Outsource Management Module

1 Introduction

1.1 Purpose

The purpose of this document is to define the functional specifications and business logic for the enhanced Outsource Management Module within the Laboratory Information System (LIS). This document addresses current workflow bottlenecks—specifically premature document submissions, lack of revision control, and accidental approval bypasses during file replacement or deletion. By establishing clear document statuses (Draft vs. Final), controlled editing rights, and structured approval/rejection workflows, this module aims to ensure clinical data integrity, mitigate medical risks, and improve overall operational efficiency for laboratory staff

1.2 Scope

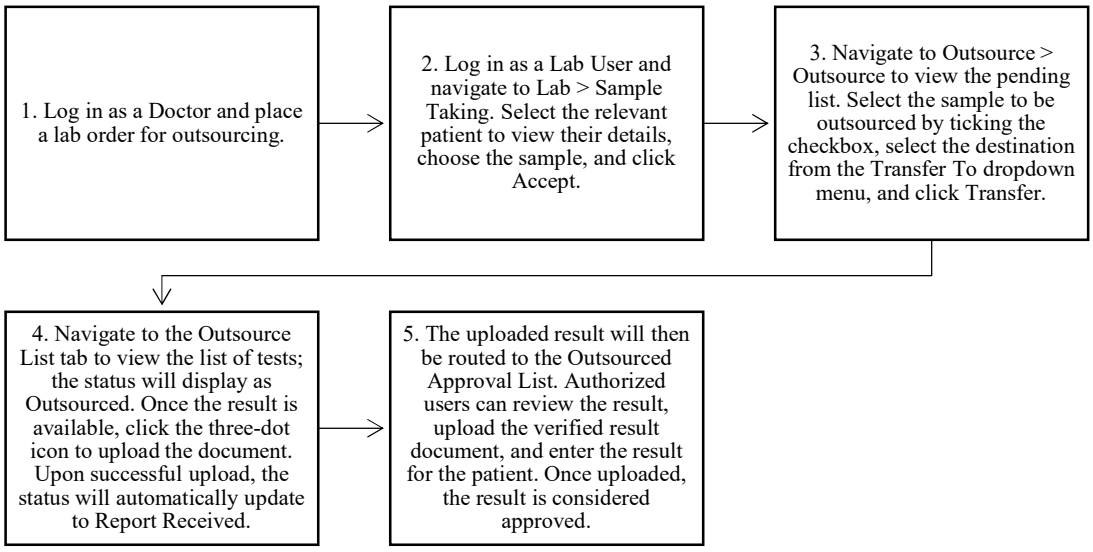
This document applies to the end-to-end lifecycle management of outsourced laboratory test results. The scope encompasses:

- **Outsourced List Management:** Managing sample outsourcing status transitions (Outsourced, Report Received, Released, Rejected).
- **Document Upload & Revision Control:** Uploading lab result documents with strict status controls (Draft state allowing full edit/delete capability vs. Final state locking the document for review).
- **Approval & Verification Routing:** Routing finalized documents to the Outsourced Approval List for verified review.
- **Rejection Workflow:** Capturing mandatory rejection reasons via pop-up modal, unlocking rejected files back to editable status, and returning them to the Outsourced List.
- **Filtering & Tracking:** Providing real-time status filtering across outsourced lists to ensure visibility over all processing stages.

2 Current System Overview

2.1 Current System Functionality

2.1.1 As-Is Workflow Diagram



2.2 Pain Points & Bottlenecks

2.2.1 Module / Process

- Upload Document in Outsourced List and Approval List

2.2.2 Pain Point:

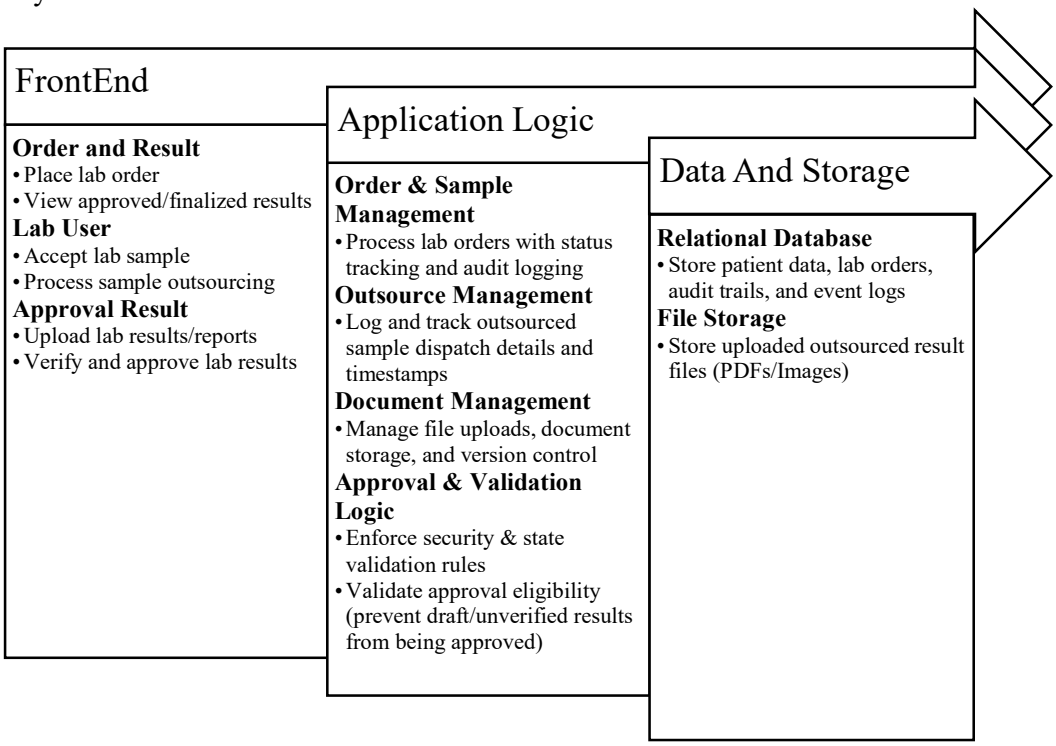
- System only allows a single document upload, even for draft files.
- Draft documents are automatically pushed to the *Outsourced Approval List* prematurely.
- Uploading a second document under the *Outsourced List* automatically auto-approves the result without going through proper verification/approval.
- Deleting an uploaded document and uploading a new one causes the system to bypass the approval stage entirely and auto-approve the result.

2.2.3 Bottleneck

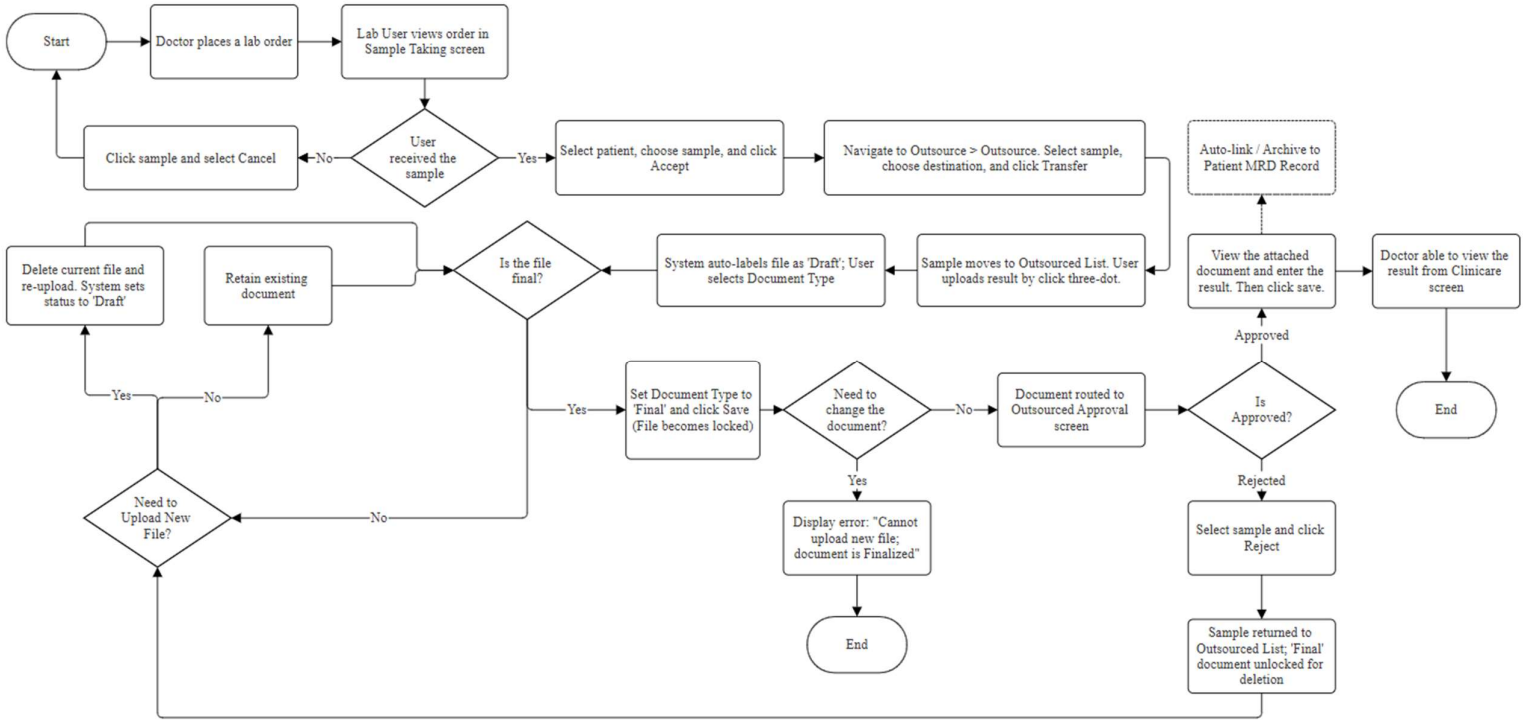
- *Unintended Approval Bypass*: Bypassing the verification stage leads to unverified lab results being finalized, posing data integrity and clinical risk.
- *Process Inefficiency*: Premature movement of draft files clutters the approval queue and creates confusion for approvers.
- *Lack of Revision Control*: Users cannot replace or revise uploaded draft documents properly due to system limitation.

3 Proposed System Overview

3.1 System Architecture



3.2 Proposed Workflow



3.3 User Roles & Permission Matrix

User Role	View Lists (Outsourced & Approval)	Upload / Edit / Delete Draft Document	Set Status to 'Final' & Submit	Approve / Release Result	Reject Result & Enter Reason	View Final Results (Clinicare)
Lab User / Technician	Yes	Yes	Yes	No	No	No
Lab Approver / Verifier	Yes	No	No	Yes	Yes	No
Doctor / Clinician	No	No	No	No	No	Yes
System Administrator	Yes	Yes	Yes	Yes	Yes	Yes

4 Functional Requirements & Wireframes Specification

4.1 Outsourced Lab Result Upload Screen

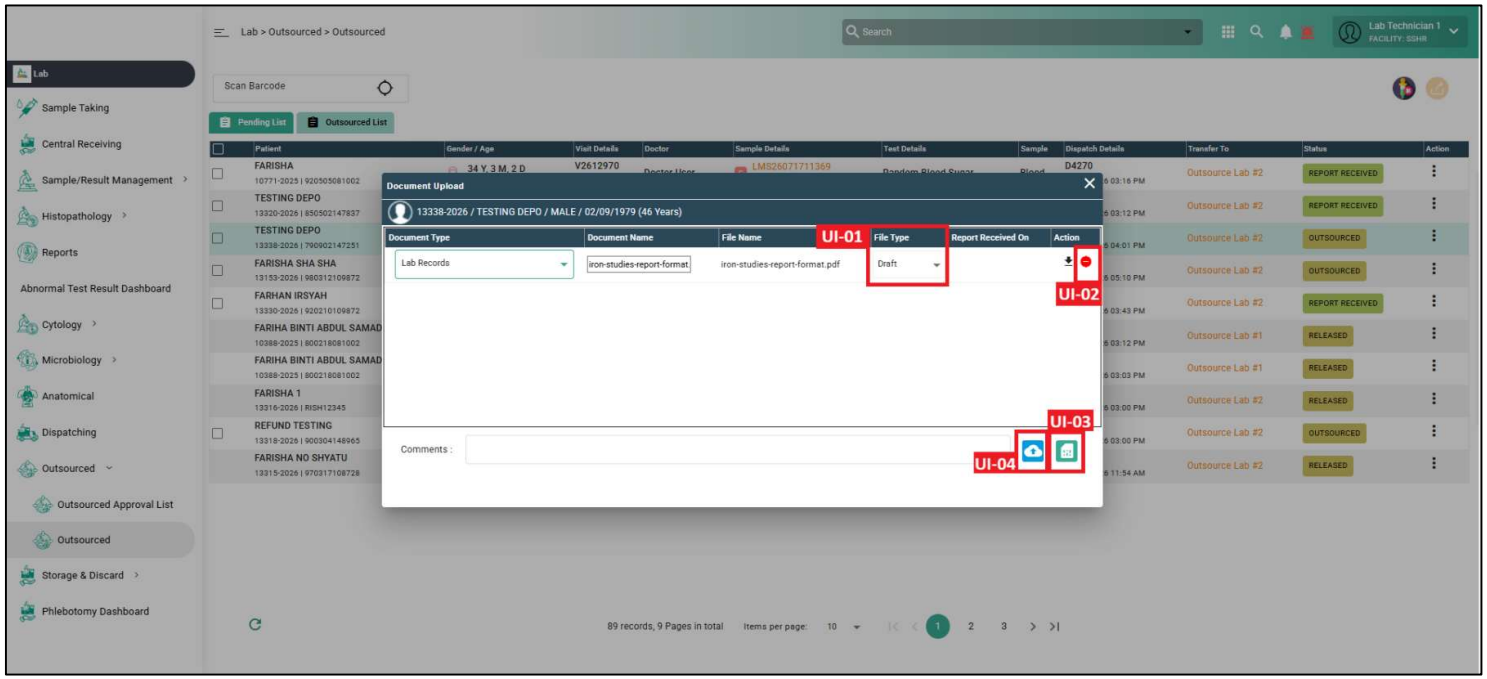
4.1.1 Description & Purpose

Path: Lab > Outsourced > Outsourced > Outsourced List tab > Click three-dot in Action column

This screen enables Lab Users to manage sample outsourcing, upload test result files, and define document statuses (Draft vs. Final) prior to submitting for approval.

4.1.2 Wireframe/ UI Mockup

- Main Screen of Upload Outsource Screen

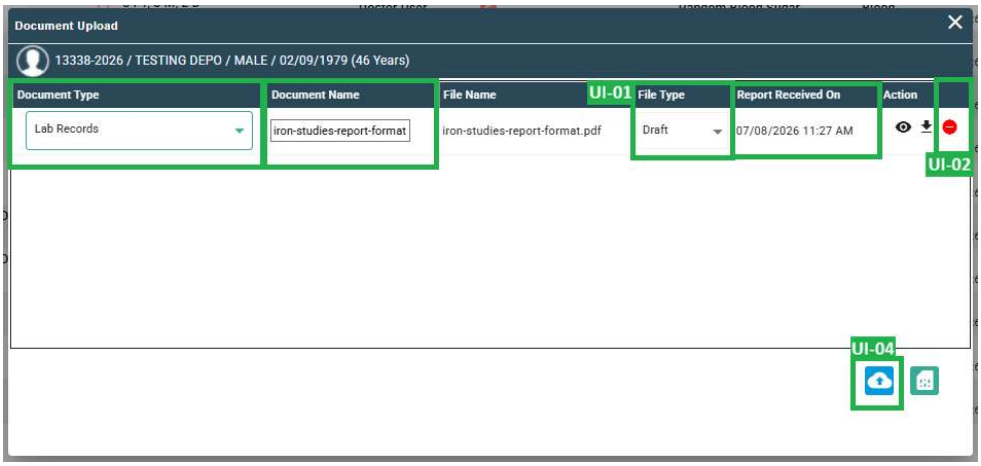


4.1.3 UI Components Specification Table

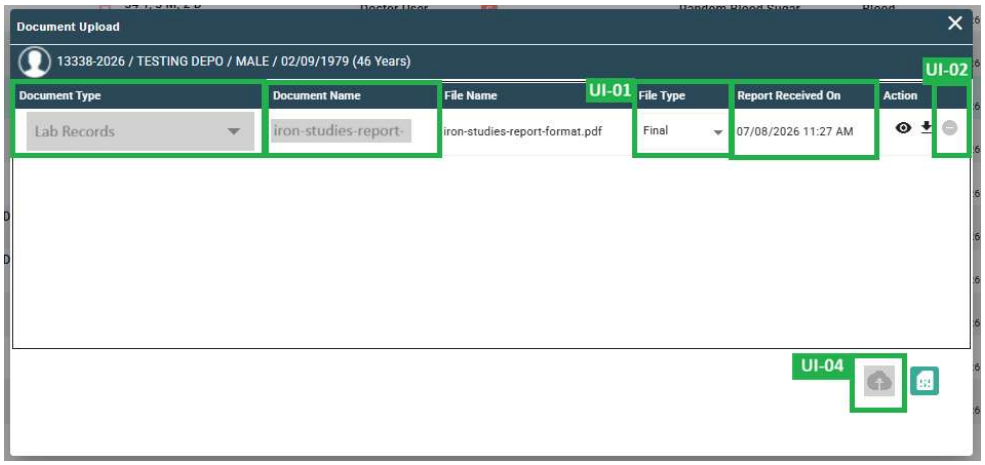
Component ID	Field/Button Name	Type	Value/Option	Mandatory?	Description
UI-01	File Type	Dropdown	Draft, Final	Yes	Defaults to Draft upon initial file upload.
UI-02	Delete File	Button	Clickable	Conditional	Enabled only if the file status is Draft, or if a Final document has been rejected..
UI-03	Save	Button	Clickable	Yes	Saves current changes. Automatically submits and routes the document for approval when File Type is set to Final.
UI-04	Upload	Button	PDF, DOCX, PNG (Max 10MB)	Yes	Allows user to select and upload the required result document.

4.1.4 Business Logic & Scenarios

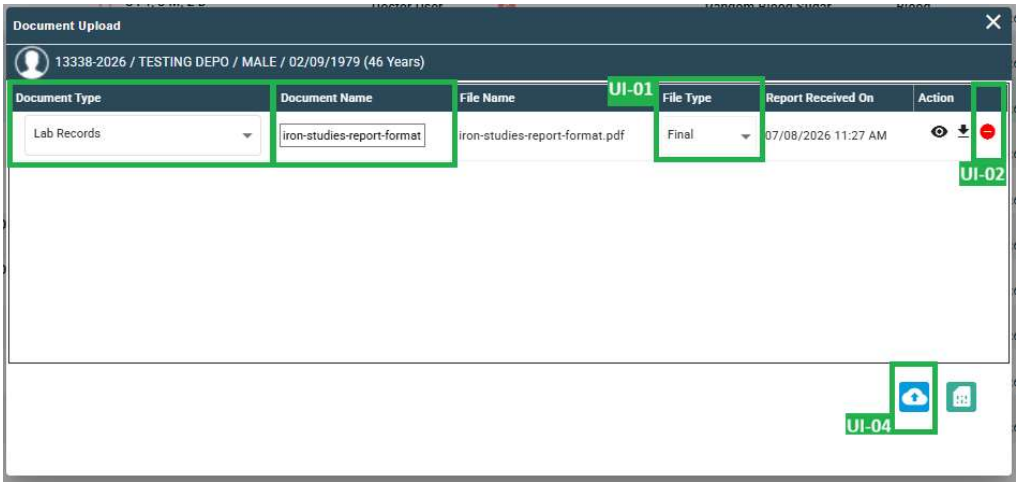
- Scenario A: Upload document in Draft State
  - All editing fields (File Type, Upload, Delete, Document Name, Document Type)
  - User can replace, upload or remove files freely before finalizing



- Scenario B: Upload Document in Final State
  - Upon setting File Type to Final and clicking Save:
    a) Document Type, Document Name, File Type, Delete Button and Upload button become Disabled (Grey Out)
    b) Document is locked and routed to Outsourced Approval Screen



- Scenario C: Rejection Handling
  - If rejected by Approver, the file status unlocks back to editable state, enabling the Delete File button again.



4.2 Outsourced List Screen

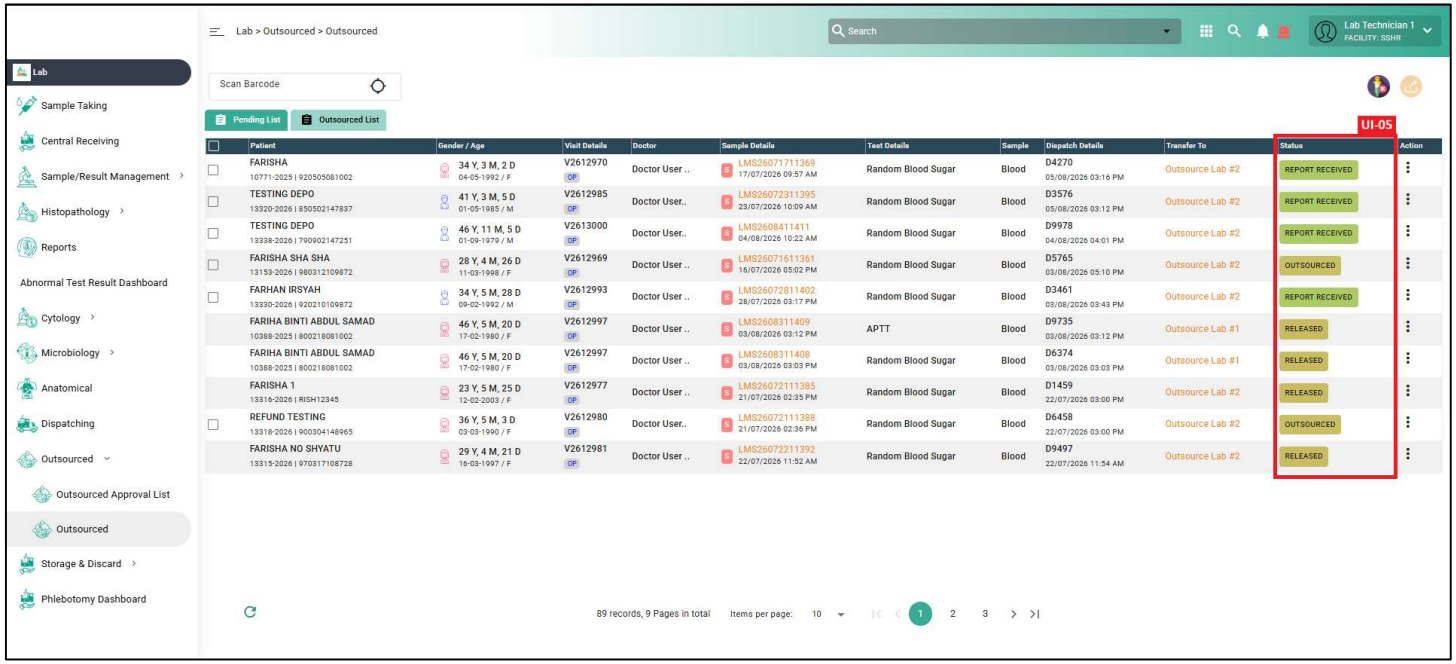
4.2.1 Description & Purpose

Path: : Lab > Outsourced > Outsourced > Outsourced List tab

This screen enables Lab Users to manage sample outsourcing and define document statuses.

4.2.2 Wireframe/ UI Mockup

- Main screen of Outsourced List

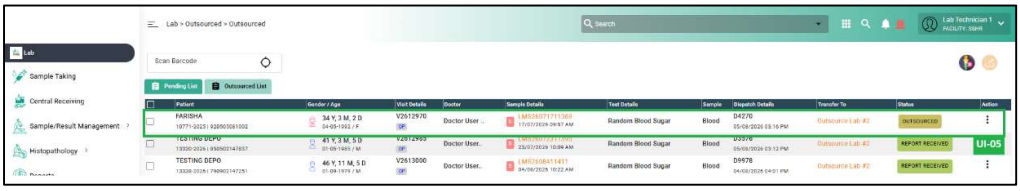


4.2.3 UI Components Specification Table

Component ID	Field/Button Name	Type	Value/Option	Mandatory?	Description
UI-05	Status Column	Status Badge	Report Received, Outsourced, Released, Rejected	N/A	Displays the real-time processing status of the outsourced sample results

4.2.4 Business Logic & Scenarios

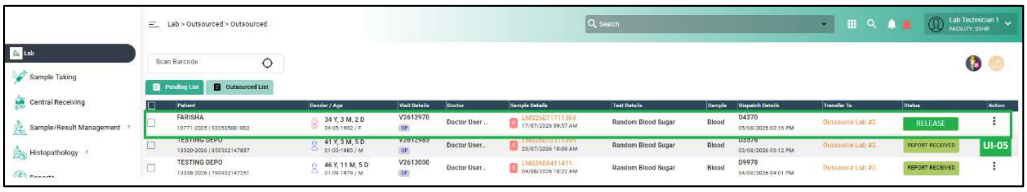
- Scenario A: From Pending List → Outsourced List and upload document as a draft
  - The Status should be Outsource



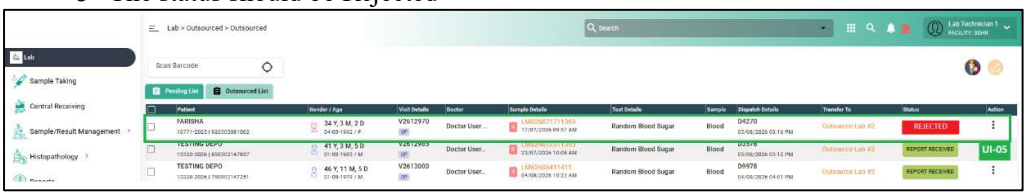
- Scenario B: After file type change to final
  - The status should be Report Received



- Scenario C: After the file being Approved
  - The status should be Released



- Scenario D: After the test being Rejected in Approval level
  - The status should be Rejected



4.3 Outsourced List Filter

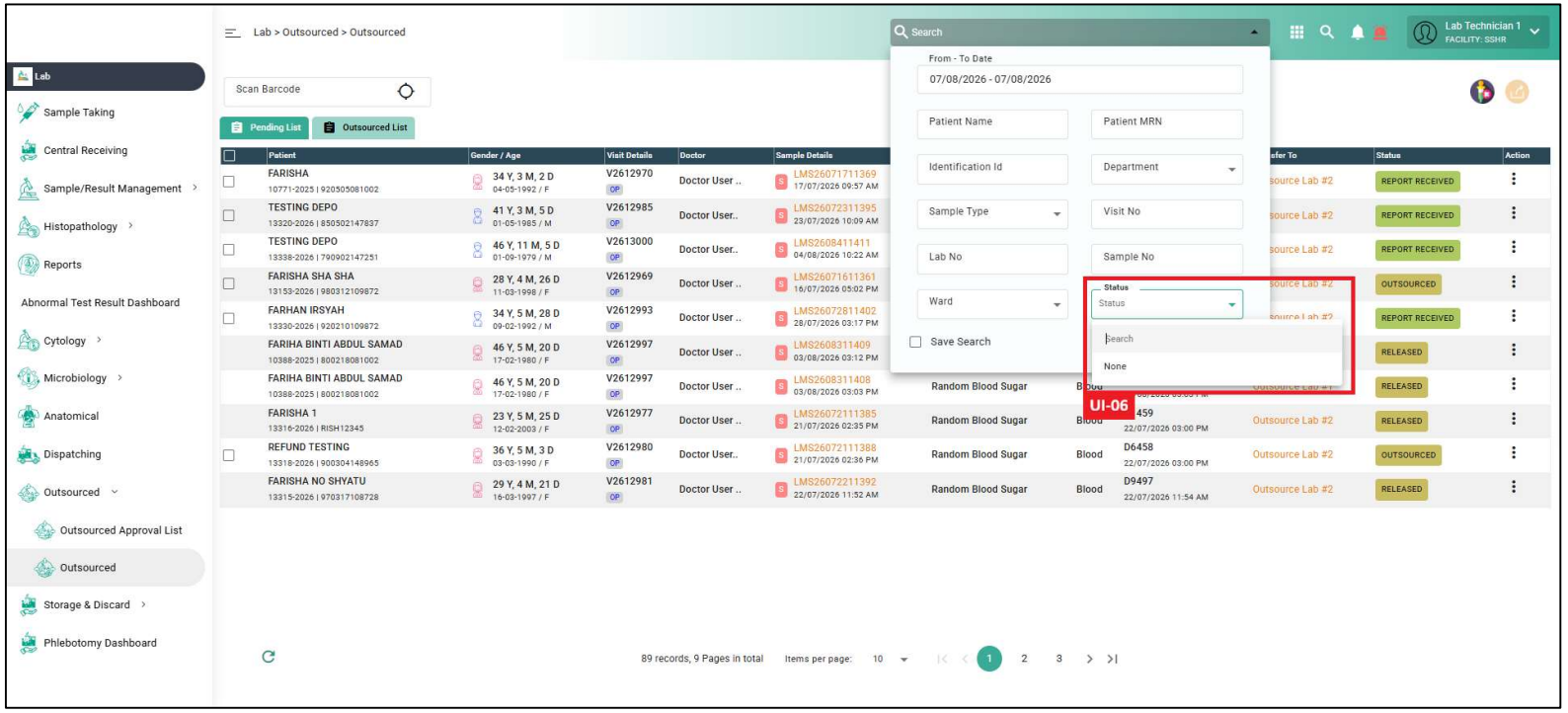
4.3.1 Description & Purpose

Path: Lab > Outsourced > Outsourced > Outsourced List tab

This screen enables Lab Users to filter of the status of the Outsourced Samples.

4.3.2 Wireframe/ UI Mockup

- Main screen of Outsourced List



4.3.3 UI Components Specification Table

Component ID	Field/Button Name	Type	Value/Option	Mandatory?	Description
UI-06	Status Filter	Dropdown	Report Received, Outsourced, Released, Rejected	N/A	The status value should be applicable same as Outsourced List Screen.

4.4 Outsourced Approval List

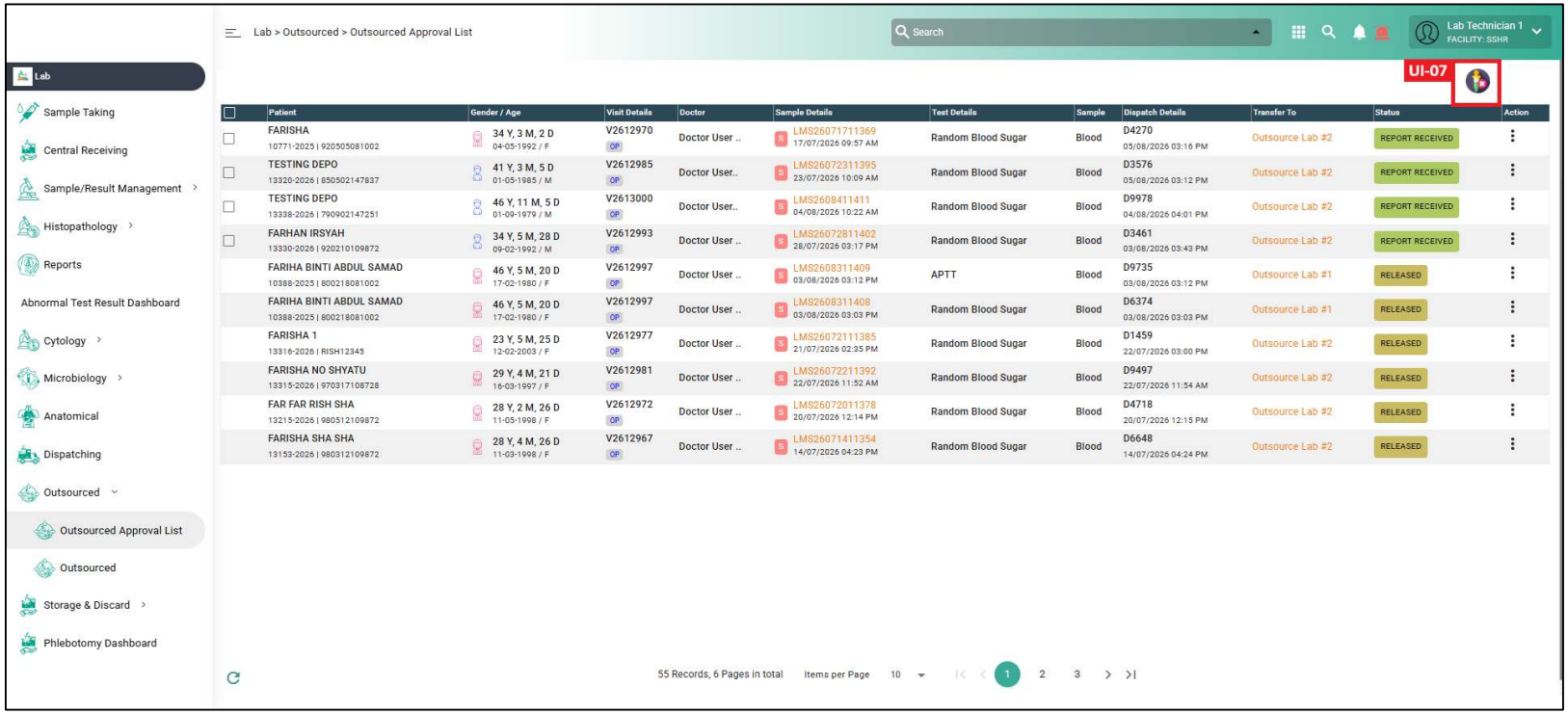
4.4.1 Description & Purpose

Path: Lab > Outsourced > Outsourced > Outsourced Approval List

This screen enables Lab Users to filter of the status of the Outsourced Samples.

4.4.2 Wireframe/ UI Mockup

- Main screen of Outsourced List



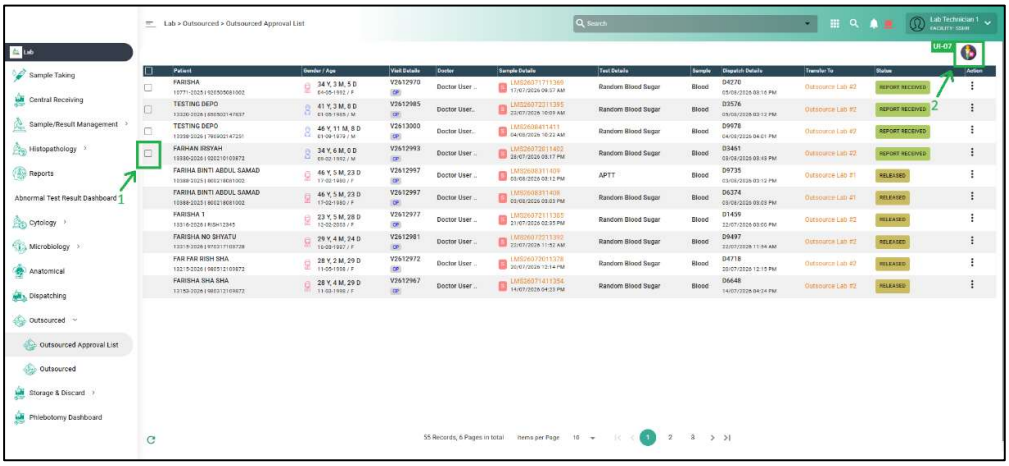
4.4.3 UI Components Specification Table

Component ID	Field/Button Name	Type	Value/Option	Mandatory?	Description
UI-07	Reject Icon	Button	Clickable	No	Triggers a pop-up modal requiring the user to select a rejection reason from a dropdown. Upon submission, the transaction is returned to the Outsourced List.

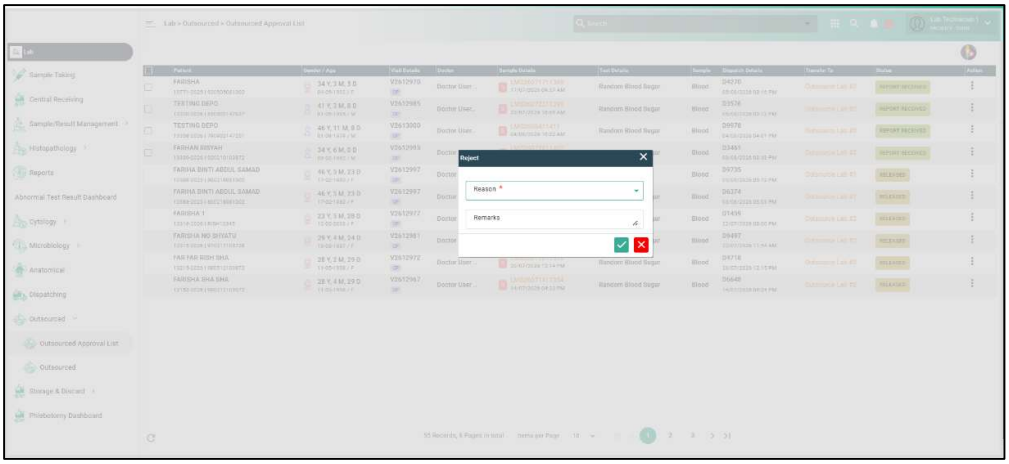
4.4.4 Business Logic & Scenarios

- Scenario A: The uploaded document is wrongly update
  - The Status should be Rejected
  - The tick box should not appear
  - The pop-up should appear to capture the reason of rejection

During Rejection:



A pop-up appears after click:



After Rejected:

