1. Introduction

Project Overview: AI-enabled Medical Record Summarization system
Tech Stack: Angular, Node.js, S3(For File Management), MongoDB
Users: Super User/ Super Admin - Web App
Github repository: https://github.com/arpan-maruti/medical-record-management
Deploy link: https://medical-record-management.netlify.app/
Schema Design: https://dbdiagram.io/d/6788a87e6b7fa355c30c8b35c

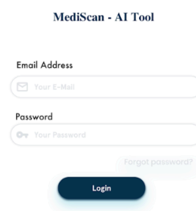
2. Module Overview

a. Components

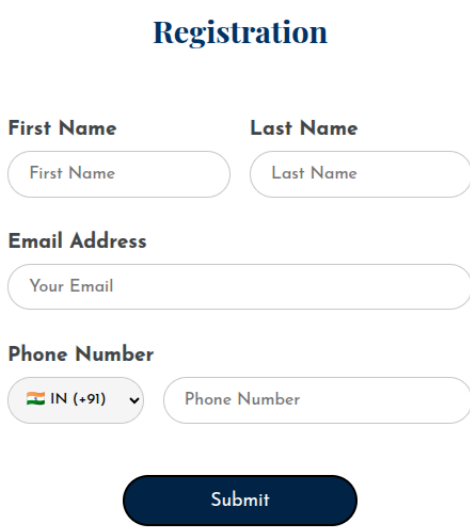
1) Login (/)
2) Registration(/register) [Only For Super Admin]
3) Otp Verification (/otp)
4) Case Management Dashboard (/case-management)
    - 5.1) Navbar
    - 5.2) Sidebar
    - 5.3) Case Management List (/dashboard/case-list)
    - 5.4) Add a new Case (/dashboard/add-case)
    - 5.5) Add a Subcase (/dashboard/add-subcase)
    - 5.6) Preview LOI
    - 5.7) Upload File
    - 5.8) View Files or Label
6) Profile (/profile)
7) User List(/userList) [Only for Super Admin]
8) Page not Found (/page-not-found)

b. Routes

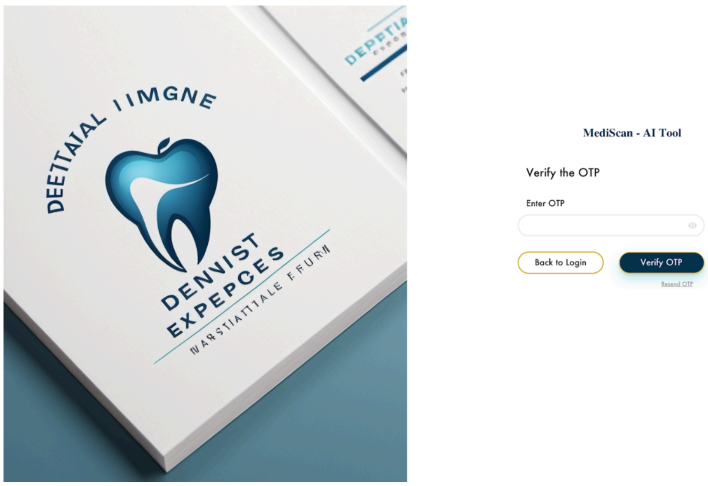
- / (landing-page)



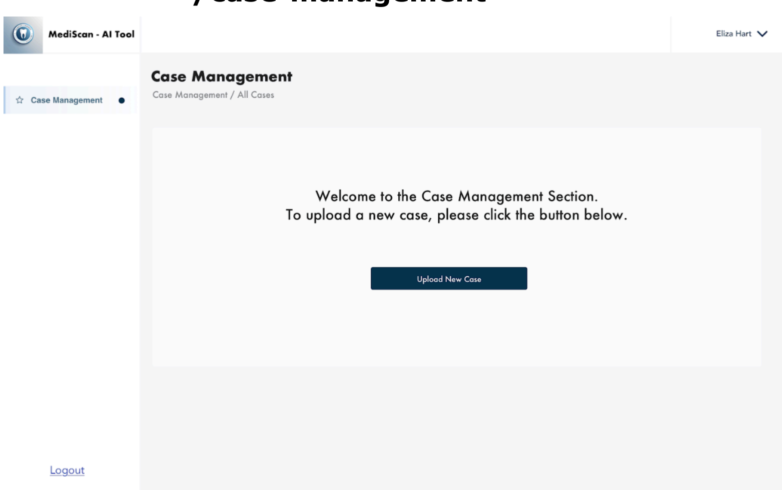
- /register



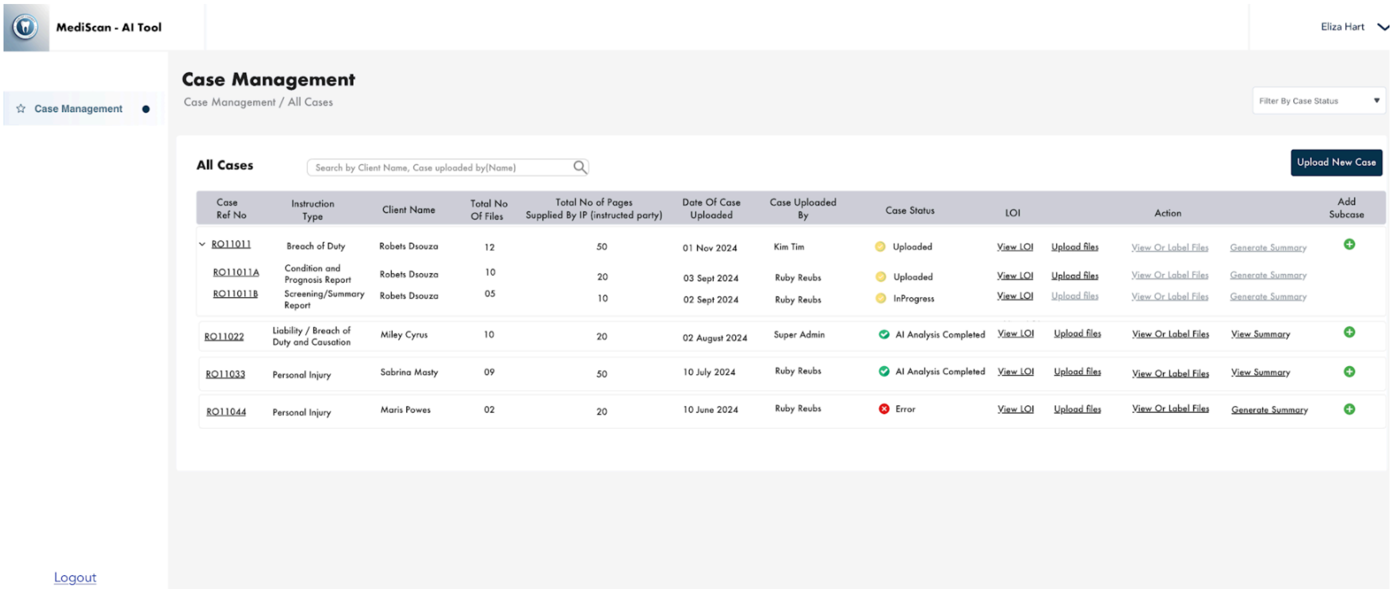
- /otp



- /case-management

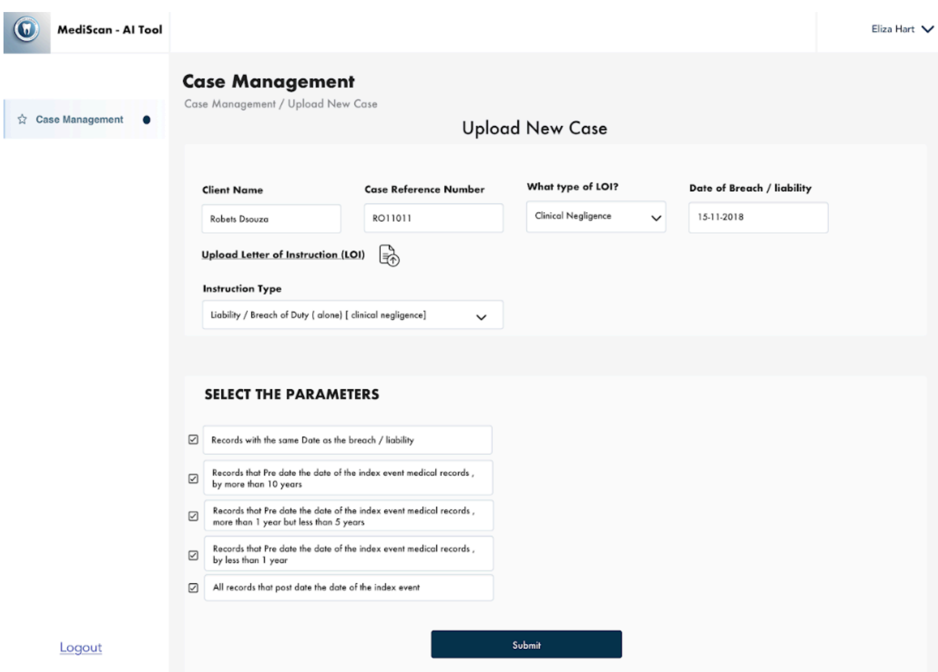


- **/case-management/all-cases**



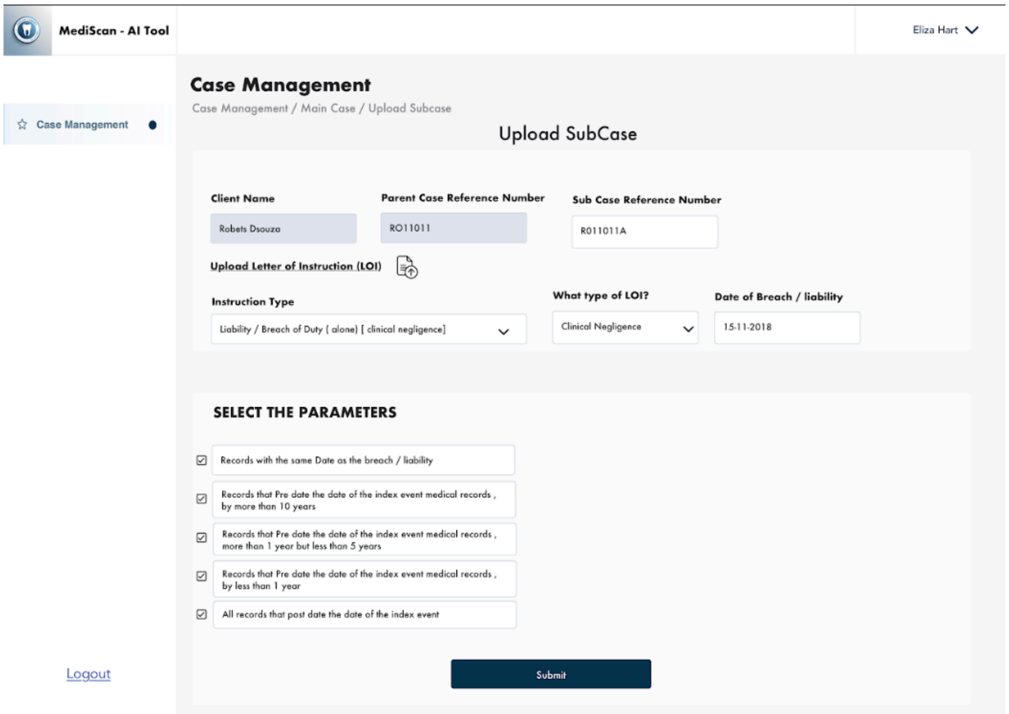
- **/case-management/upload-new-case**

Select the parameters will vary depending on the Instruction type and type of LOI selected.

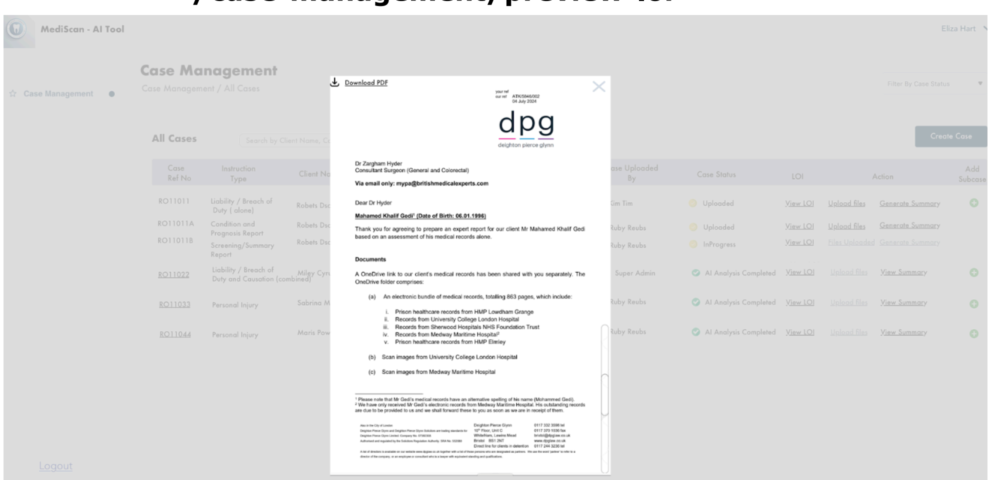


- **/case-management/add-subcase**

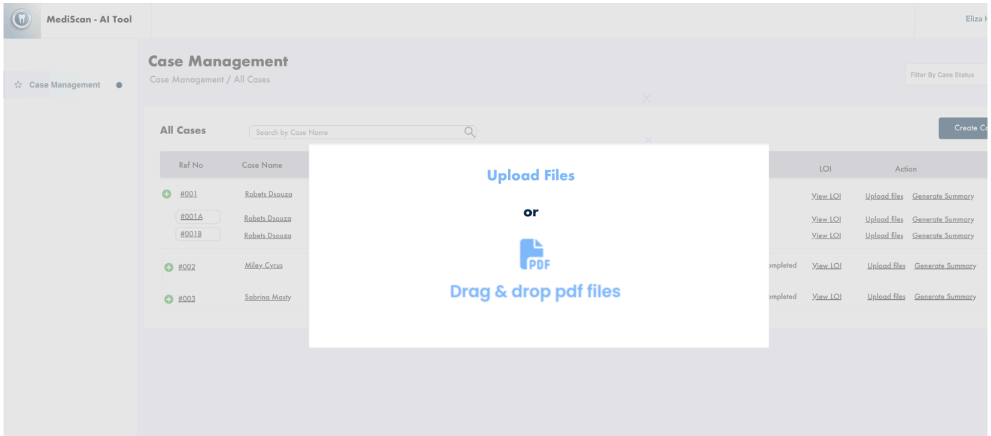
  Select the parameters will change according to the Instruction type and type of LOI selected.



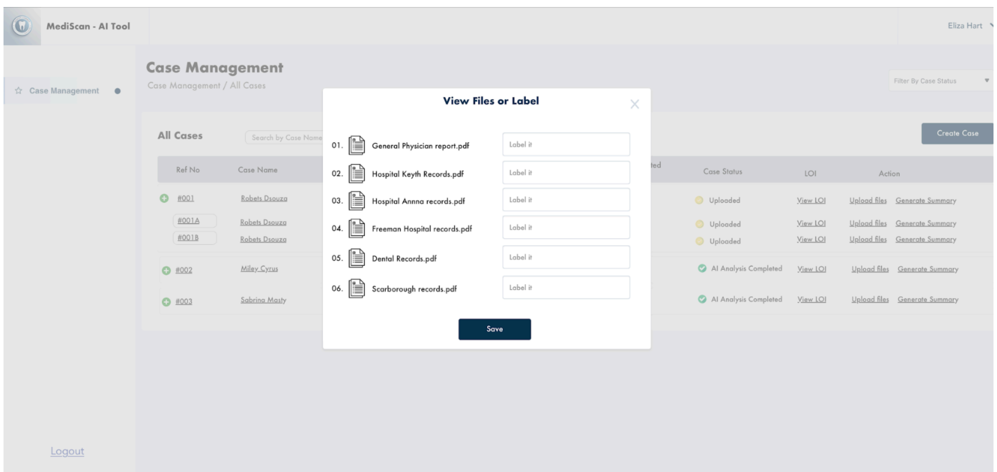
- **/case-management/preview-loi**



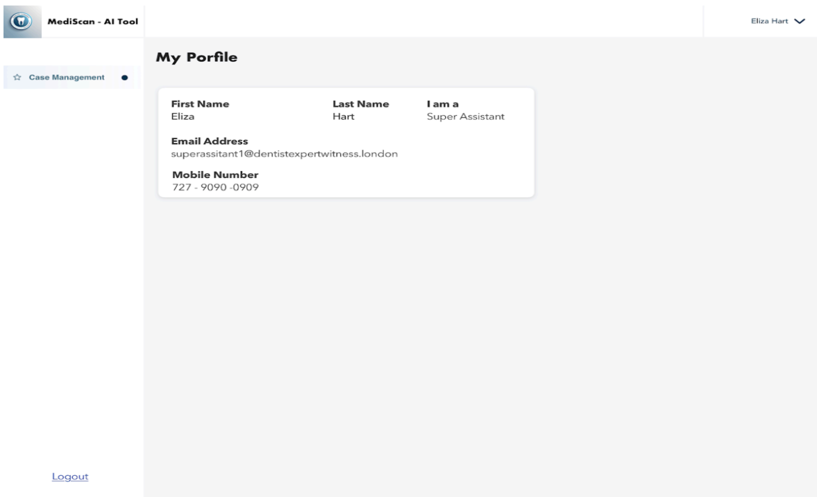
- **/case-management/upload-file**



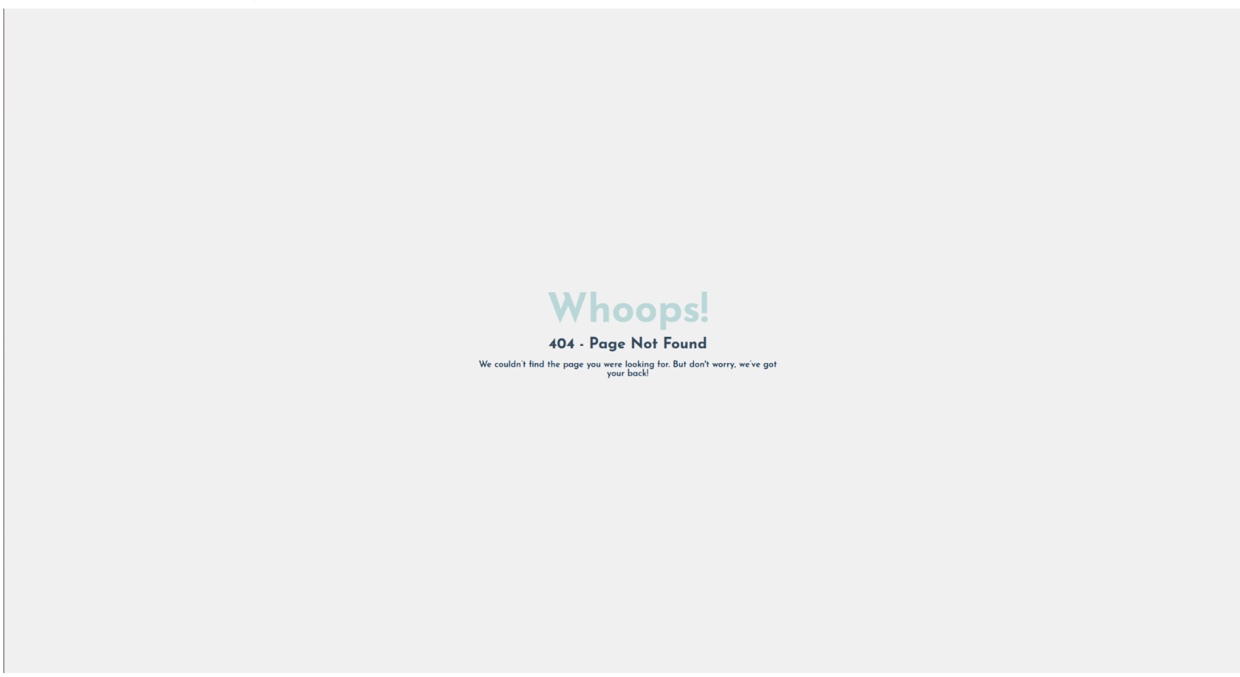
- **/case-management/view-files-or-labels**



- **/case-management/profile**



- **/page-not-found**



c. Functional Requirements

1) Login-user

Description: Authenticate user, manage sessions and protect data(encrpt data at REST).

Input:

- Email: email provided by user.
- Password: password set by user.

Output:

- **Success:** Redirects to verify otp.
- **Failure:** Returns an error message for invalid credentials ("Invalid email or password."), empty fields ("Please enter both email and password."), if the user is ideal for more than 30 minutes ("Your session has expired. Please log in again.”).
- **Forgot Password:** Display message "Please contact BME to reset your password.”

2) 2FA - OTP Verification

Description: Verifies the user's identity through Two-Factor Authentication (2FA) after successful login.

Input:

- Phone number: User's provided company-registered Mobile number.
  - otp: The One-Time Password (OTP) entered by the user, sent to their registered mobile number.

Output:

- **Success**: If the correct OTP is entered, the user is redirected to the main screen or dashboard.
- **Failure**: Returns an error message for incorrect or expired OTP ("Invalid OTP. Please try again."), empty fields ("Please enter the OTP."), or multiple incorrect attempts ("Too many incorrect attempts. Please try again later.").
- **Resend OTP**: If the user has not received or misplaced the OTP, they can click "Resend OTP" to trigger a new OTP being sent to their registered mobile number.

3) Case Management - No Cases Created

Description: Displays a welcome message with an option to add a new case if no cases have been created, and handles navigation to the case creation screen.

Input:

- User Login: The Super Assistant or Super Admin logs in to the BME tool.
- System State: The system checks if any cases have been created by the logged-in user.

Output:

- **Success:**
  - If no cases have been created, display a welcome message("Welcome to the Case Management Section. To upload a new case, please click the button below.") and an "Add New Case" button.
  - If cases have already been created, display the list of existing cases without the welcome message.
- **Failure:** If there's a system error when trying to load the case creation screen, show an error message("Unable to load the case creation screen. Please try again later.") and remain on the welcome screen.

4) Create Case / Upload Case

Description: Allows Super Assistant or Super Admin to create and manage case details by entering required fields and uploading necessary documents.

4.1 Client Name

- Valid Input: Alphabetic characters, ‘-’, ‘ ’, ‘,’.
- Invalid Input: "Invalid input. Please enter a valid client name."
- Empty Field: Displays *"Client Name is required."*

4.2 Case Reference Number

- Valid Input: Accepts unique case reference.
- Duplicate Input: Displays *"This case reference number already exists."*
- Empty Field: Displays *"Case Reference Number is required."*

4.3 What Type of LOI

- Valid Selection: Accepts data from the dropdown (database-managed).
- Empty Field: Displays *"LOI Type is required."*

4.4 Date of Breach / Liability or Date of Index Accident

- Valid Date: Selects date from calendar.
- Invalid Format: Displays *"Invalid date format. Please select a date from the calendar."*
- Empty Field: Displays *"Date is required."*

4.5 Instruction Type

- Valid Input: Accepts selection based on LOI type.
- Empty Field: Displays *"Instruction type is required."*

4.6 Upload LOI PDF

- Valid Upload: Accepts PDF/Word file, max 200 MB.
- Invalid File: Displays *"Invalid file type. Please upload a PDF document."*
- Empty Field: Displays *"LOI PDF is required."*

4.7 LOI Parameters

- Valid Selection: At least one parameter must be selected; others can be unchecked.

4.8 Case Submission

- Valid Submission: Saves case, redirects to Case Management screen with *"Case successfully created."*
- Incomplete Fields: Prevents submission, displays missing fields.
- System Error: Displays *"Unable to create a case at this time."*

5) Business Logic for Case and File Management

5.1 Total Number of Allowed Cases:

- Limit: 10 cases allowed across all users.

5.2 Files per Case/Sub-case:

- Limit: Each case or sub-case can have a maximum of 10 files.
- Total Limit: Across all cases and sub-cases, a maximum of 100 files is allowed.

5.3 Maximum File Size:

- Limit: Each file must not exceed 500 MB. Any file larger than this will be blocked from uploading.

6) Case Management - With Cases Listed

6.1 Case Listing and Viewing

- Table Columns: Includes Case Reference Number, Instruction Type, Client Name, Number of Files, Number of Pages, Date Created, Created By, Case Status, View LOI, and Actions (Upload Files, View or Label Files, Generate Summary, View Summary).
- Case Visibility: Super Assistants can view cases created by others.

6.2 Filtering Cases by Status

- Status Filter: Users can filter cases by status (e.g., "Uploaded," "AI Analysis Completed").
- No Matches: If no cases match, a message "No cases found" is shown.

6.3 Searching Cases

- Search by Client or Creator: Users can search by client name or case creator.
- No Matches: Displays "No cases found matching the search criteria."

6.4 Case Actions

- Upload Files: Users can upload PDF/Word files. The "Generate Summary" button is enabled once files are uploaded.
- Generate Summary: Starts AI analysis, with confirmation message displayed.
- Error: If summary generation fails, shows "Unable to generate summary."

6.5 Creating a Subcase

- Create Subcase: Clicking "+" for a subcase pre-fills certain fields.
- Form Submission: Subcase is saved if all required fields are completed, with error if parameters(one loi parameter is compulsory) are missing.
- View Subcases: Expands/collapses subcases for parent cases with an icon.

6.6 User Interface and Navigation

- Page Refresh: System resets filters and search criteria.
- Session Expiry: Redirects to login page with expiry message("Your session has expired. Please log in again.).

7) Profile Management for Super Assistant / Super Admin

Acceptance Criteria:

7.1 Navigate to Profile Page

- Given the user is logged in as a Super Assistant or Super Admin,
- When the user navigates to their profile page,
- Then the system should display the profile page.

7.2 Profile Page Information

- The profile page should display the following non-editable details:
  - First Name
  - Last Name
  - User Role
  - Email Address
  - Mobile Number

7.3 Edit Restrictions

- The user cannot edit any of the fields on the profile page.