can edit profile information.	A Finance user is logged in. System is running.	1. Navigate to the "Profile" section. 2. Update a field (e.g., email). 3. Click "Save".	The profile is updated successfully, and a confirmation message is displayed.
TC_FR_015_01	FR-015	Verify Finance user can log out successfully.	A Finance user is logged in. System is running.	1. Click the "Logout" button.	The Finance user is logged out and redirected to the login page.

3.1.3. Test Suite: ID Department Functions

Test Case ID	Requiremen t ID(s)	Test Case Description	Preconditions	Test Steps	Expected Result
TC_FR_016_0 1	FR-016	Verify successful ID Department user login with valid ID and password.	An ID Department account exists with valid credentials. System is running.	1. Navigate to the login page. 2. Enter valid ID Department ID and password. 3. Click "Login".	The ID Department dashboard is displayed successfully.
TC_FR_016_0 2	FR-016	Verify login failure with invalid ID Department password.	An ID Department account exists. System is running.	1. Navigate to the login page. 2. Enter valid ID Department ID and invalid password. 3. Click "Login".	An error message is displayed indicating invalid credentials.

TC_FR_017_01	FR-017	Verify ID Department dashboard displays Finance-approved requests.	An ID Department user is logged in. At least one request is approved by Finance. System is running.	1. Log in as an ID Department user. 2. View the dashboard.	The dashboard displays a list of all Finance-approved requests with details (e.g., request ID, student ID, documents).
TC_FR_018_01	FR-018	Verify ID Department user can review approved request details.	An ID Department user is logged in. An approved request exists. System is running.	1. Navigate to the approved requests list. 2. Select a request. 3. Click "View Details".	The request details (e.g., uploaded documents, student ID) are displayed.
TC_FR_019_01	FR-019	Verify ID Department user can update request status to "Processed".	An ID Department user is logged in. An approved request exists. System is running.	1. Navigate to the approved requests list. 2. Select a request. 3. Click "Mark as Processed".	The request status is updated to "Processed", and the student is notified of ID issuance.

TC_FR_019_02	FR-019	Verify ID Department user can update request status to "On Hold".	An ID Department user is logged in. An approved request exists. System is running.	1. Navigate to the approved requests list. 2. Select a request. 3. Click "Mark as On Hold". 4. Enter a reason (e.g., "Missing document").	The request status is updated to "On Hold", and the student is notified with the reason.
TC_FR_020_01	FR-020	Verify ID Department user can edit profile information.	An ID Department user is logged in. System is running.	1. Navigate to the "Profile" section. 2. Update a field (e.g., contact number). 3. Click "Save".	The profile is updated successfully, and a confirmation message is displayed.
TC_FR_021_01	FR-021	Verify ID Department user can log out successfully.	An ID Department user is logged in. System is running.	1. Click the "Logout" button.	The ID Department user is logged out and redirected to the login page.

3.1.4. Test Suite: Non-Functional Requirements

Test Case ID	Requirement ID(s)	Test Case Description	Preconditions	Test Steps	Expected Result
TC_NFR_001_01	NFR-001	Verify the interface is intuitive for students with minimal training.	A student user with no prior training is available. System is running.	1. Provide the student with access to the login page. 2. Ask them to log in, submit an ID request, and check request status without guidance. 3. Observe their navigation and task completion.	The student completes tasks within 2 minutes with no external help, reporting the interface as easy to use.
TC_NFR_001_02	NFR-001	Verify error messages are clear and informative for invalid inputs.	A student is logged in. System is running.	1. Attempt to upload an invalid file format (e.g., .txt) for a renewal request. 2. Submit the form. 3. Note the error message displayed.	The error message clearly states "Invalid file format. Please upload JPG or PNG." or similar.

TC_NFR_001 _03	NFR-001	Verify the interface is intuitive for Finance and ID Department users.	A Finance and an ID Department user with no prior training are available. System is running.	1. Provide each user with access to their dashboard. 2. Ask them to search for a request (Finance) and update a request status (ID Department) without guidance. 3. Observe their navigation.	Both users complete tasks within 5 minutes with no external help, reporting the interface as easy to use.
TC_NFR_002 _01	NFR-002	Verify login response time is within 3 seconds under normal load.	System is running with normal load (e.g., 100 concurrent users). A student account exists.	1. Navigate to the login page. 2. Enter valid student ID and password. 3. Click "Login" and measure response time.	The dashboard loads within 3 seconds.
TC_NFR_002 _02	NFR-002	Verify request submission response time is within 3 seconds under normal load.	A student is logged in. System is running with normal load.	1. Complete an ID request form with valid data and uploads. 2. Click "Submit Request" and measure response time.	The submission completes, and a request ID is displayed within 3 seconds.

TC_NFR_002_03	NFR-002	Verify dashboard loading time for Finance user is within 3 seconds under normal load.	A Finance user is logged in. System is running with normal load.	1. Log in as a Finance user. 2. Access the dashboard and measure loading time.	The dashboard with pending requests loads within 3 seconds.
TC_NFR_003_01	NFR-003	Verify passwords are stored securely (hashed and salted).	System is running with access to the database. A student account exists.	1. Create a student account with a known password. 2. Inspect the database entry for the password field.	The password is stored as a hashed value (e.g., using bcrypt) with a unique salt, not in plaintext.
TC_NFR_003_02	NFR-003	Verify all communications use HTTPS encryption.	System is running. A network monitoring tool (e.g., Wireshark) is available.	1. Perform a student login and submit an ID request. 2. Monitor network traffic during these actions.	All data transmissions (e.g., login credentials, file uploads) are encrypted via HTTPS (TLS/SSL).

TC_NFR_003_03	NFR-003	Verify access control prevents students from accessing Finance functions.	A student is logged in. System is running.	1. Attempt to access the Finance dashboard URL directly (e.g., /finance/dashboard). 2. Observe the system response.	The system denies access, redirecting to an error page or login page with a message like "Unauthorized Access".
TC_NFR_003_04	NFR-003	Verify access control prevents Finance users from accessing ID Department functions.	A Finance user is logged in. System is running.	1. Attempt to access the ID Department dashboard URL directly (e.g., /id-department/dashboard). 2. Observe the system response.	The system denies access, redirecting to an error page or login page with a message like "Unauthorized Access".

TC_NFR_003_05	NFR-003	Verify uploaded documents are accessible only to authorized users.	A student has submitted an ID request with uploaded documents. Finance and ID Department users are logged in. System is running.	1. Attempt to access the uploaded document URL as an unauthorized user (e.g., another student). 2. Log in as Finance and ID Department users and access the document.	Unauthorized users receive an "Access Denied" error; Finance and ID Department users can view the document.
TC_NFR_004_01	NFR-004	Verify system availability during university operational hours.	System is running during operational hours (8 AM–5 PM EAT).	1. Access the system at various times (e.g., 8 AM, 12 PM, 5 PM). 2. Perform login and request submission.	The system is accessible and functional at all tested times.
TC_NFR_004_02	NFR-004	Verify data integrity for request status updates.	A Finance user has approved a request, and an ID Department user is logged in. System is running.	1. Update the request status to "Processed" as an ID Department user. 2. Log in as the student and check the request status.	The student sees the status as "Processed" consistently across the system.

TC_NFR_004_03	NFR-004	Verify input validation prevents invalid data submission.	A student is logged in. System is running.	1. Attempt to submit an ID request with an invalid email in the profile (e.g., "test@"). 2. Observe the system response.	An error message is displayed, preventing submission and indicating an invalid email format.
TC_NFR_006_01	NFR-006	Verify compatibility with Chrome, Firefox, and Edge on Windows 10/11.	System is running. Test devices with Windows 10/11 and latest browser versions are available.	1. Access the system on Chrome, Firefox, and Edge. 2. Perform login, request submission, and dashboard access for each user role.	The system functions correctly with no UI or functional issues on all tested browsers.
TC_NFR_007_01	NFR-007	Verify system handles 5,000 concurrent users without performance degradation.	System is running with a load testing tool (e.g., JMeter) configured.	1. Simulate 5,000 concurrent users performing login, request submission, and dashboard access. 2. Measure response times and system stability.	Response times remain within 3 seconds, and the system remains stable with no crashes.

3.2. Traceability Matrix

Functional Requirements (FR)

Requirement ID	Simplified Requirement Description	Test Case ID(s) Covered	Test Execution Status	Notes / Comments
FR-001	Allow students to log in with ID and password.	TC_FR_001_01, TC_FR_001_02, TC_FR_001_03	Pass, Pass, Pass	All login scenarios tested successfully.
FR-002	Allow students to select ID request type (renewal or new).	TC_FR_002_01	Pass	Selection of request type works as expected.
FR-003	Require upload of damaged ID for renewal requests.	TC_FR_003_01, TC_FR_003_02	Pass, Pass	File upload and validation for renewal tested successfully.
FR-004	Require upload of police report and approvals for new ID requests.	TC_FR_004_01, TC_FR_004_02	Pass, Pass	Document upload and validation for new ID tested successfully.

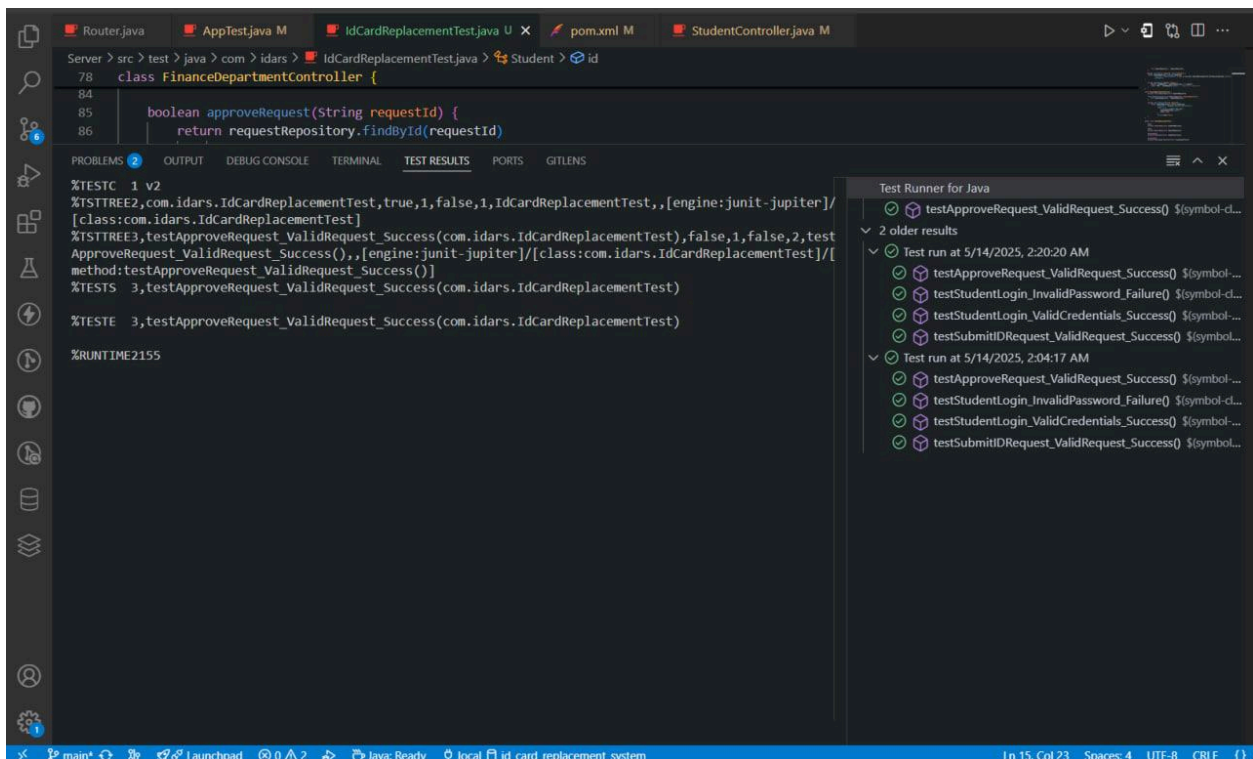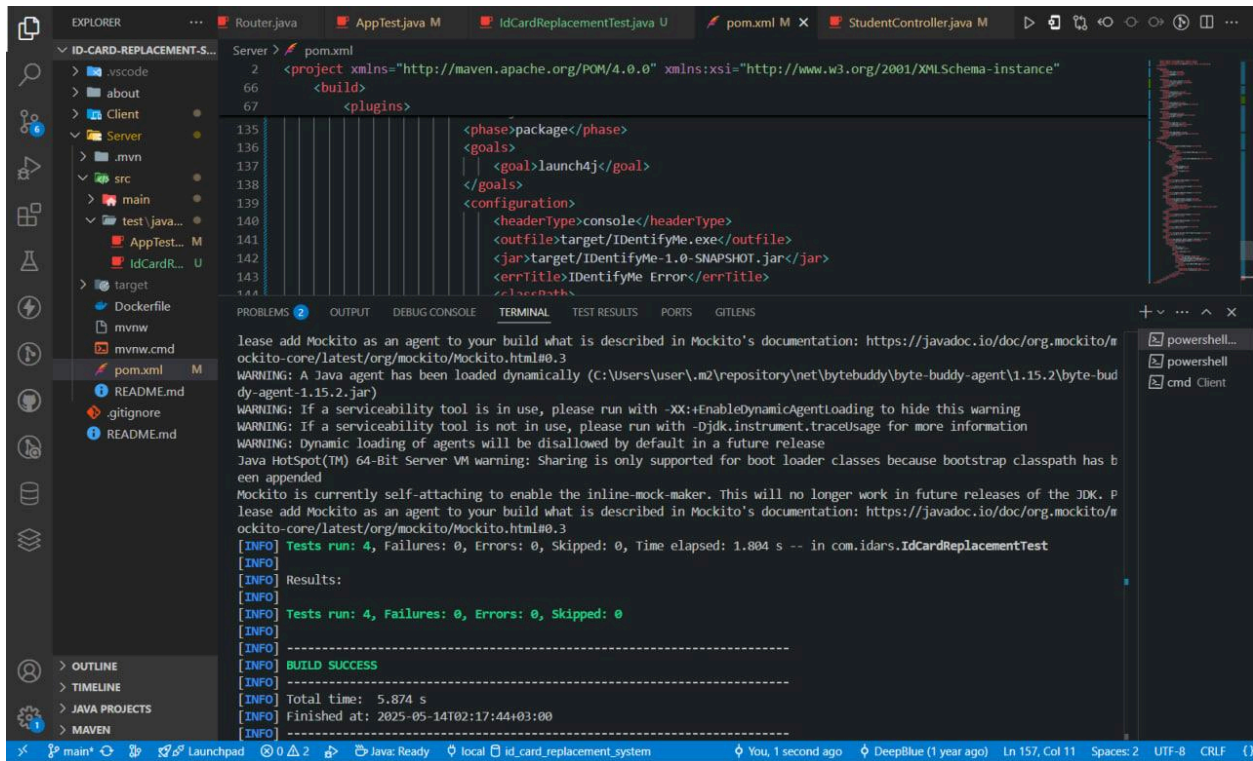| FR-005	Require upload of payment receipt for ID requests.	TC_FR_005_01, TC_FR_005_02	Pass, Pass	Receipt upload and file size validation tested successfully.
FR-006	Allow students to submit ID requests to Finance.	TC_FR_006_01	Pass	Request submission and ID generation work as expected.
FR-007	Allow students to view request history and status.	TC_FR_007_01, TC_FR_007_02	Fail, Fail	History display functionality is not implemented. And also It didn't show any error message.
FR-008	Allow students to edit profile information.	TC_FR_008_01, TC_FR_008_02	Fail, Fail	Editing profile Functionality is not working
FR-009	Allow students to log out.	TC_FR_009_01	Pass	Logout functionality works as expected.
FR-010	Allow Finance users to log in with ID and password.	TC_FR_010_01, TC_FR_010_02	Pass, Pass	Finance login scenarios tested successfully.

FR-011	Display all pending ID requests on Finance dashboard.	TC_FR_011_01	Pass	Dashboard displays pending requests correctly.
FR-012	Allow Finance users to search requests by request ID.	TC_FR_012_01, TC_FR_012_02	Pass, Pass	Search functionality and error handling tested successfully.
FR-013	Allow Finance users to approve or decline requests.	TC_FR_013_01, TC_FR_013_02	Pass, Pass	Approval and decline actions work as expected.
FR-014	Allow Finance users to edit profile information.	TC_FR_014_01	Fail	The functionality is not working. And also didnot show appropriate error meaasge
FR-015	Allow Finance users to log out.	TC_FR_015_01	Pass	Logout functionality works as expected.
FR-016	Allow ID Department users to log in with ID and password.	TC_FR_016_01, TC_FR_016_02	Pass, Pass	ID Department login scenarios tested successfully.

FR-017	Display Finance-approved requests on ID Department dashboard.	TC_FR_017_01	Pass	Dashboard displays approved requests correctly.
FR-018	Allow ID Department users to review approved request details.	TC_FR_018_01	Fail	Empty table only. It's not integrated.
FR-020	Allow ID Department users to edit profile information.	TC_FR_020_01	Fail	Editing profile Functionality is not working
FR-021	Allow ID Department users to log out.	TC_FR_021_01	Pass	Logout functionality works as expected.

Non-Functional Requirements (NFR)

NFR-001	Usability: Intuitive interface, clear error messages.	TC_NFR_001_01, TC_NFR_001_02, TC_NFR_001_03	Pass, Fail, Fail	Intuitive UI, but invisible button text with unclear error message.

NFR-002	Performance: System responses within 3 seconds.	TC_NFR_002_01, TC_NFR_002_02, TC_NFR_002_03	Pass, Pass, Pass	Tested login, request submission, and dashboard loading times.
NFR-003	Security: Secure passwords, HTTPS, access control, document storage.	TC_NFR_003_01, TC_NFR_003_02, TC_NFR_003_03	Not Executed	
NFR-004	data integrity, input validation.	TC_NFR_004_02, TC_NFR_004_03	Pass, Pass, Pass	Tested availability, data consistency, and input validation.
NFR-005	Maintainability: Code follows best practices, well-commented.	N/A	N/A	Not directly testable via black-box testing; covered in code review.
NFR-007	Scalability: Handles 5,000 concurrent users.	TC_NFR_007_01	Not Executed	Scalability test pending load testing setup.

Screenshot 1 — POST http://localhost:8081/student/login

Team Workspace — New — Import

Collections / Environments / Flows / History

- B2B Marketplace API
- Home Service test & variable
- identifyme
  - student
    - POST New Request
    - GET New Request
  - finance
    - This folder is empty. Add a request to start working.
  - ID_Department
    - This folder is empty. Add a request to start working.
  - request
    - This folder is empty. Add a request to start working.
- Medical Tests Allocation
- New Collection
- Tender Agency API

identifyme / student / New Request — Save — Share

POST http://localhost:8081/student/login Send

Params Authorization Headers (9) Body Scripts Tests Settings Cookies

none form-data x-www-form-urlencoded ● raw binary GraphQL JSON Beautify

```
1  {
2      "Email": "",
3      "StudentID": "stu001",
4      "Name": "",
5      "Password": "password123"
6  }
```

Body Cookies (1) Headers (5) Test Results — 200 OK · 103 ms · 257 B Save Response

JSON Preview Visualize

```
1  {
2      "message": "Login successful",
3      "status": "successful"
4  }
```

Screenshot 2 — GET http://localhost:8081/student/getInfo

identifyme / student / New Request — Save — Share

GET http://localhost:8081/student/getInfo Send

Params Authorization Headers (7) Body Scripts Tests Settings Cookies

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Body Cookies (1) Headers (4) Test Results — 200 OK · 4 ms · 281 B Save Response

JSON Preview Visualize

```
1  {
2      "message": "{\"Email\":\"john.doe@example.com\",\"StudentID\":\"stu001\",\"Name\":\"John Doe\",\"Password\":\"password123\"}",
3      "status": "successful"
4  }
```

Screenshot 3 — POST http://localhost:8081/student/update

identifyme / student / New Request — Save — Share

POST http://localhost:8081/student/update Send

Params Authorization Headers (9) Body Scripts Tests Settings Cookies

none form-data x-www-form-urlencoded ● raw binary GraphQL JSON Beautify

```
1  {
2      "Email": "",
3      "StudentID": "stu001",
4      "Name": "",
5      "Password": "password1234"
6  }
```

Body Cookies (1) Headers (4) Test Results — 400 Bad Request · 7 ms · 195 B Save Response

JSON Preview Visualize

```
1  {
2      "message": "Invalid Student object",
3      "status": "failed"
4  }
```