PRODUCT DESIGN

Project: Optimal Accessibility

Team: Group 7
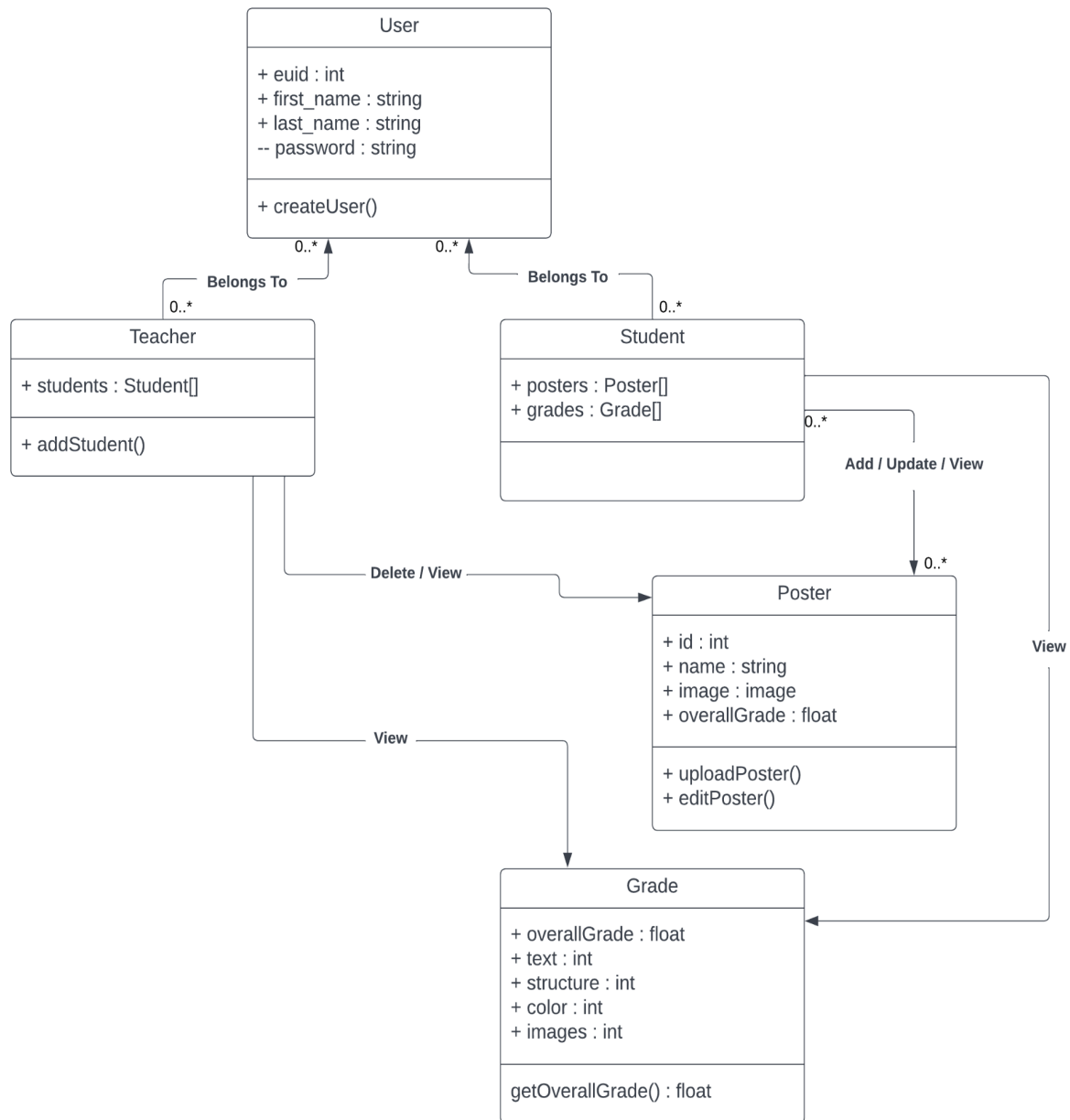
Team Members: Tyler Adam Martinez and Henry Peeples

Revision History

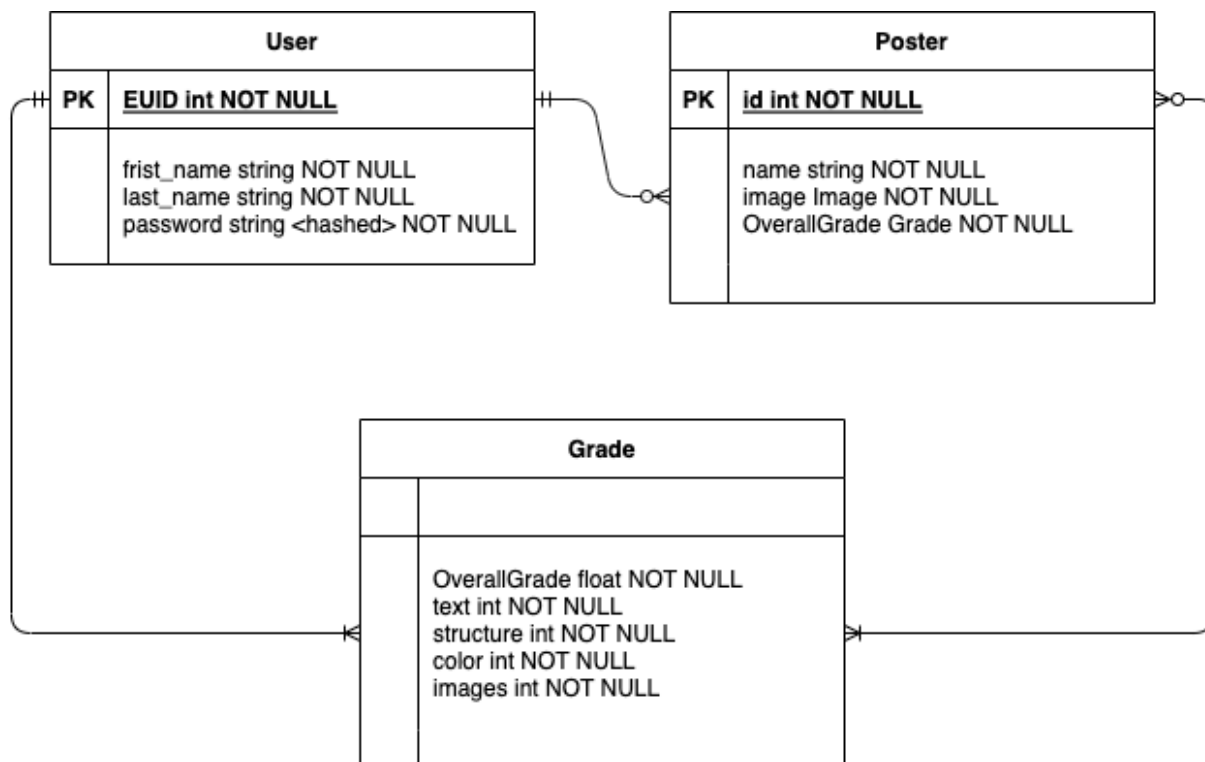| Date	Version	Description	Author
06-20-2022	1.0	Product Design	Group 7

Class Diagram

- **User** - This class stores the information for all registered users on the system such as name, EUID, and password. This class will also contain a list of the user's associated posters.

- **Teacher** - Users with the teacher role will also be part of the user class; however, they will be able to see all the posters from all the students.

- **Student** - Users with the student role will also be a part of the user class; however, students can only see their own posters.

- **Poster** - This class will contain the information for a poster. This information includes the name and UID of the poster. It will also contain the grade of the poster's overall accessibility which is of type Grade Object.

- **Grade** - This class will contain the information for a poster's grade or the overall poster grades. The class' main attribute is the average of the four minor attributes. The main attribute is the overall grade and the four minor are text, structure, color, and images.
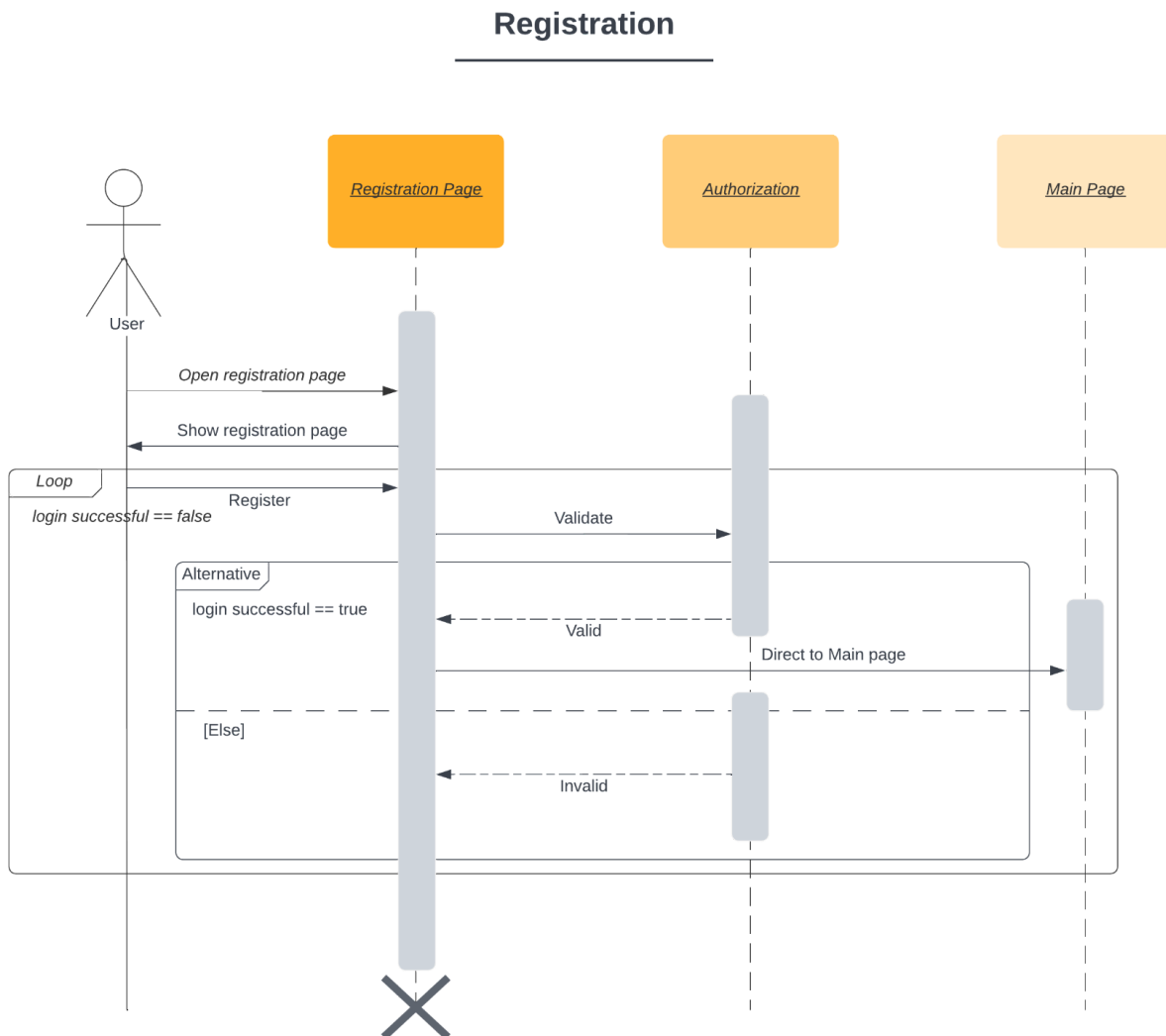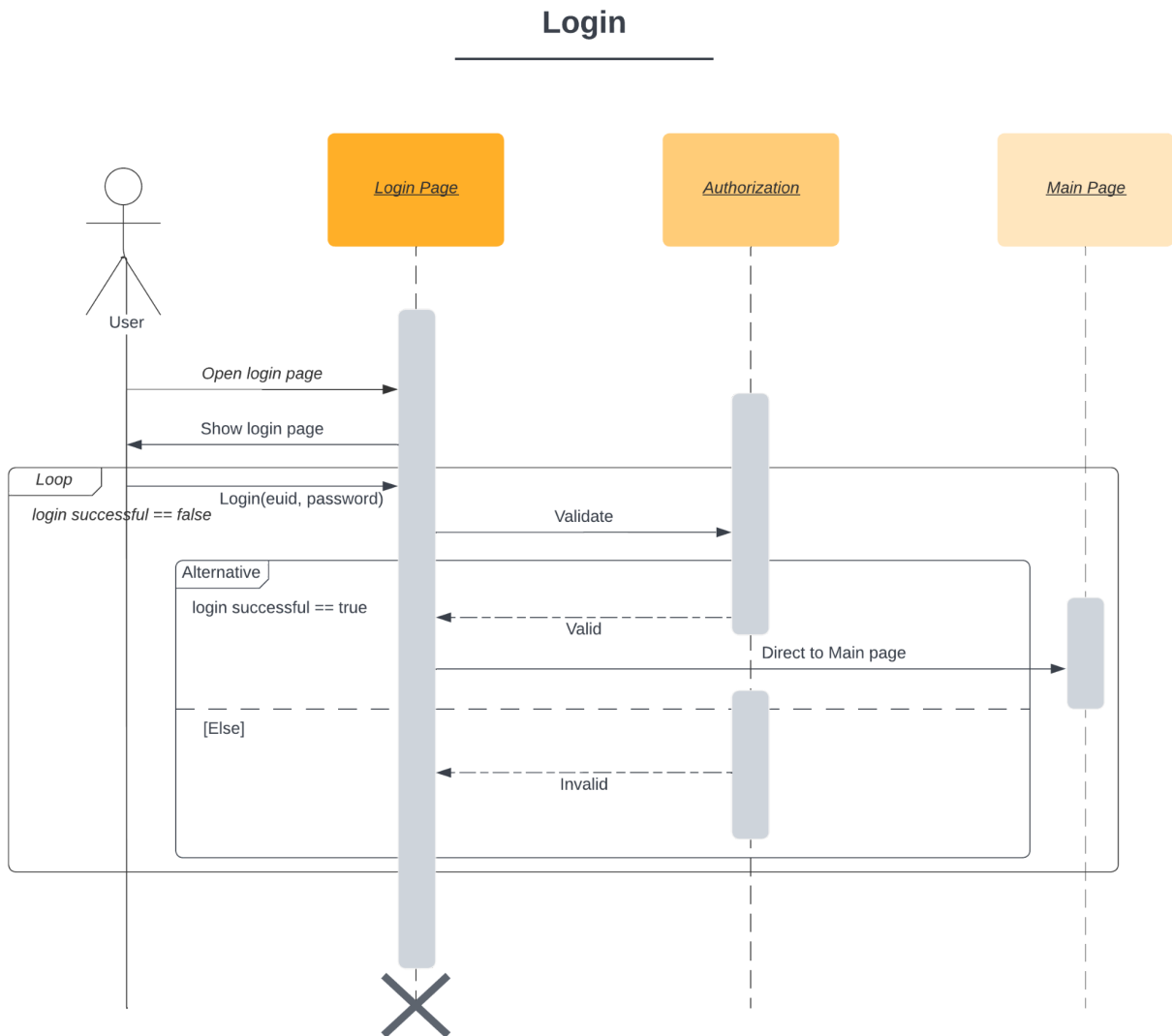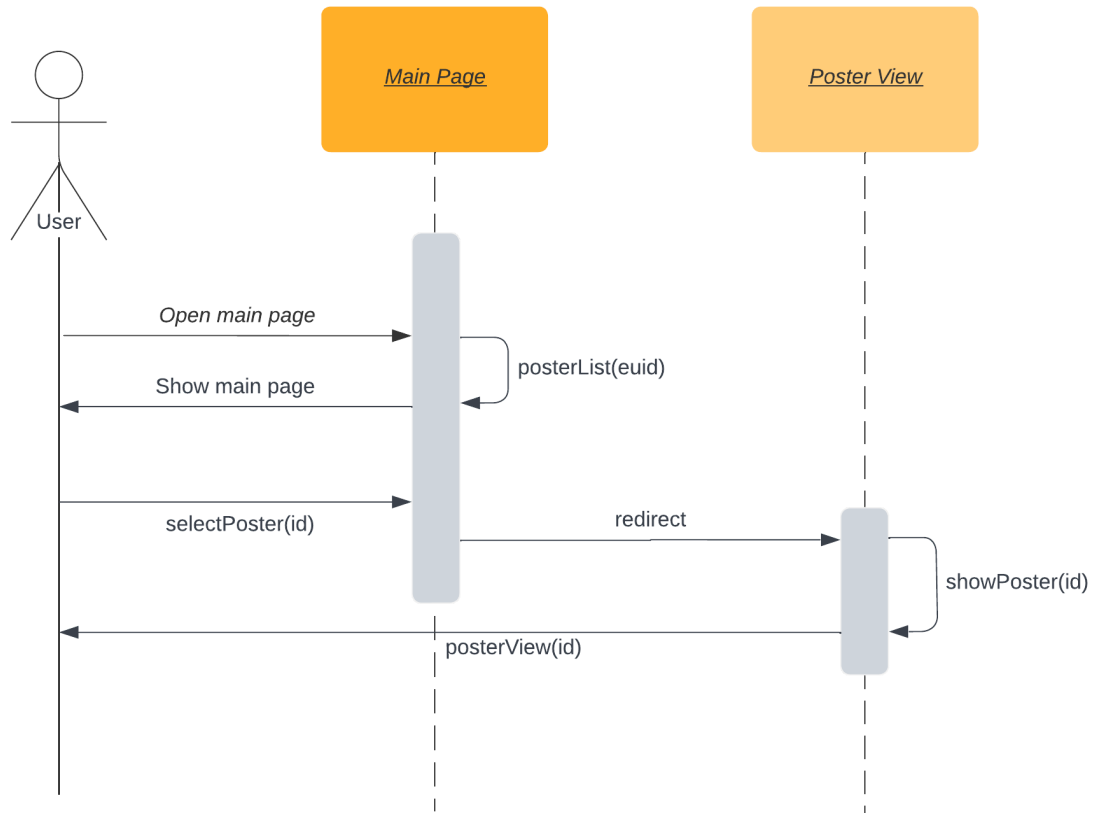
Class Diagram

```
                        ┌─────────────────────────┐
                        │          User           │
                        ├─────────────────────────┤
                        │ + euid : int            │
                        │ + first_name : string   │
                        │ + last_name : string    │
                        │ -- password : string    │
                        ├─────────────────────────┤
                        │ + createUser()          │
                        └─────────────────────────┘
```

Belongs To   0..*   0..*   Belongs To

0..*   0..*

```
┌─────────────────────────┐        ┌─────────────────────────┐
│        Teacher          │        │        Student          │
├─────────────────────────┤        ├─────────────────────────┤
│ + students : Student[]  │        │ + posters : Poster[]    │
├─────────────────────────┤        │ + grades : Grade[]      │
│ + addStudent()          │        ├─────────────────────────┤
└─────────────────────────┘        │                         │
                                   └─────────────────────────┘
```

0..*   Add / Update / View

Delete / View   0..*

```
                        ┌─────────────────────────┐
                        │         Poster          │
                        ├─────────────────────────┤
                        │ + id : int              │
                        │ + name : string         │
                        │ + image : image         │
                        │ + overallGrade : float  │
                        ├─────────────────────────┤
                        │ + uploadPoster()        │
                        │ + editPoster()          │
                        └─────────────────────────┘
```

View   View

```
                        ┌─────────────────────────┐
                        │          Grade          │
                        ├─────────────────────────┤
                        │ + overallGrade : float  │
                        │ + text : int            │
                        │ + structure : int       │
                        │ + color : int           │
                        │ + images : int          │
                        ├─────────────────────────┤
                        │ getOverallGrade() : float│
                        └─────────────────────────┘
```

ER Diagram(s)

User

PK	EUID int NOT NULL
	frist_name string NOT NULL last_name string NOT NULL password string <hashed> NOT NULL

Poster

PK	id int NOT NULL
	name string NOT NULL image Image NOT NULL OverallGrade Grade NOT NULL

Grade

	OverallGrade float NOT NULL text int NOT NULL structure int NOT NULL color int NOT NULL images int NOT NULL

Sequence Diagram(s)

Registration

Login

View Poster

User

Main Page

Poster View

Open main page

posterList(euid)

Show main page

selectPoster(id)

redirect

showPoster(id)

posterView(id)

Upload Poster

Design Rationale

The design for our webpage began by designing the login/registration pages. We decided for the first page to be the login page which requires a EUID and Password field to be filled by the user. If the user does not have an account, there is a button at the bottom that takes the user to a Registration page. This page requires personal information to be filled in by the user including their name, EUID, and password for login. If the user does not wish to create an account, they can choose the "guest" option from the login page to continue to the site with no registration.

Student

Once the user is logged in, they are taken to the main page where the most relevant information will be displayed. A couple of different designs were considered, but we chose to go with a very simple layout that shows all of your personal posters and grades right on the main page. No need to search through multiple tabs.

We went with a simple design to make the main page accessible yet useful enough with various features. The main page displays poster cards for the user with a couple of options. Below the class cards, there is a section showing the Accessibility Scores (grades) for the posters above.

The navigation bar is an important part of this website as it is present and accessible from every page the user navigates through. We decided to only include four options in the navbar which include a link to the main page, a help option, a plus or add a new option, and a profile button.

The help option is used to provide the user with information regarding the grading criteria that are used in the accessibility scoring system. There are four options which include text, structure, color, and images. These are used by the accessibility scoring system to try and provide an accurate score for your posters.
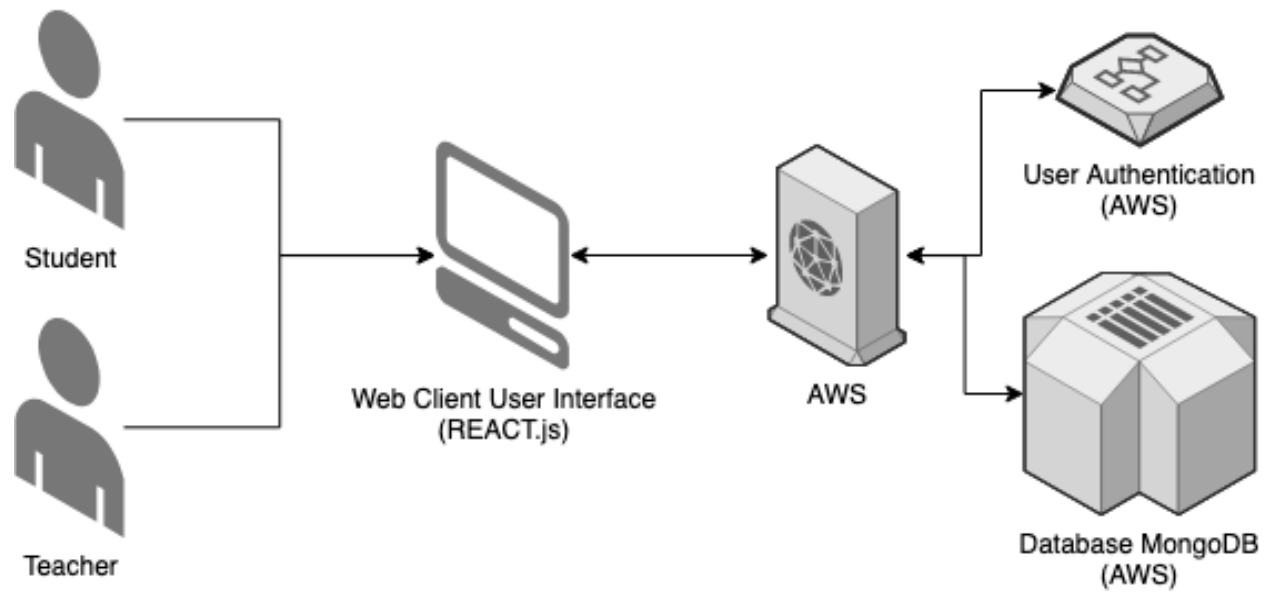
The plus option page will pop out an area for the user to upload a new image. The user needs to add a title, image file, and an optional description for the poster.

The profile button will simply show the user a logout button that they can use to exit the system.

Teacher

The main page for teachers will show a list of their students' posters. The teacher will have the option to delete student posters that are no longer valid or needed. Teachers can also see the grades for each poster and are provided an option to have the system re-grade a poster if they feel the grade is incorrect for any reason.

Information Architecture Diagram

Student

Teacher

Web Client User Interface
(REACT.js)

AWS

User Authentication
(AWS)

Database MongoDB
(AWS)

User Interface
Wireframe(s)/Screenshot(s)

- **Color**

F6F6F6	E8E8E8	333333	990100	B90504
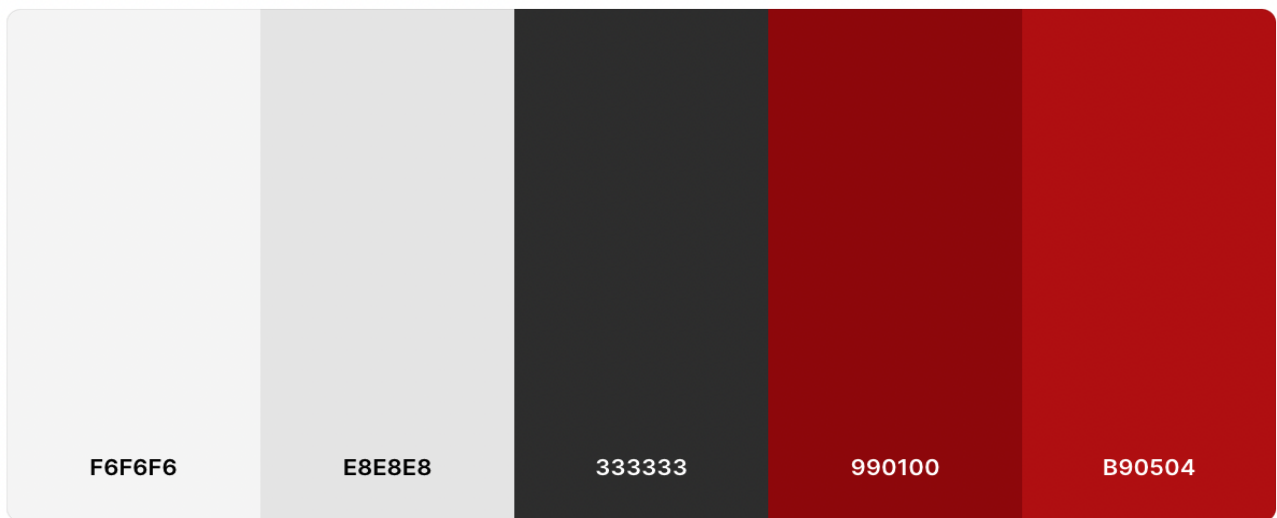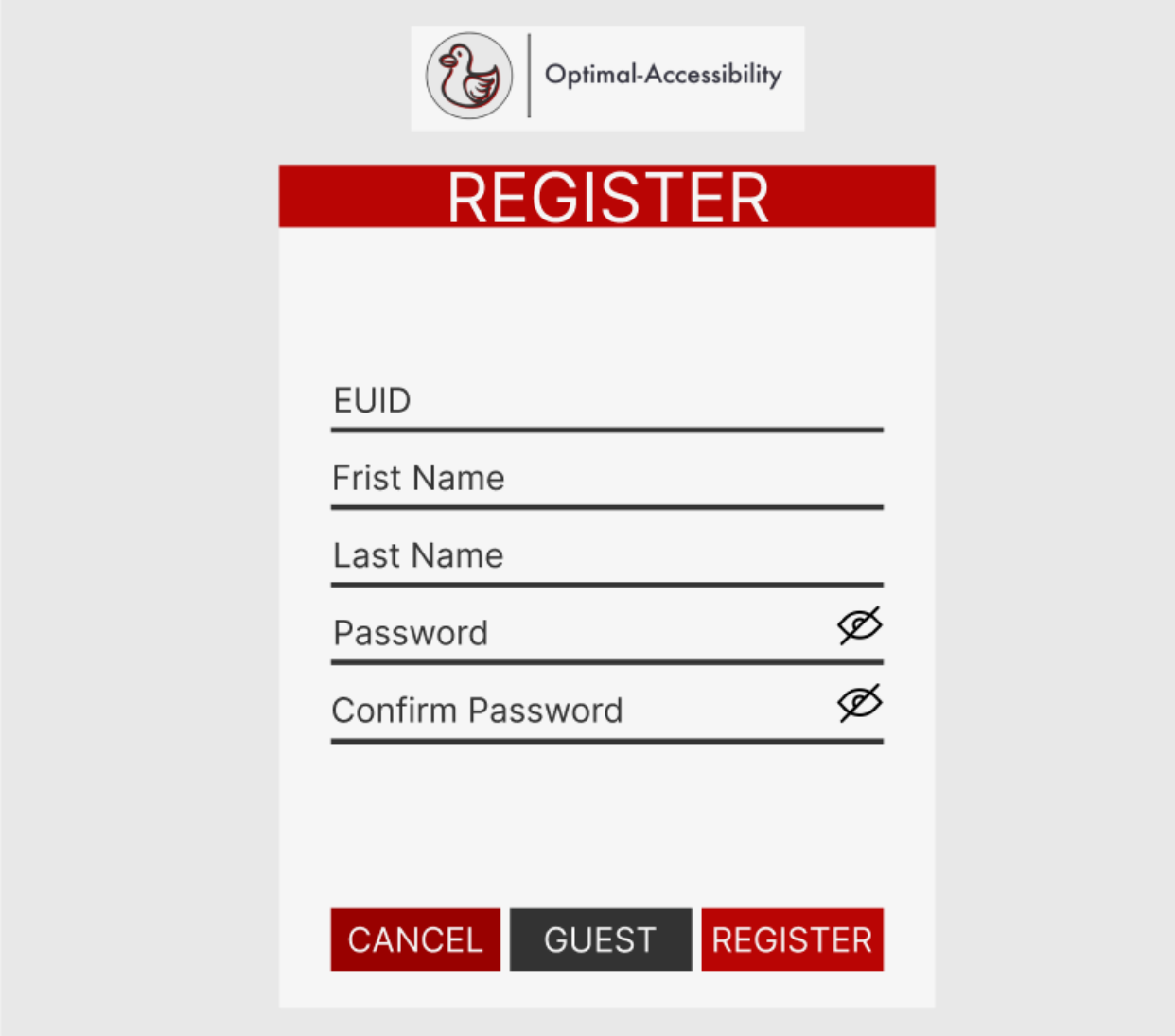
- **Logo**

Optimal-Accessibility

1. Registration Page

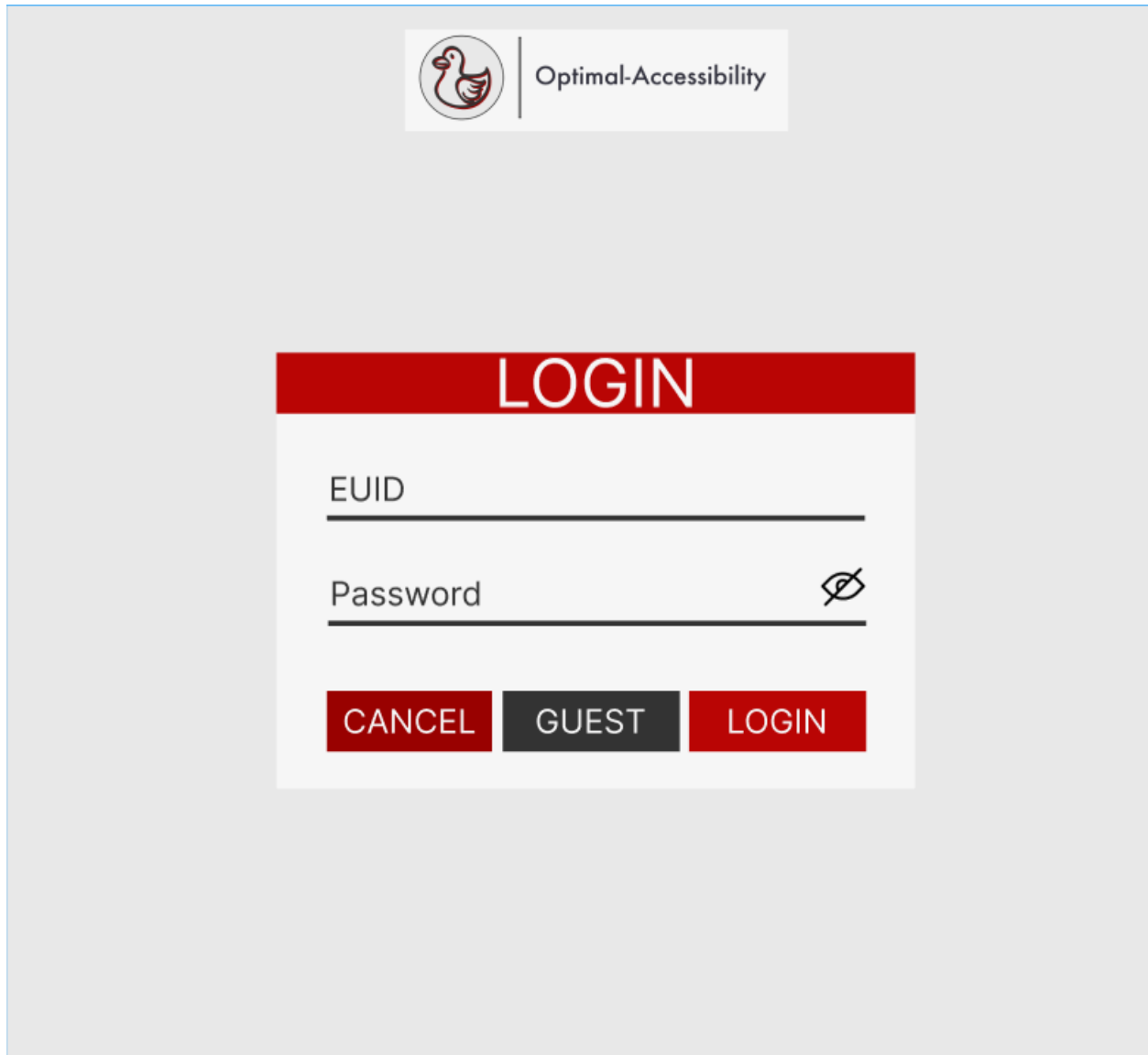This page will allow students to register to our portal or bypass the registration process by going to the dashboard as a guest.

2. Login

    This page is an entry page to the portal that requires users to identify themselves. Users can identify as Guests; therefore, bypassing the need to authenticate them.

3. Dashboard

This page is the dashboard for a sign-in account. It will give him/her an overview of all the posters that he/she submitted. Unless, if the account is registered as a teacher account then users will be able to see all the posters submitted to the database.
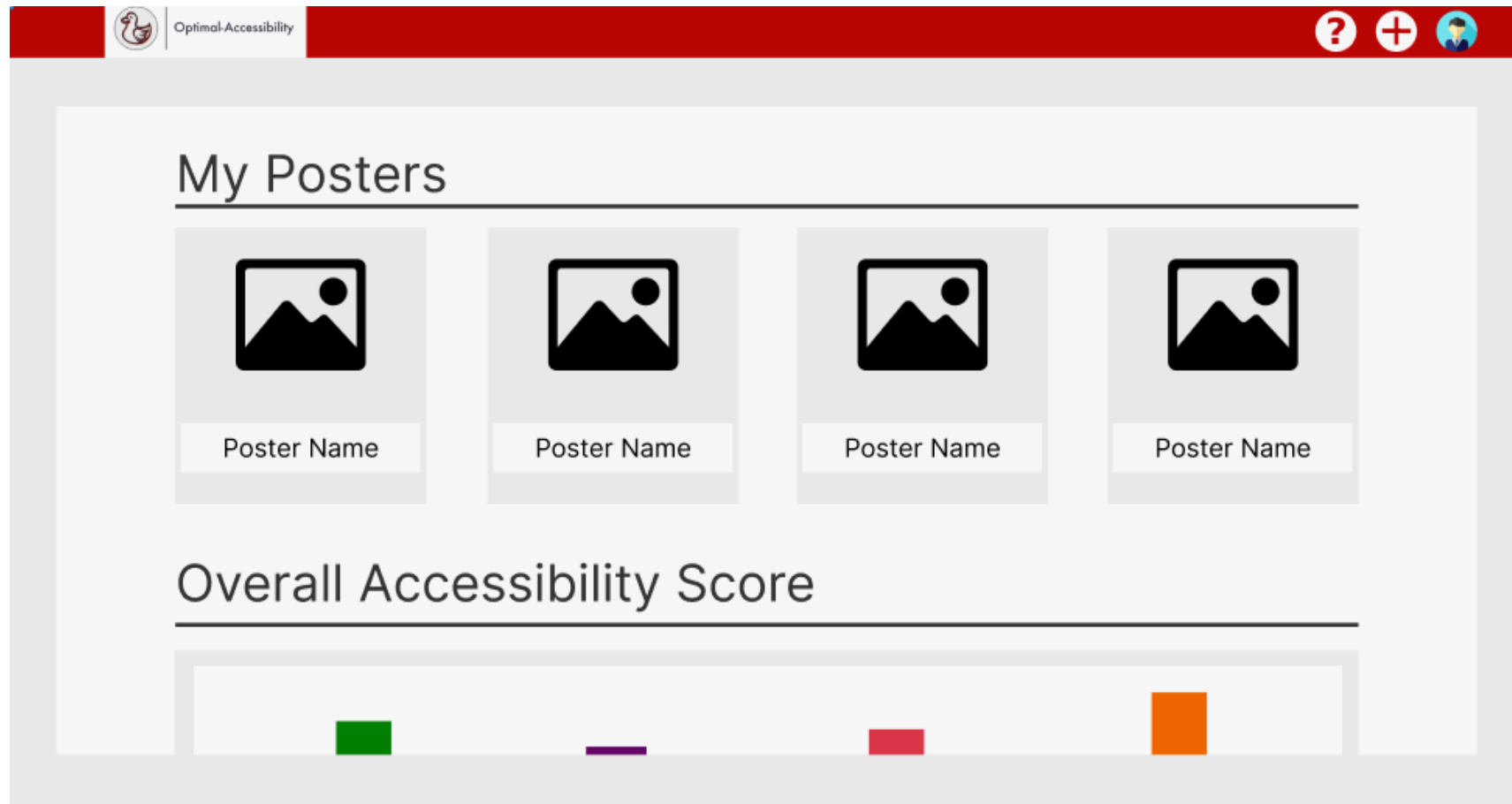
4. Clicked Individual Poster

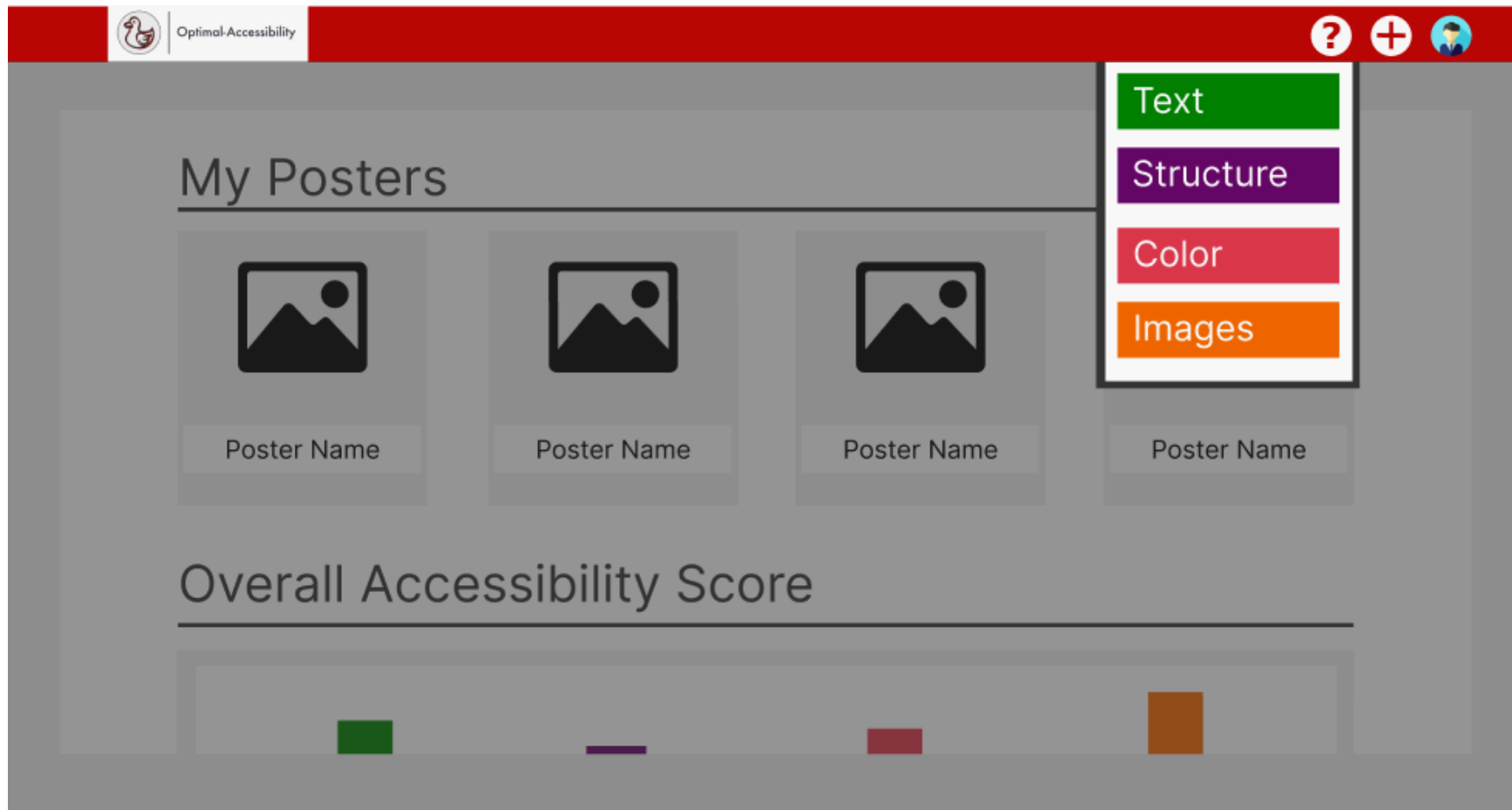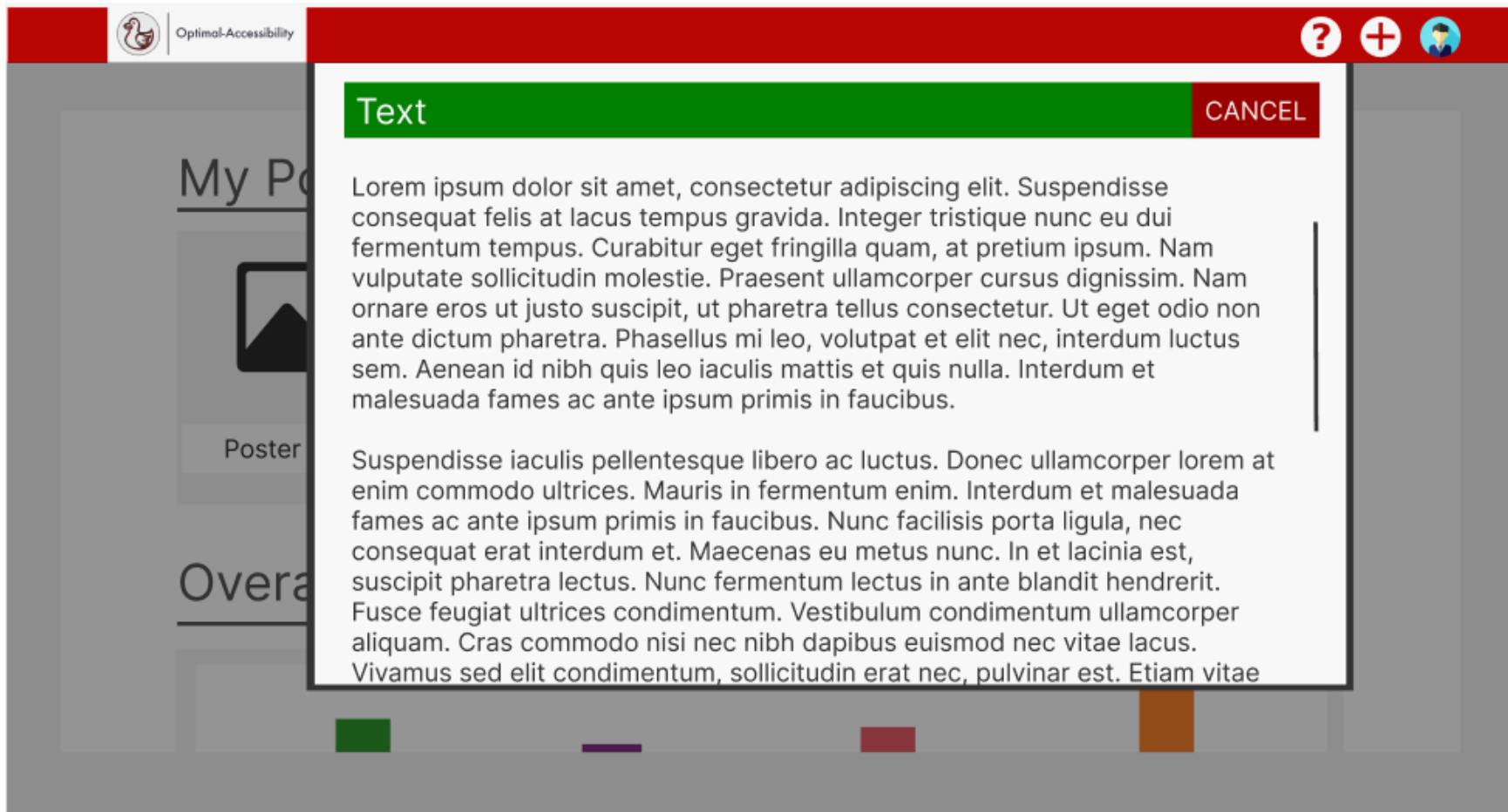Once the user clicks an Individual Poster then a pop-menu appears that shows the full image of the poster and the accessibility score of that poster appears.
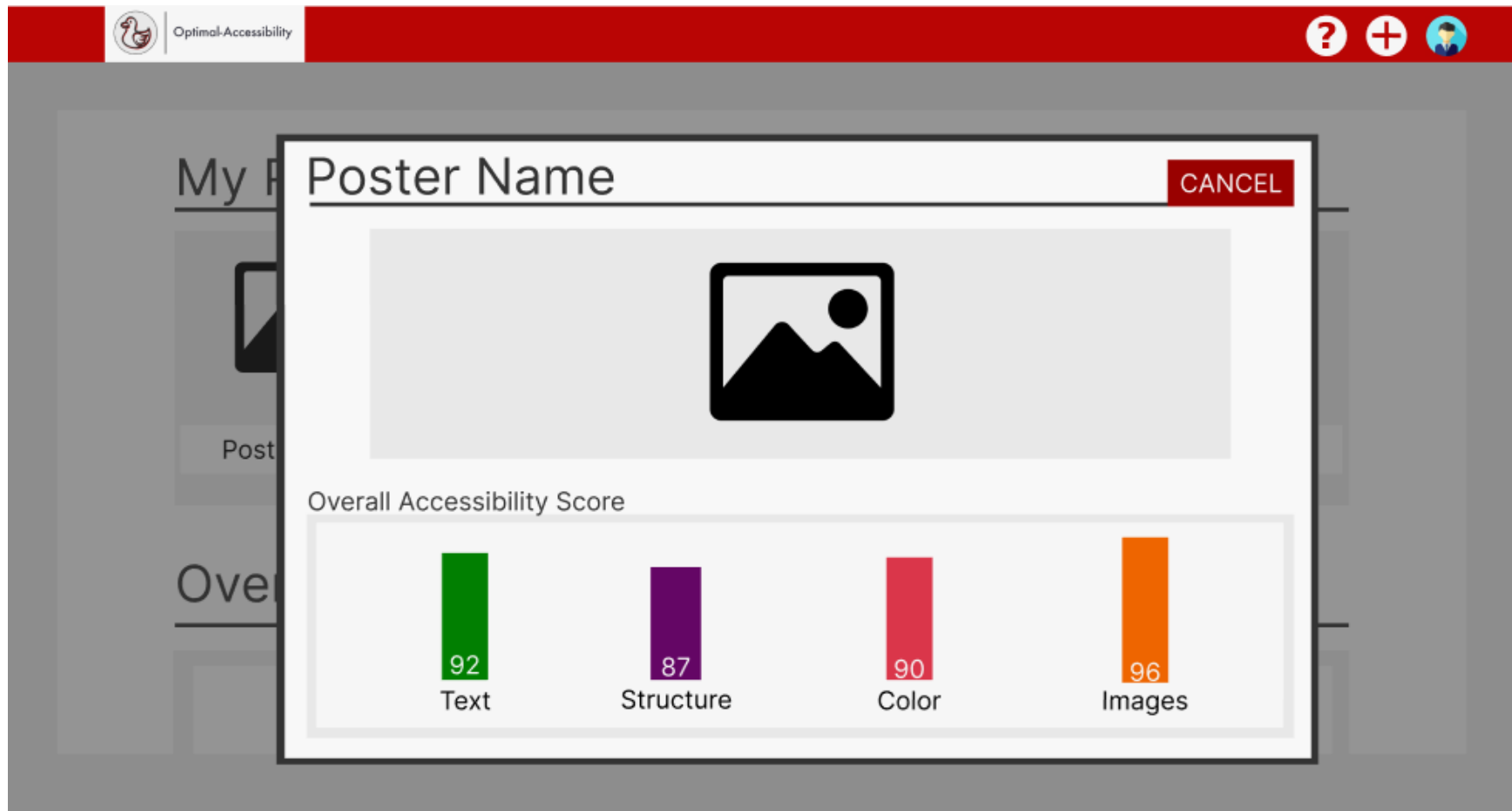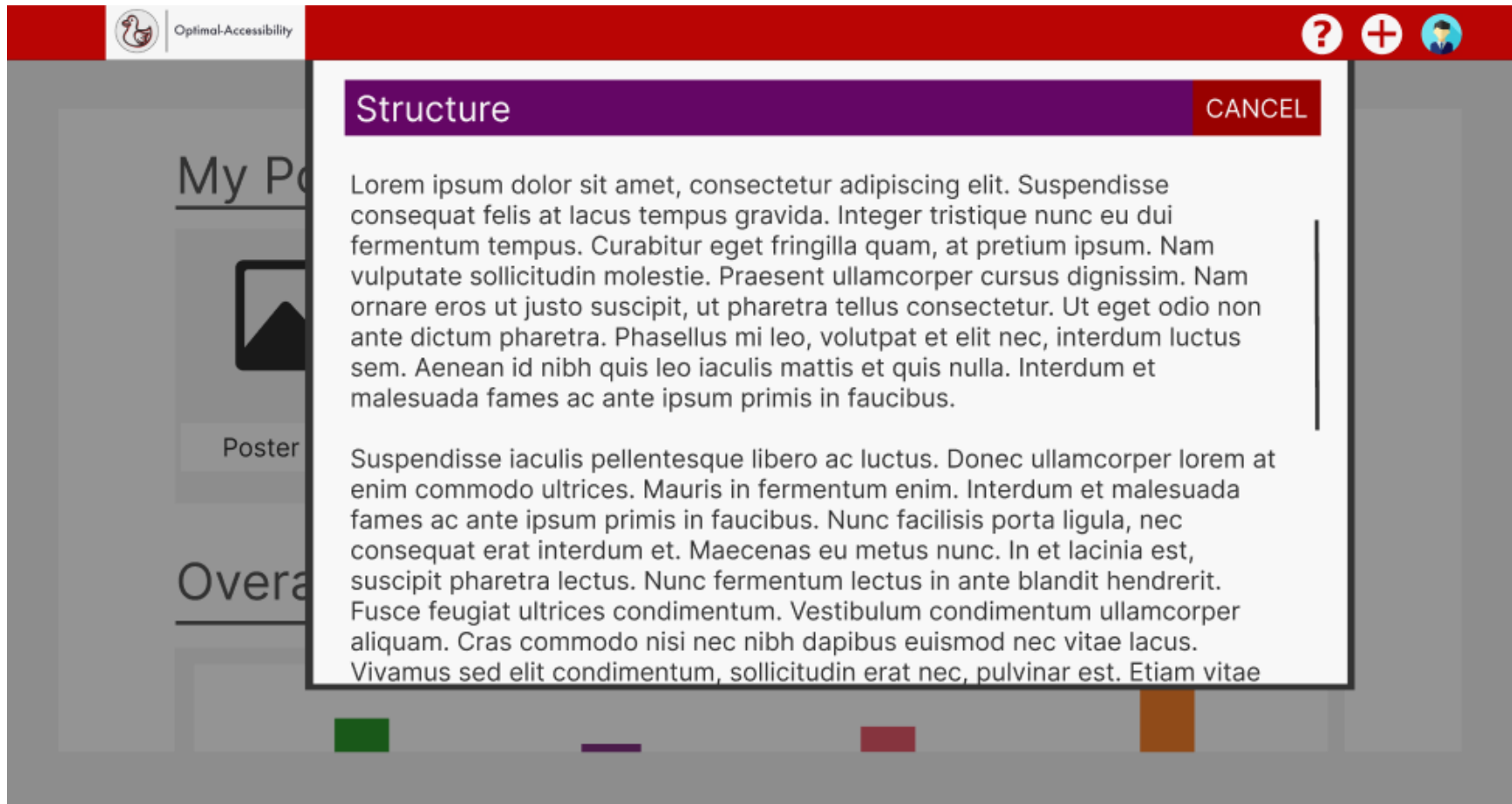
5. Nav - Judgement Ceritera
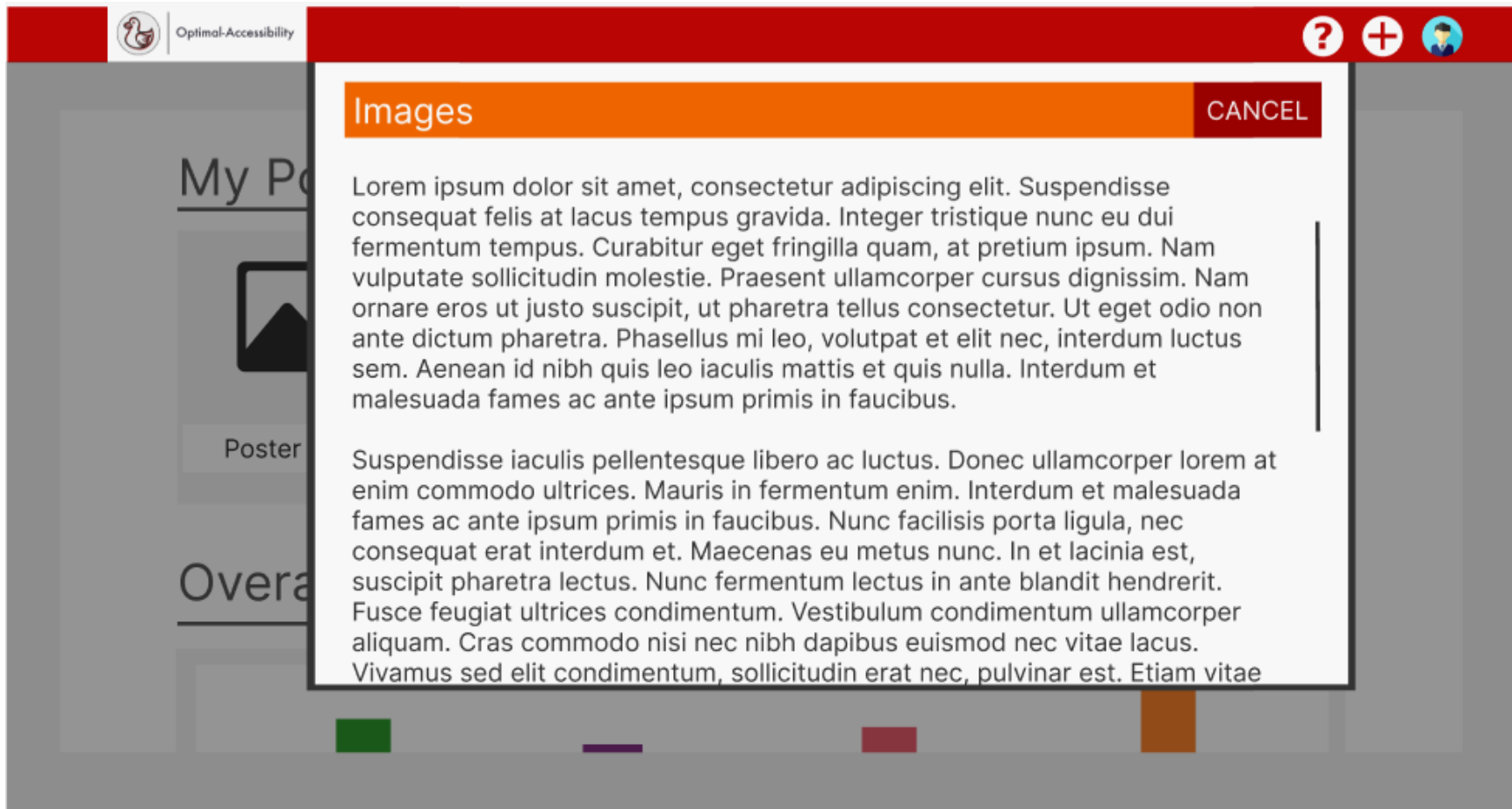
This feature is part of the navigation bar which allows the user to view the four accessibility judgment criteria more in-depth.

CSCE 3444 Software Engineering   Sprint 3

Optimal-Accessibility

Structure

CANCEL

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse consequat felis at lacus tempus gravida. Integer tristique nunc eu dui fermentum tempus. Curabitur eget fringilla quam, at pretium ipsum. Nam vulputate sollicitudin molestie. Praesent ullamcorper cursus dignissim. Nam ornare eros ut justo suscipit, ut pharetra tellus consectetur. Ut eget odio non ante dictum pharetra. Phasellus mi leo, volutpat et elit nec, interdum luctus sem. Aenean id nibh quis leo iaculis mattis et quis nulla. Interdum et malesuada fames ac ante ipsum primis in faucibus.

Suspendisse iaculis pellentesque libero ac luctus. Donec ullamcorper lorem at enim commodo ultrices. Mauris in fermentum enim. Interdum et malesuada fames ac ante ipsum primis in faucibus. Nunc facilisis porta ligula, nec consequat erat interdum et. Maecenas eu metus nunc. In et lacinia est, suscipit pharetra lectus. Nunc fermentum lectus in ante blandit hendrerit. Fusce feugiat ultrices condimentum. Vestibulum condimentum ullamcorper aliquam. Cras commodo nisi nec nibh dapibus euismod nec vitae lacus. Vivamus sed elit condimentum, sollicitudin erat nec, pulvinar est. Etiam vitae

My P

Poster

Over

Optimal-Accessibility

Images   CANCEL

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse consequat felis at lacus tempus gravida. Integer tristique nunc eu dui fermentum tempus. Curabitur eget fringilla quam, at pretium ipsum. Nam vulputate sollicitudin molestie. Praesent ullamcorper cursus dignissim. Nam ornare eros ut justo suscipit, ut pharetra tellus consectetur. Ut eget odio non ante dictum pharetra. Phasellus mi leo, volutpat et elit nec, interdum luctus sem. Aenean id nibh quis leo iaculis mattis et quis nulla. Interdum et malesuada fames ac ante ipsum primis in faucibus.

Suspendisse iaculis pellentesque libero ac luctus. Donec ullamcorper lorem at enim commodo ultrices. Mauris in fermentum enim. Interdum et malesuada fames ac ante ipsum primis in faucibus. Nunc facilisis porta ligula, nec consequat erat interdum et. Maecenas eu metus nunc. In et lacinia est, suscipit pharetra lectus. Nunc fermentum lectus in ante blandit hendrerit. Fusce feugiat ultrices condimentum. Vestibulum condimentum ullamcorper aliquam. Cras commodo nisi nec nibh dapibus euismod nec vitae lacus. Vivamus sed elit condimentum, sollicitudin erat nec, pulvinar est. Etiam vitae

My Po

Poster

Overa

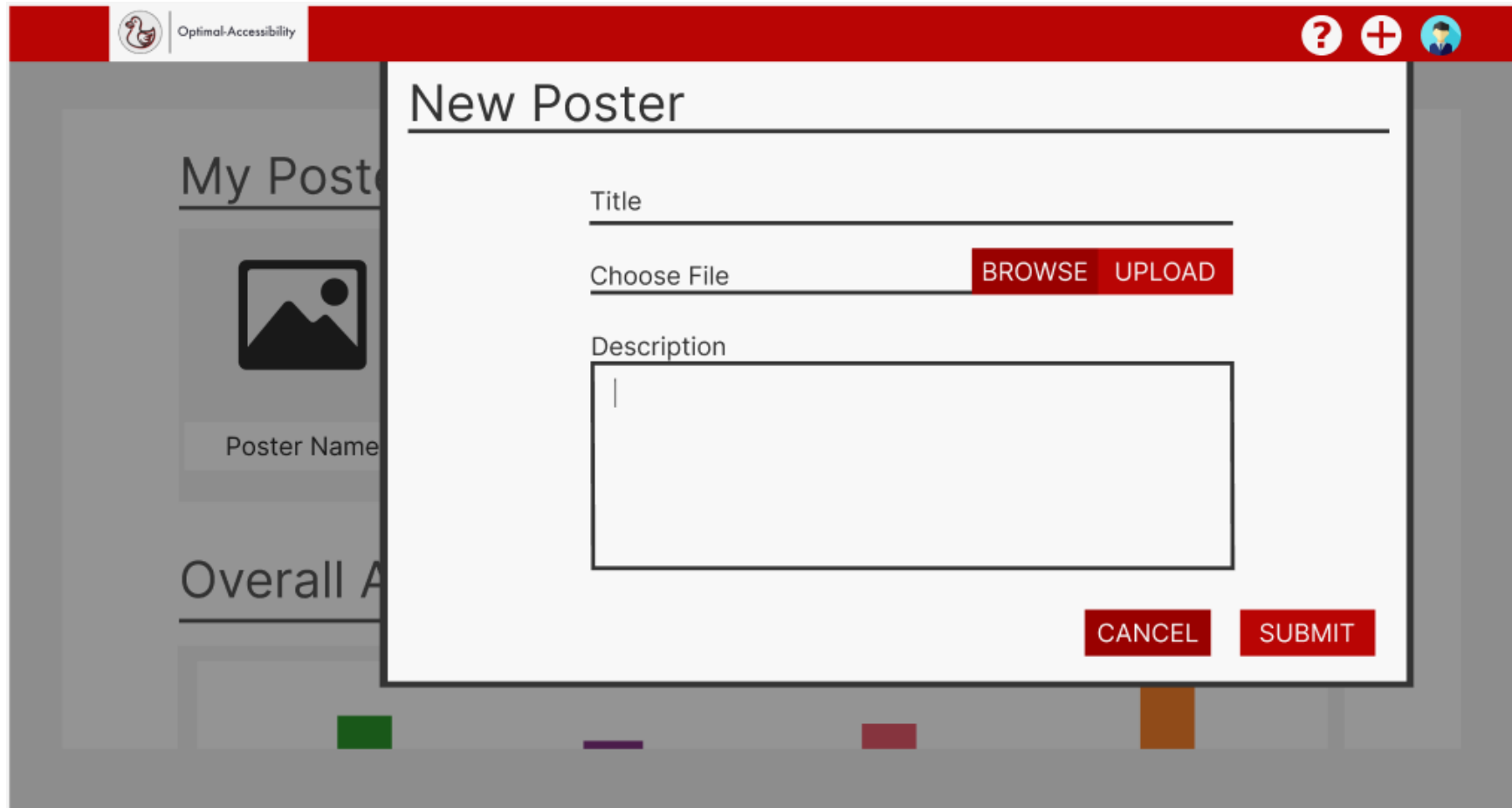## 6. Nav - Add new poster image

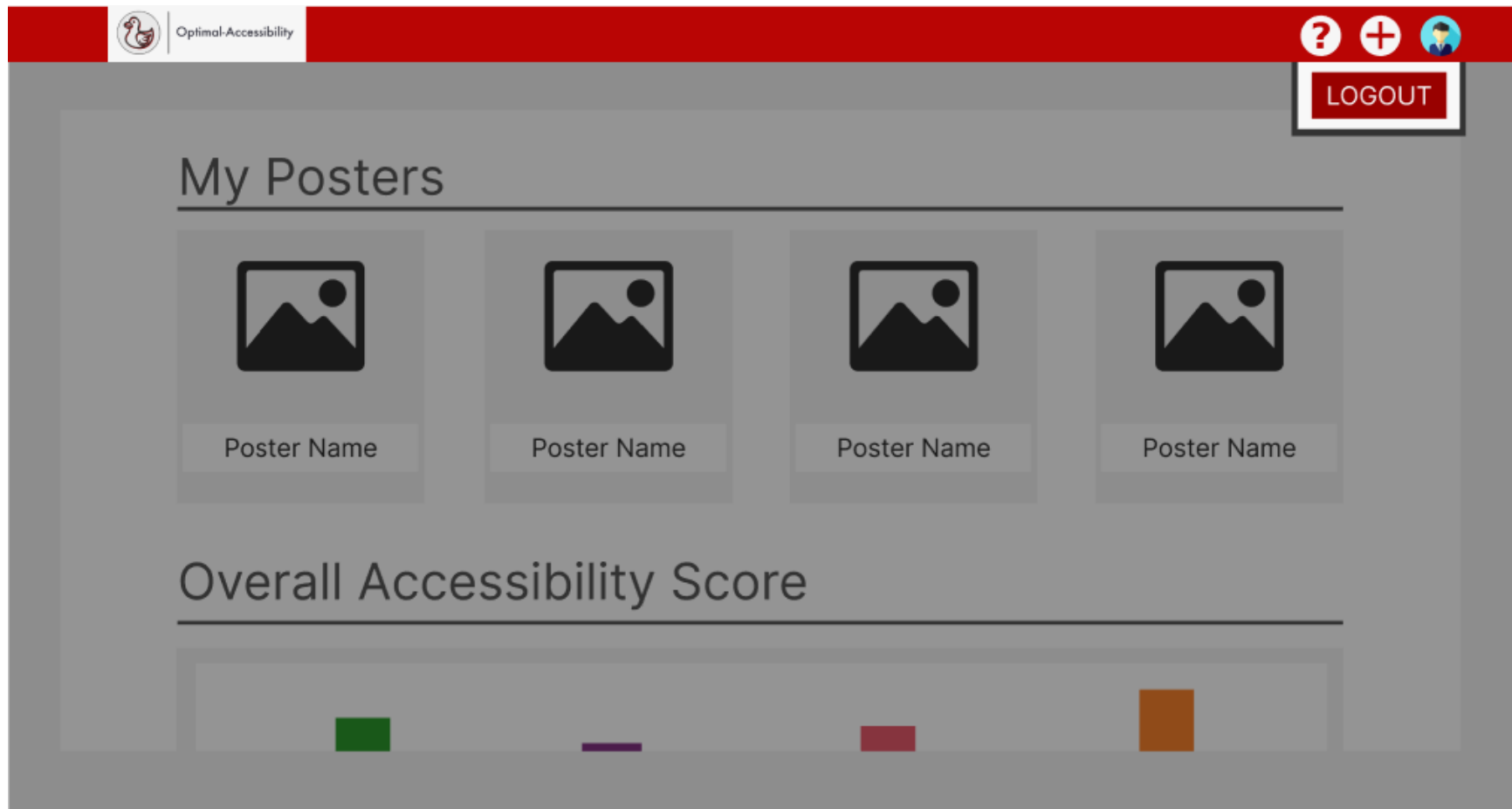This feature is part of the navigation bar which allows the user to add new posters to their portal.

7. Nav - Logout

This feature is part of the navigation bar which allows the user to log out of their portal.

8. Overall Accessibility Score

By scrolling down on the dashboard the user will see their overall accessibility scores across all their posters.