SOFTWARE DESIGN

Project: Disability Recognition Site

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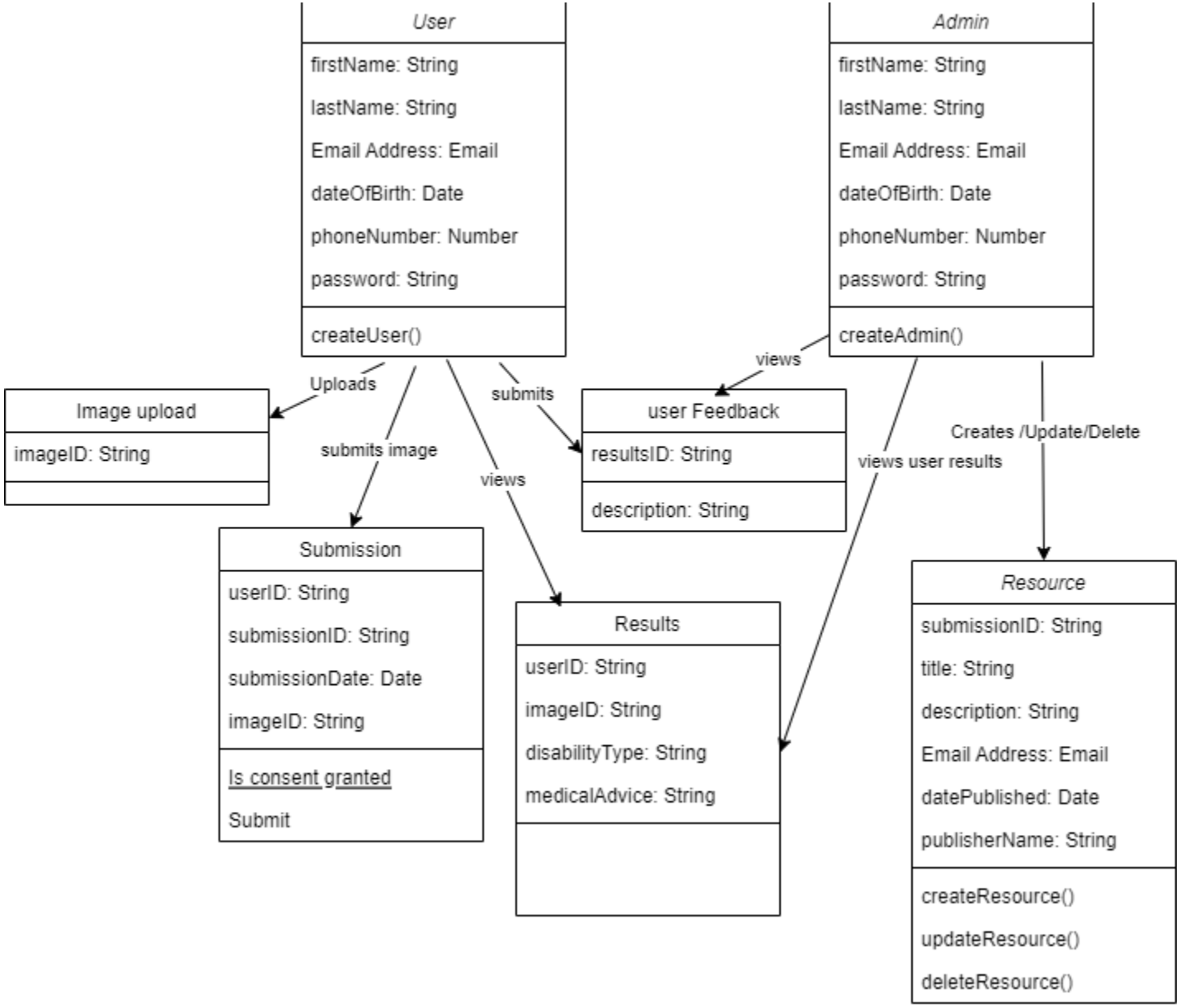
Revision History:

Date	Version	Description	Team No.
09-18-2023	1.0	Software Requirements	07
09-26-2023	2.0	Software Design	07
09-26-2023	2.1	Class Diagram	07
09-26-2023	2.2	ER Diagram	07
09-26-2023	2.3	Sequence Diagram	07
09-26-2023	2.4	Software Design	07
09-26-2023	2.5	Architecture System	07

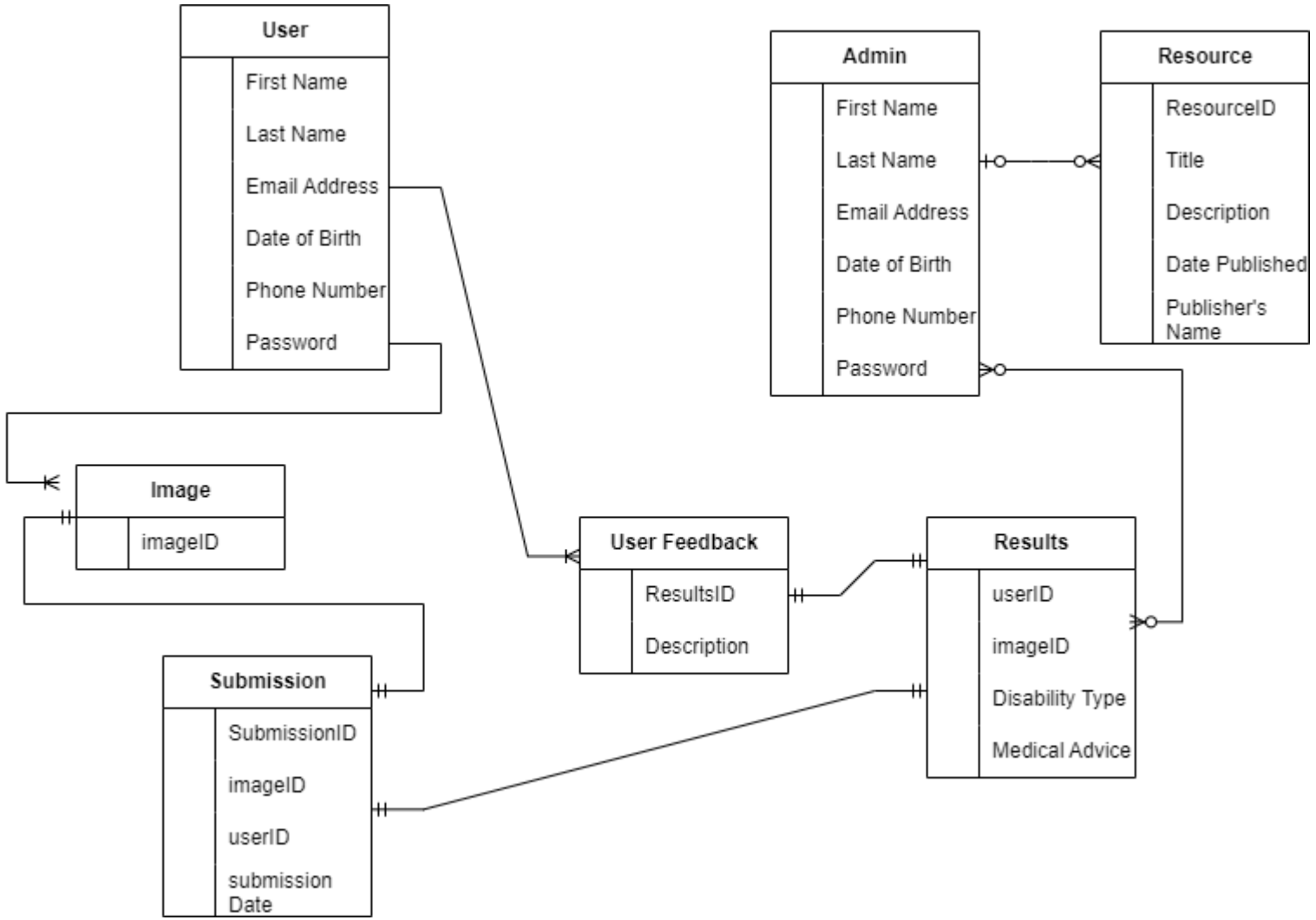
09-26-2023	2.6	User Interface Wireframe using Figma	07
09-26-2023	2.7	Trello and Github Updation and Installation Trello Link: https://trello.com/b/ObotqnNM/se7	07

Class Diagrams:

- **Users-** This class stores information of all users who upload their images for processing. The information stored includes; first name, last name, date of birth, Phone number, email address, and password.
- This class will contain information on all those authorized to have admin roles. This will contain the admin's name and role.
- **Image-** The image class will hold information for the image uploaded. The information stored in this class is imageID for identification.
- **Consent-**The consent class will hold information for user consent. The user has to consent to his/her image for processing and to be stored.
- **Submission**- This class will be used by users to submit their images for processing. It will contain information such as the submission date, image, and user's consent. It will also have the submissionID, userID, and imageID for identification.
- **Resource-** The resource class will contain all contents published by the admin. This content will be visible on the site's landing page. Information contained in this class includes; the title, description, date published, and the publisher's name.
- **Results**- This class will contain the results for the processed image. Information contained in this class is userID, imageID, results description, and medical advice.
- **User Feedback-** This class will enable users to provide feedback on the accuracy of the disability detected and their experience with the site. It will contain information such as resultsID, and feedback description.

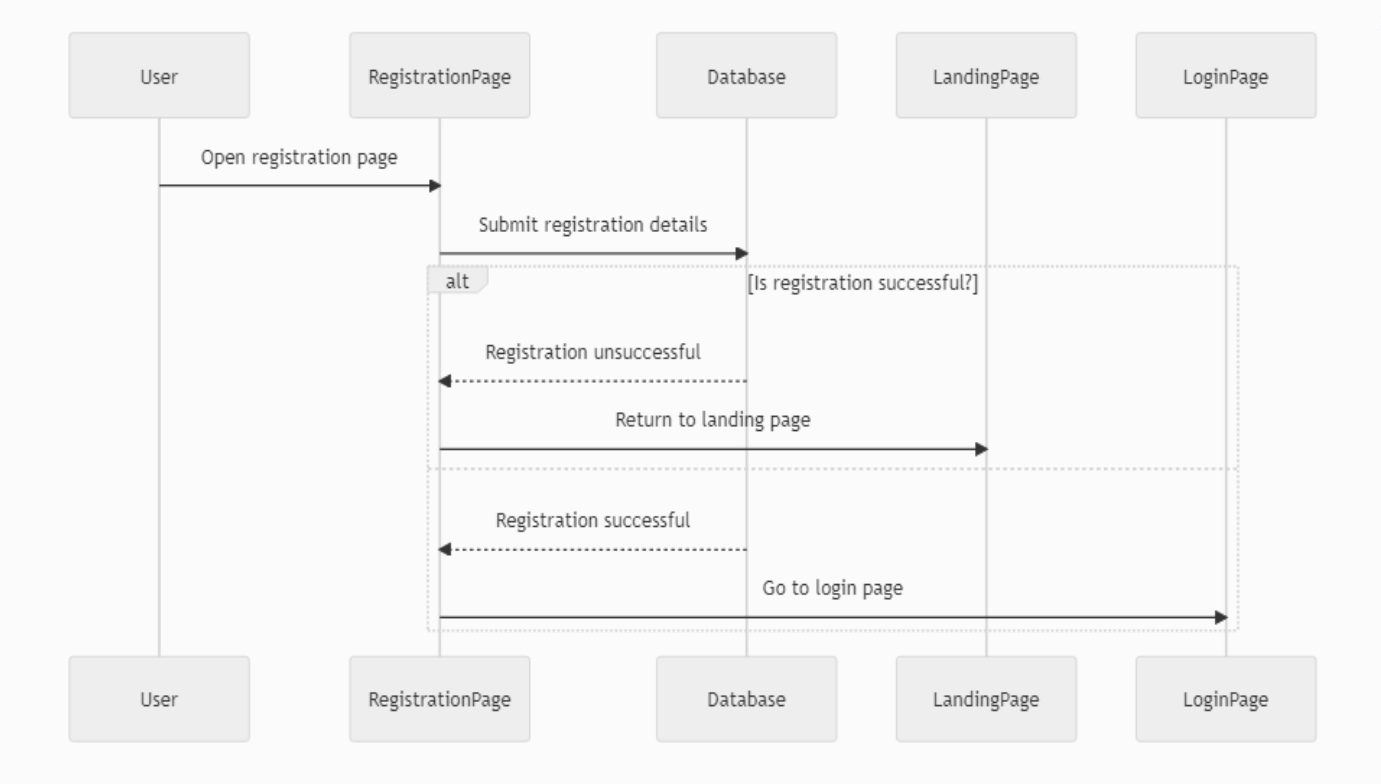

User
firstName: String
lastName: String
Email Address: Email
dateOfBirth: Date
phoneNumber: Number
password: String
createUser()
Admin
firstName: String
lastName: String
Email Address: Email
dateOfBirth: Date
phoneNumber: Number
password: String
createAdmin()
views
Uploads
submits
Image upload
imageID: String
user Feedback
resultsID: String
description: String
Creates /Update/Delete
views user results
submits image
views
Submission
userID: String
submissionID: String
submissionDate: Date
imageID: String
Is consent granted
Submit
Results
userID: String
imageID: String
disabilityType: String
medicalAdvice: String
Resource
submissionID: String
title: String
description: String
Email Address: Email
datePublished: Date
publisherName: String
createResource()
updateResource()
deleteResource()

ER(Entity- Relationship) Diagram:

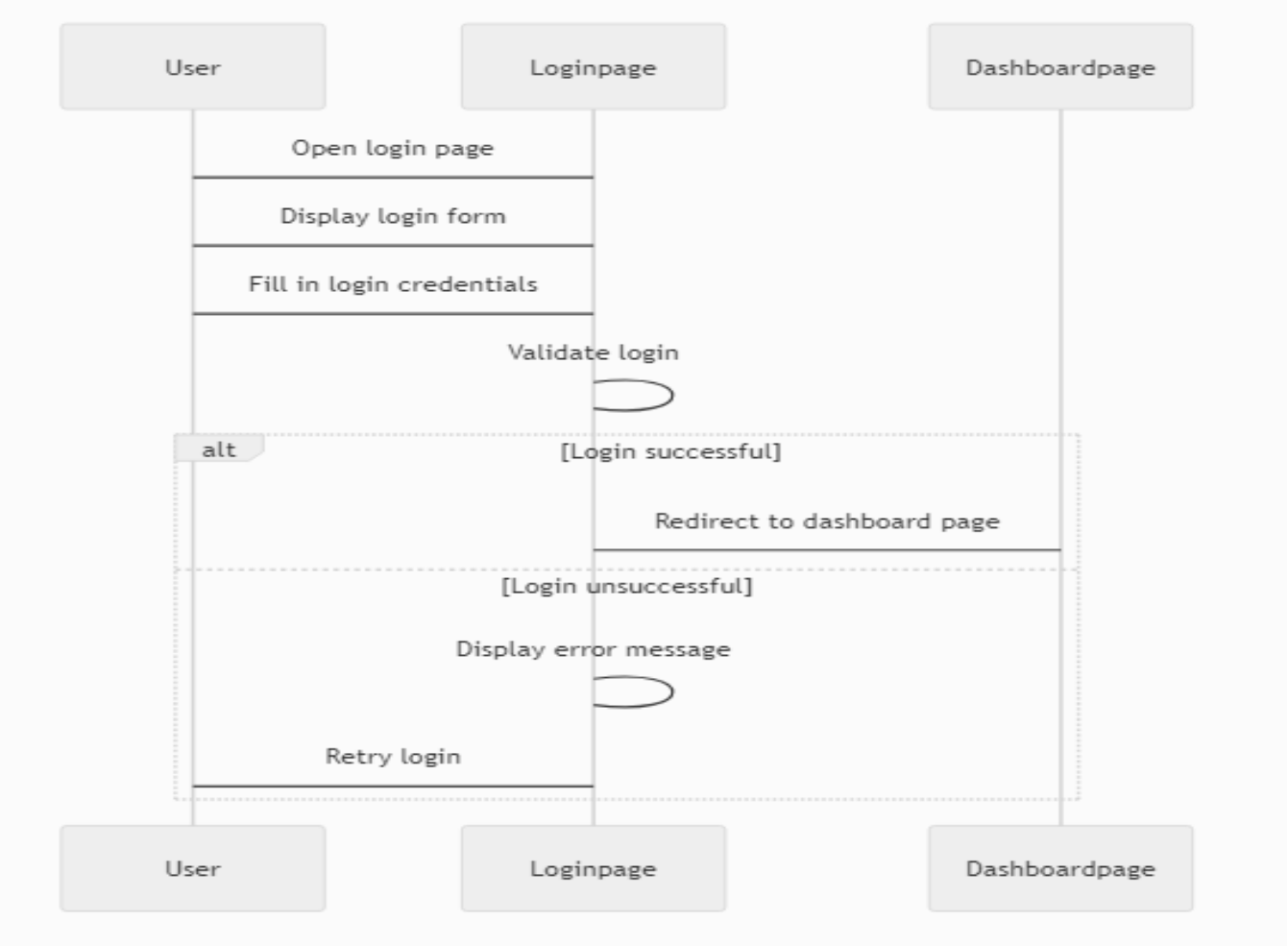


Sequence Diagram:

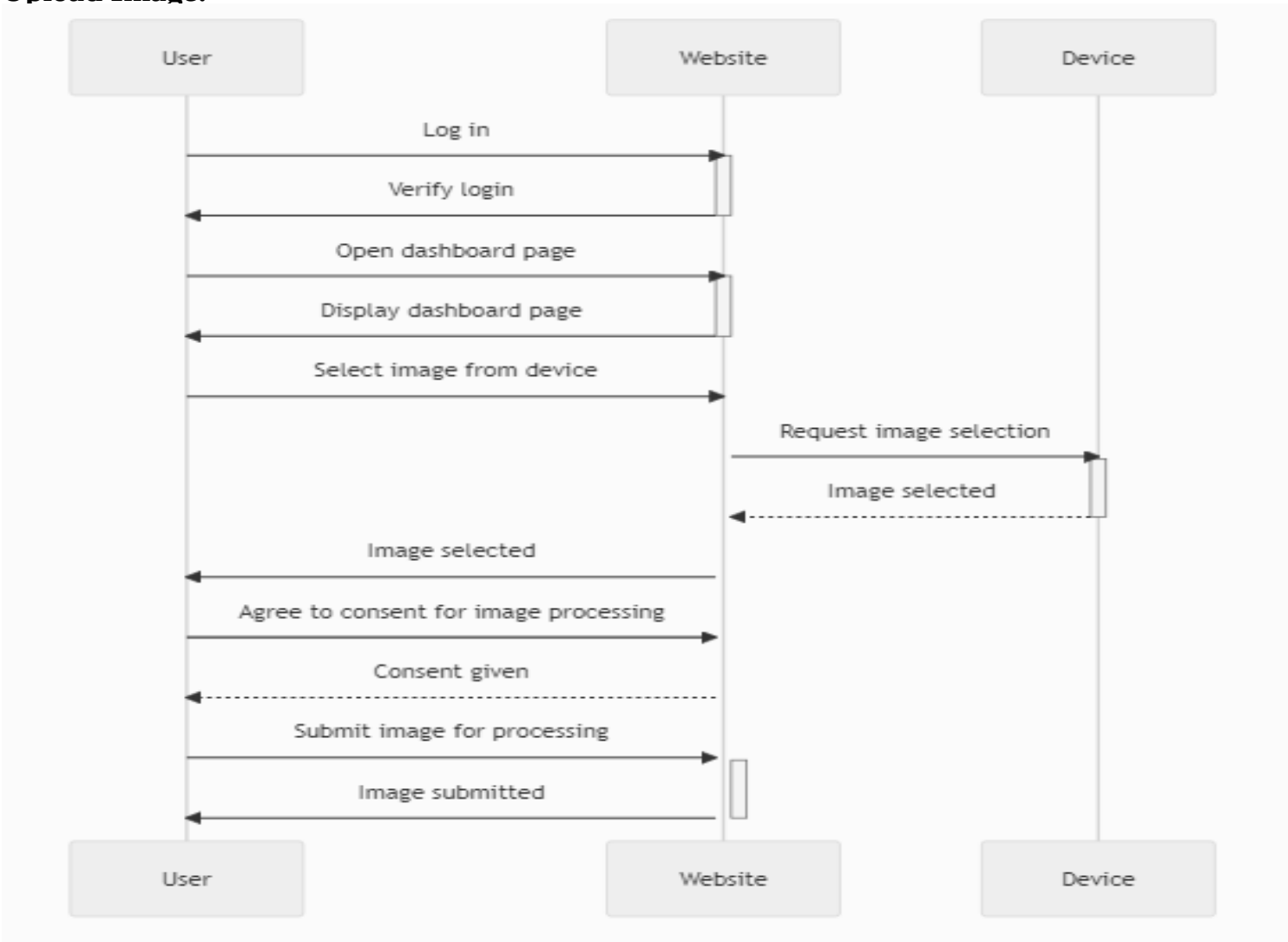
1. Registration:



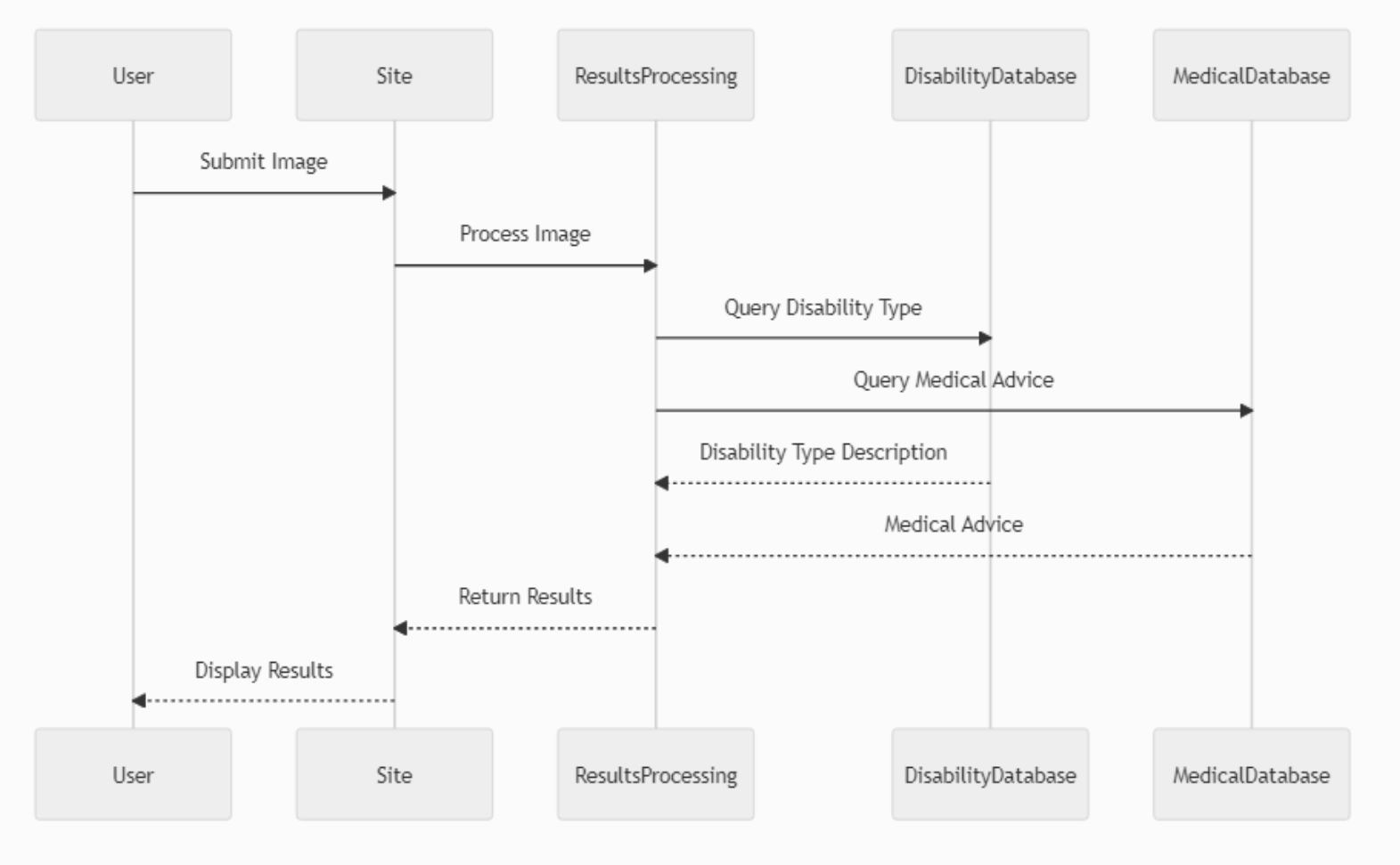
2. Login:


User
Loginpage
Dashboardpage
Open login page
Display login form
Fill in login credentials
Validate login
alt
[Login successful]
Redirect to dashboard page
[Login unsuccessful]
Display error message
Retry login
User
Loginpage
Dashboardpage

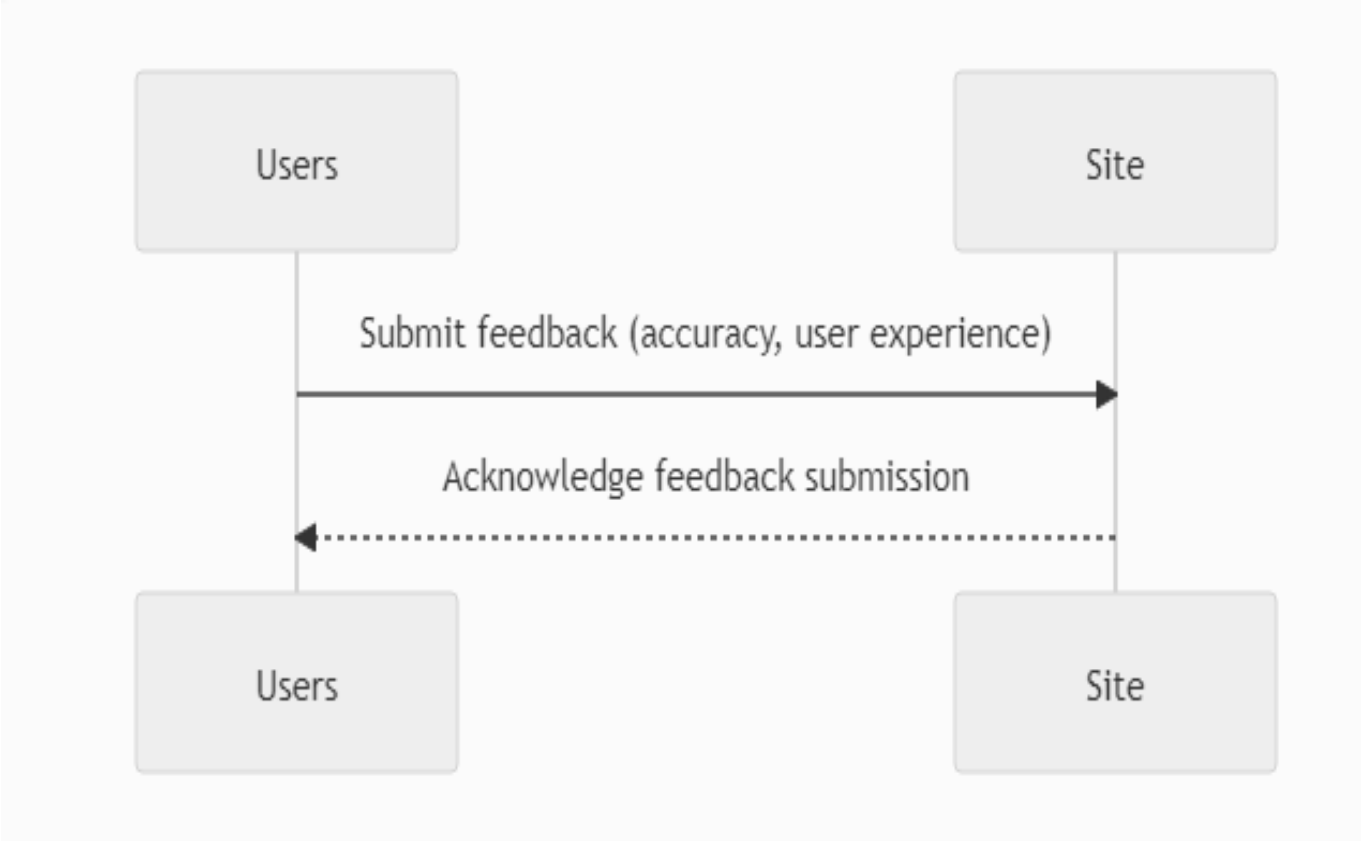
3. Upload Image:



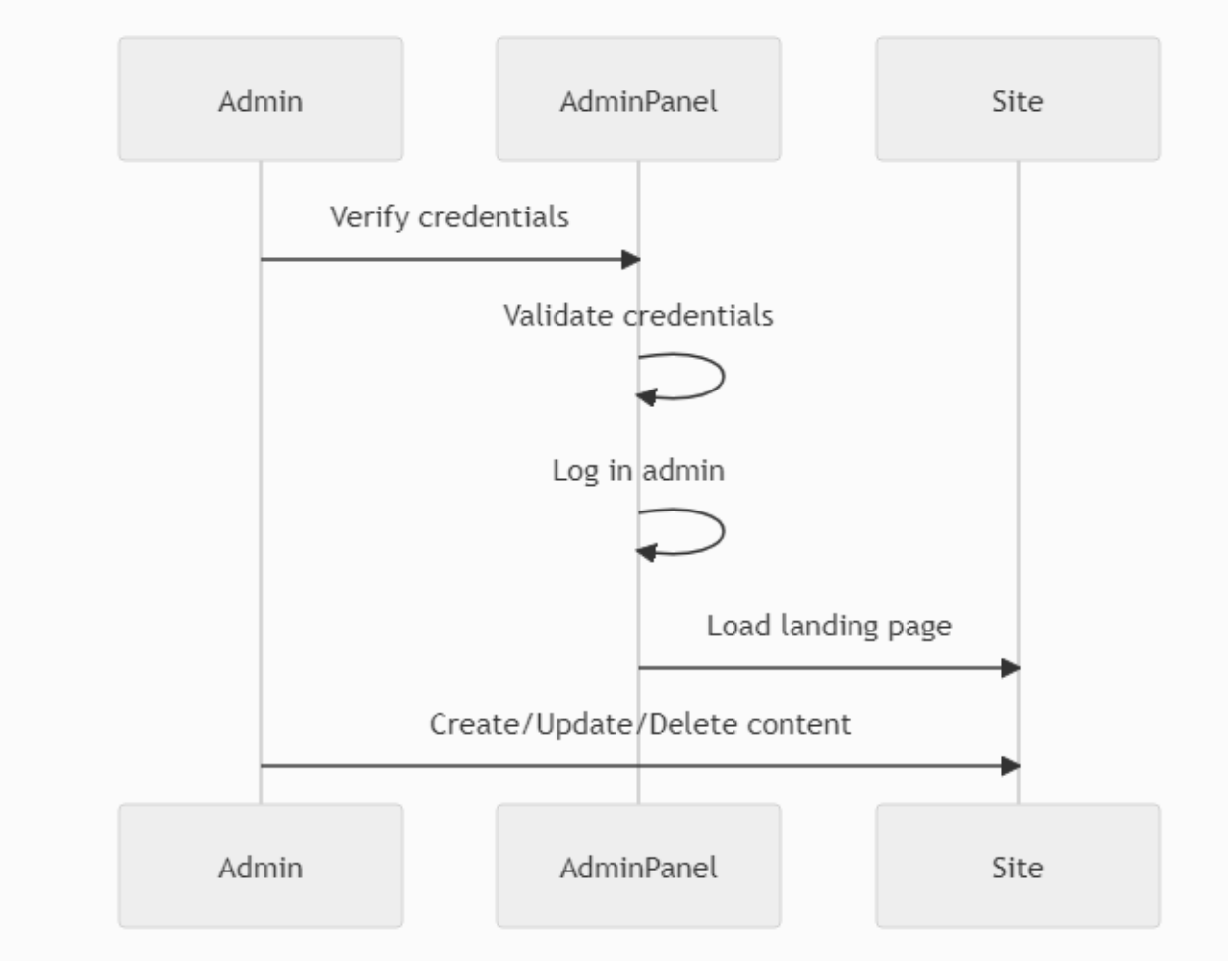
4. Results Processing :



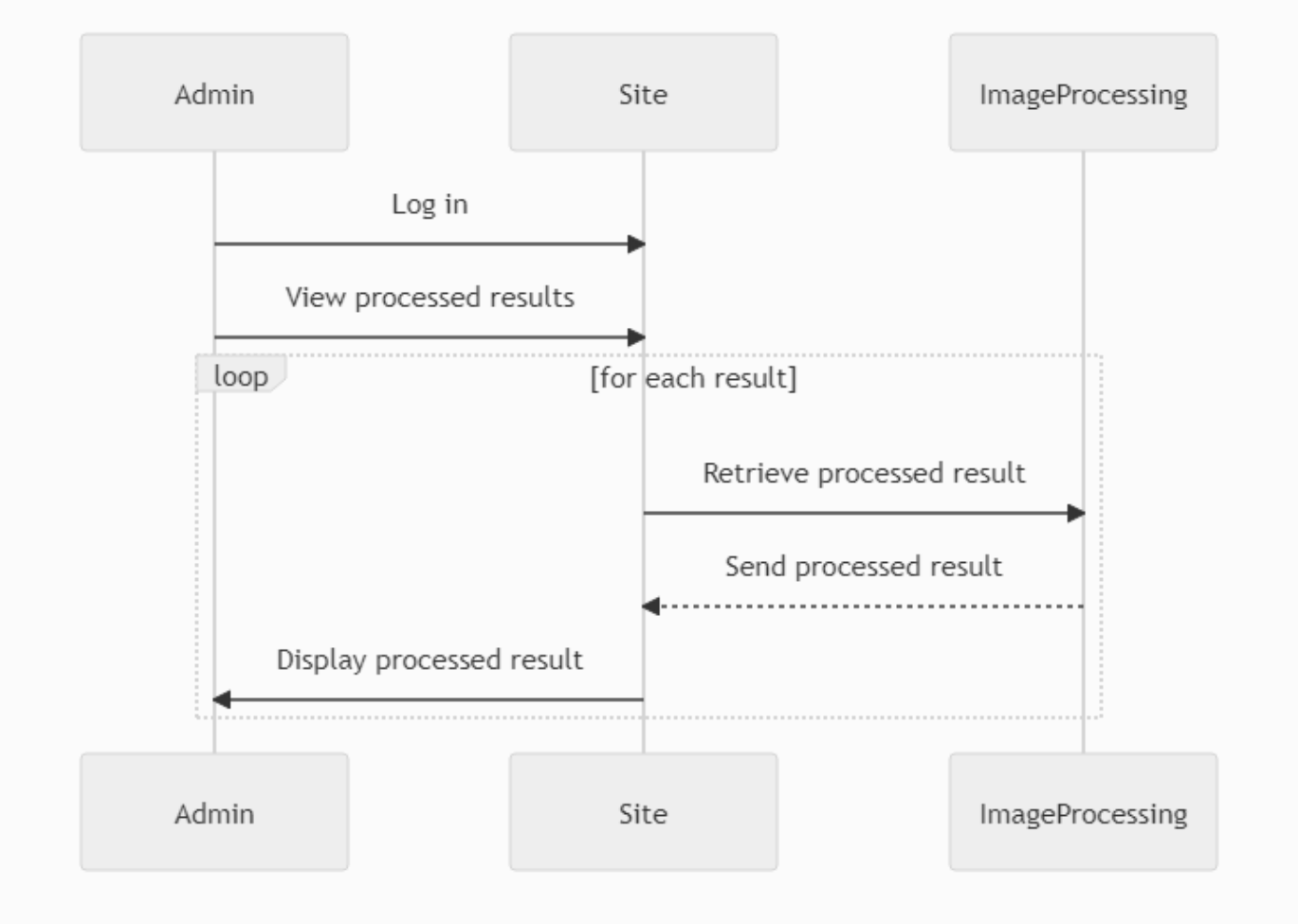
5. User Feedback Submission:



6. Admin Content Management:



7. Admin View Results:



Design Rationale:

The design of our disability recognition site began with the design of the landing page. The landing page has brief information about what the system does. On the upper right corner, there is a Login button that directs users to the login page. A user is required to enter the email address and password to log in. Underneath the login form is a link directing users who have no account to the registration page. The information for registration includes; first name, last name, date of birth, Phone number, email address, and password. The landing page has content in the form of articles published by the admin which users may find educative with regards to disabilities.

Users:

The Disability Recognition Site has prioritized user-friendly and inclusive design for its interface. As soon as users log in, they are directed to the dashboard, streamlining their experience and minimizing any obstacles. This efficient approach enables users to easily access the platform's core functionalities without unnecessary delays or complications.

The process of uploading images is user-friendly and adaptable, allowing users to choose pictures from their device's storage or capture live images using the camera. This feature accommodates different user preferences and technological capabilities.

To prioritize transparency and protect user privacy, there is a consent step incorporated into the process. During this step, users are given the option to explicitly grant permission for their images to be securely processed and stored in the system's databases.

Efficiency is a fundamental element of the design, as it optimizes image processing for real-time outcomes. In addition to providing recognition results, users receive relevant medical advice on the dashboard. This comprehensive approach empowers users by offering practical insights alongside recognition data.

User feedback is actively encouraged and easily accessible within the platform. Users have the opportunity to provide feedback on both system accuracy and their overall experience, contributing to continuous improvement efforts. Moreover, the feature allowing users to submit multiple images enhances the platform's versatility by accommodating various scenarios or conditions they may encounter.

To ensure utmost security and privacy, the dashboard prominently showcases a logout button. This enables users to securely log out once they have completed their tasks.

Admin:

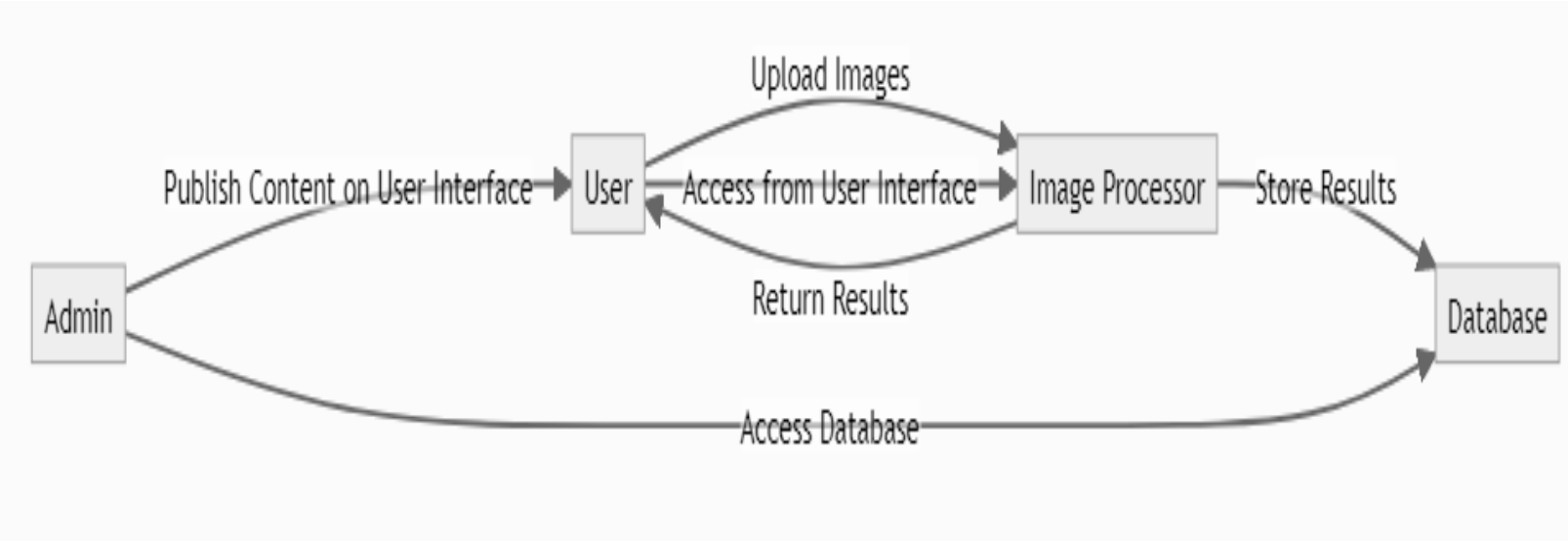
The admin panel of the Disability Identification Portal has been designed in such a manner that will enable administrators to manage content and interact with end users effectively. Admins can create, edit, add, or remove content from the Landing Page to enable real-time announcements and sharing of crucial updates with Users.

Following user-centered design principles, the admin interface comes with user management functionalities. Admins can effectively handle user accounts along with their access control ensure platform security and also take care of sensitive user data.

Security and privacy are of utmost importance and the backend follows strict cybersecurity practices. There are measures in place to protect user data from intrusion and to secure all information so that there are no breaches of your personal data or privacy data.

The admin application is set up for an ongoing cycle of iteration. Feedback from users is utilized to identify areas where the system can be enhanced, and content management tools facilitate the timely update of information to keep users informed.

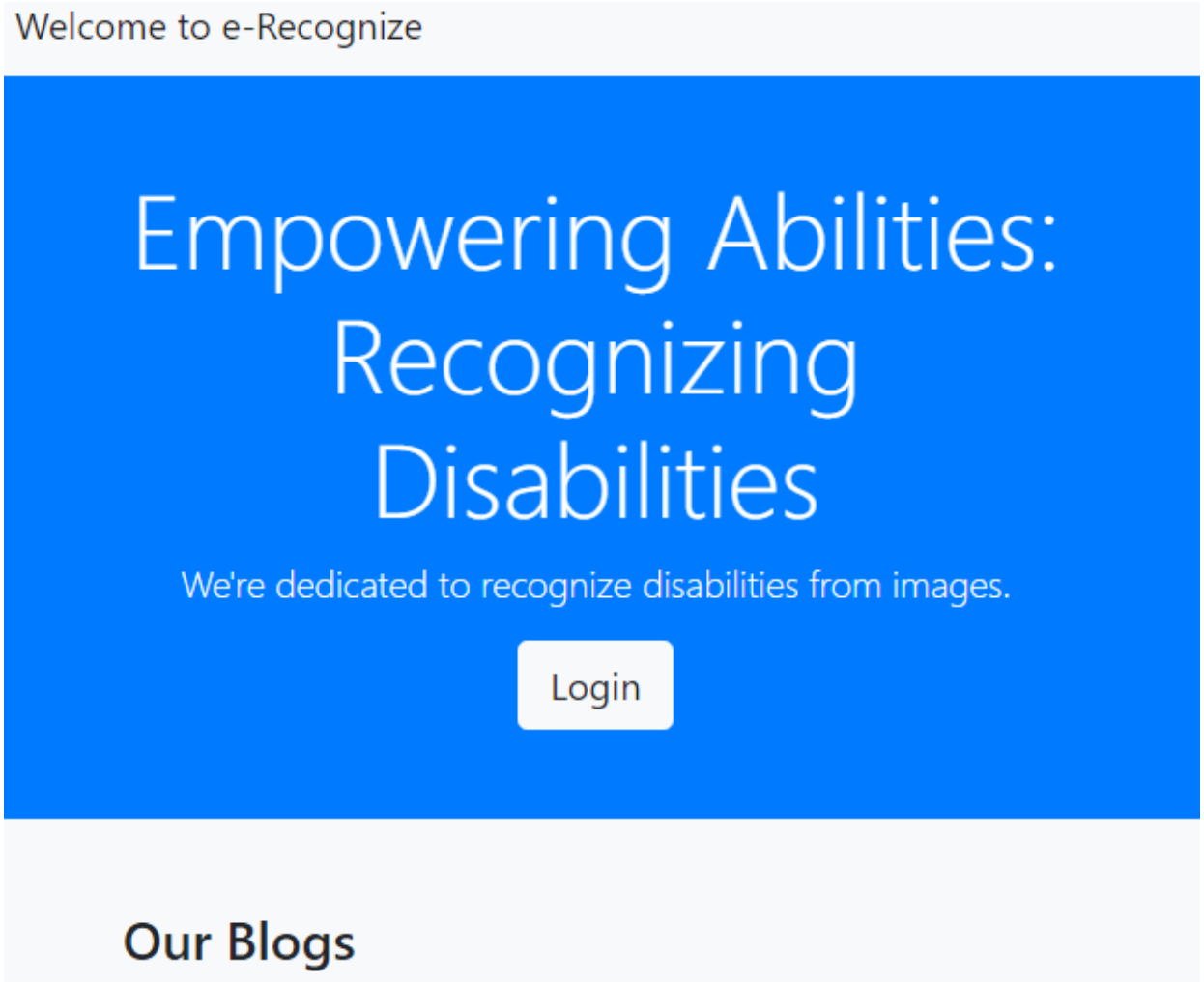
Information Architecture Diagram:



User Interface Wireframe(s)/Screenshots:

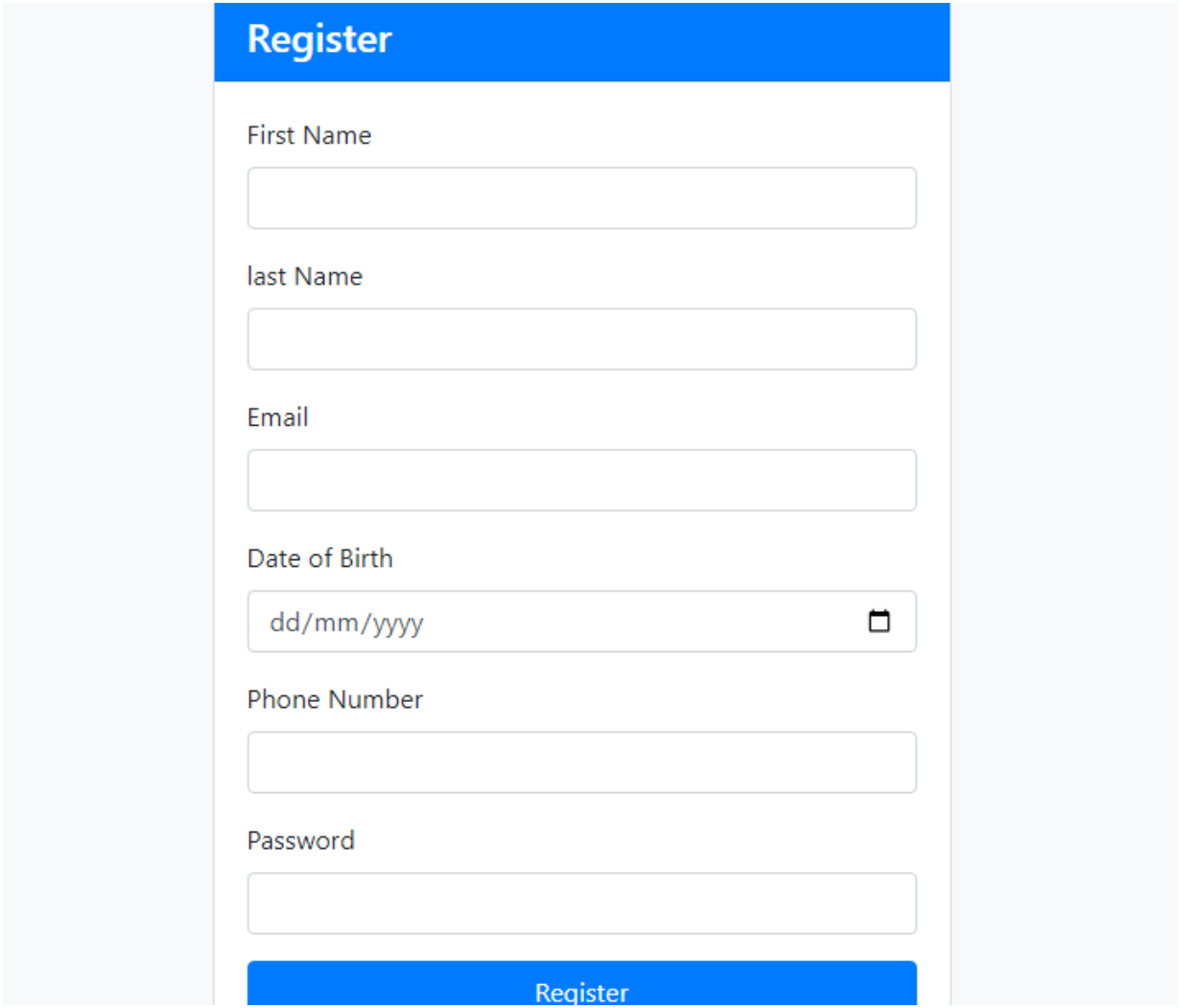
1. Landing Page:

This is the first page of the site. Users will be able to log in from this page and access blogs.



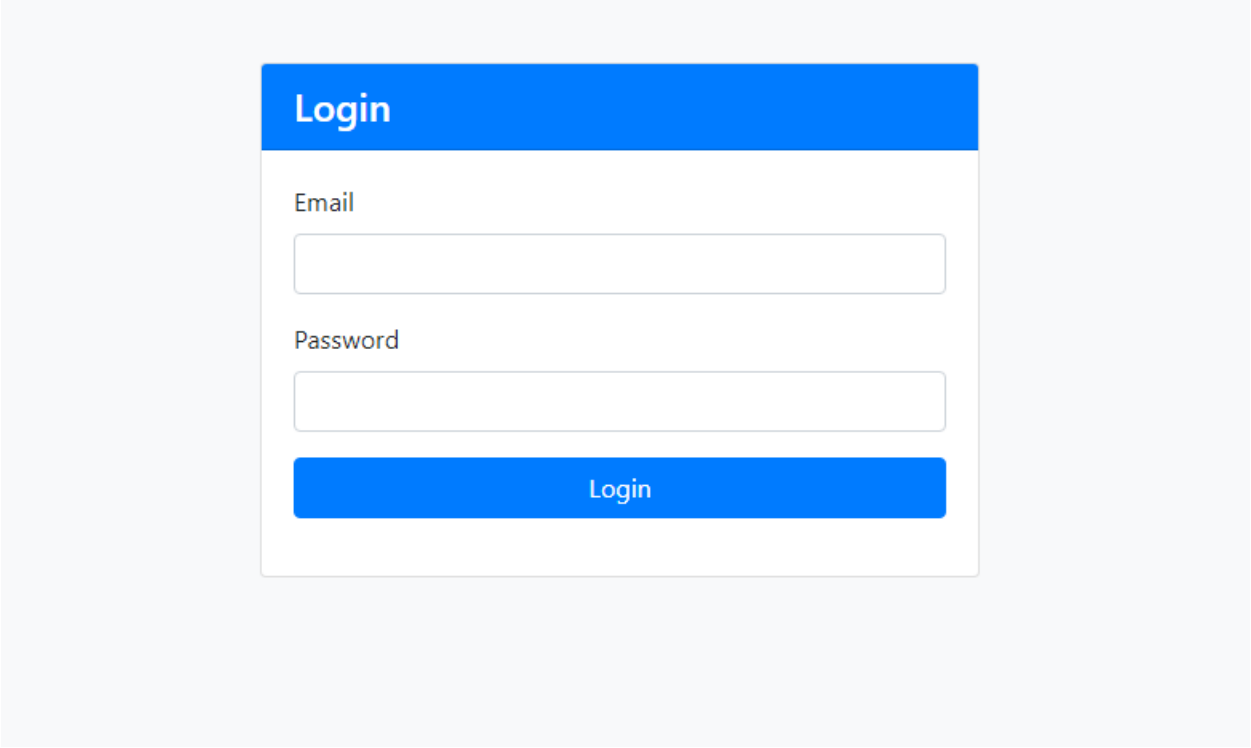
2. Registration Page:

This is the page where users register to the site.



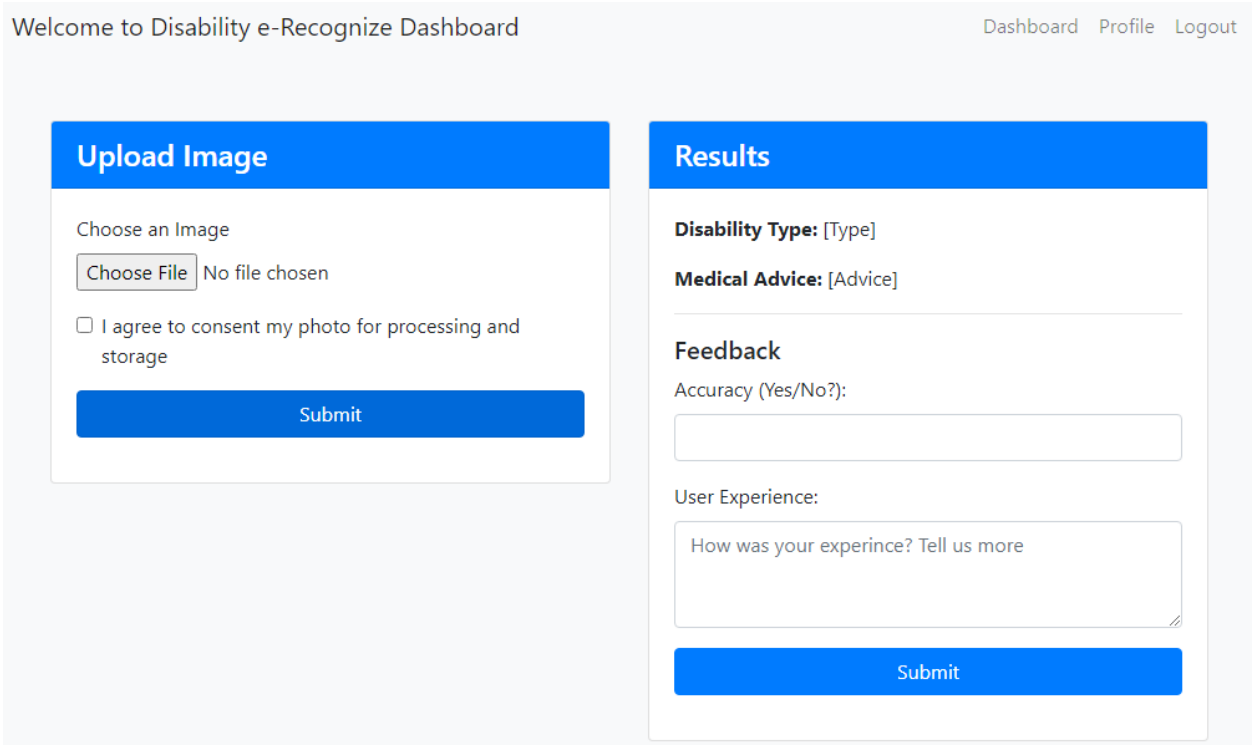
3. Login

This is an entry page to the dashboard that requires user identification.

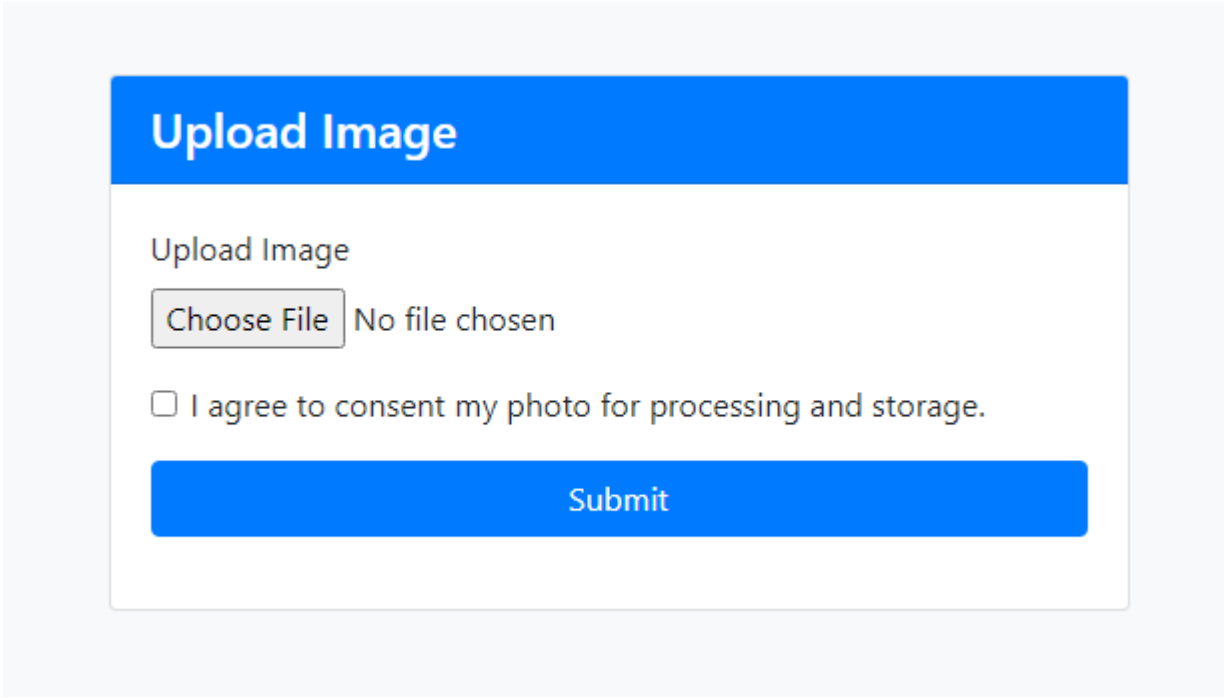


4. Dashboard:

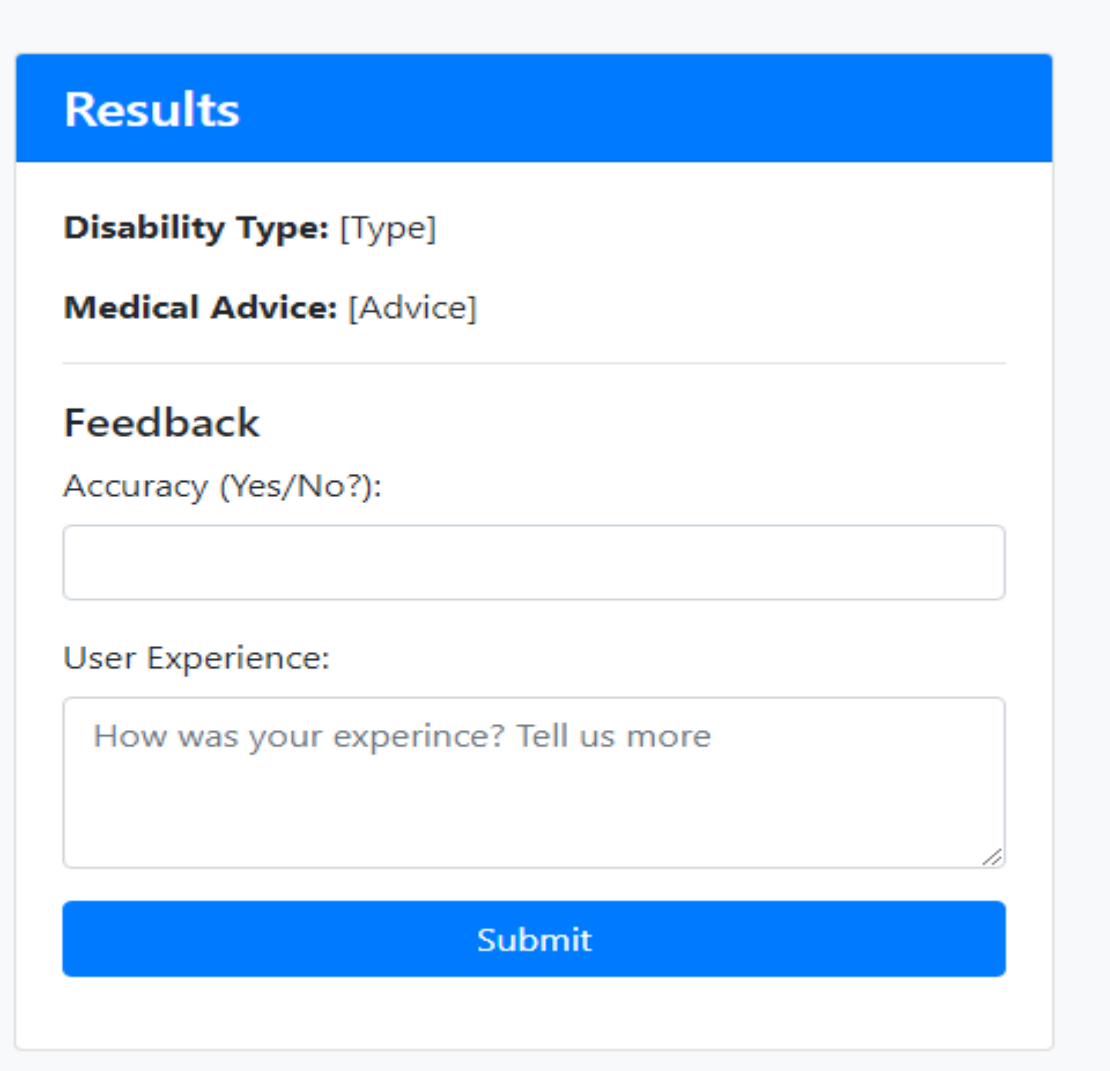
This is the page where users can upload their images, get results, and submit feedback



4.1 Upload Image:

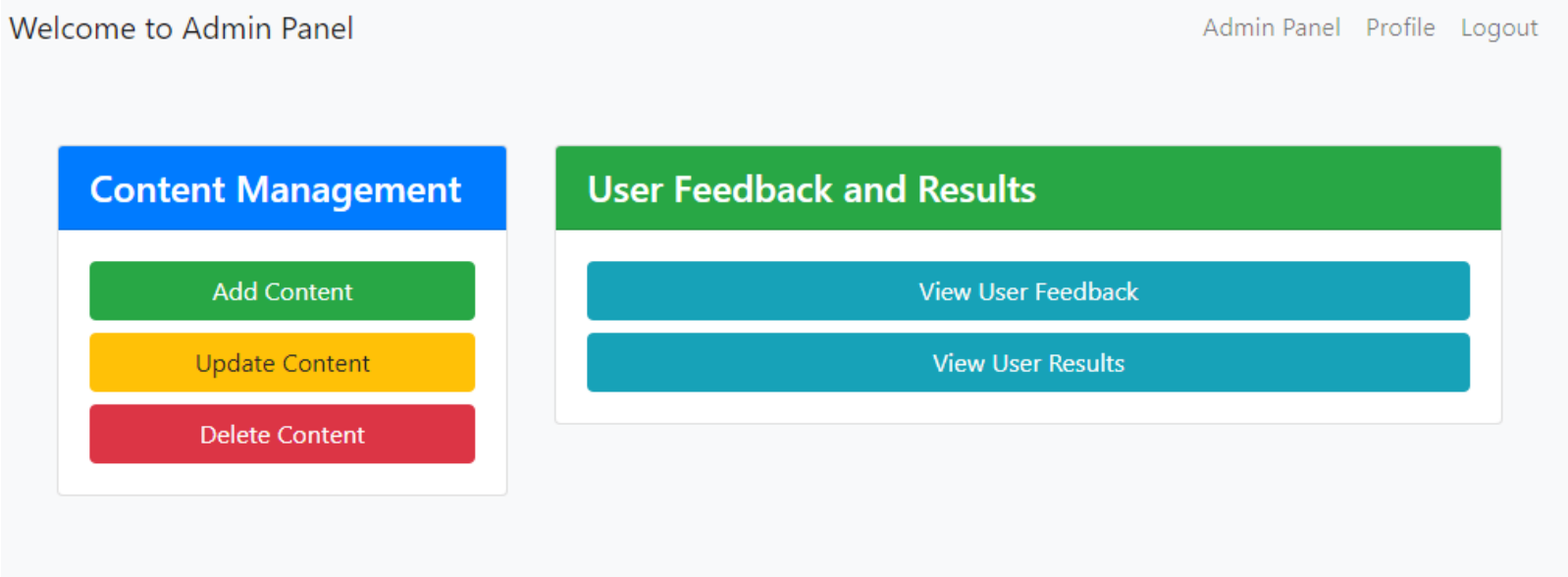


4.2 View Results and Submit Feedback:



5. Admin Panel :

The authorized admins will manage the content from this page. They will view users' feedback and their results. They will create, update, and delete content to be displayed on the landing page.



S.No.	Name	Student Id	Contributions
01	Anusha Jammalamadaka	11708020	Class diagram, ER diagram
02	Sai Teja Uppu	11691244	Sequence diagram and Trello creation
03	Suraj Kumar Panchakarla	11719347	Design Rationale
04	Neha Nadiminti	11704176	Class diagram, ER Diagram and Github Link
05	Chittemreddy GnanendraReddy	11699029	Sequence diagram
06	Swapna Dabburi	11708640	Developing user Interface wireframe using figma
07	Bindhu Madhavi Busanagari	11712816	Developing user interface wireframe using figma