UNIVERSITI TEKNOLOGI MARA

FACULTY

COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS

PROGRAMME

CDCS240 BACHELOR OF INFORMATION TECHNOLOGY (HONS.)

COURSE

CSC584 – JAVA ENTERPRISE

GROUP

NBCS2404B

PROJECT ASSESSMENT

WEB BASED APPLICATION (40%)

PREPARED FOR

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PREPARED BY

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Group project: A web-based application development.

A. Project Description:

Assume that you have a company that need a web-based application that can manage online information or process happen in the company. For example, an information system for managing inventory or parcel delivery.

B. Project Requirements:

You need to develop a web application that based on the company requirements. The web application should have at least four (4) modules as given below:

a. Login/Logout : Allow user to login and logout from the web application using session management.

b. Registration: Allow new user to register to the web system.

c. Information management: Create / Read / Update / Delete
Allow user to manage information from a database such as to create, read, update and delete information from the database.

d. Dashboard : To provide user an overview of the process or information by different data representations.

C. System specification

You are required to develop a web application using Java Web Technology and the Model-View-Controller (MVC) framework. The application must consist of the following components:

- Model (JavaBean): Handles business logic and data manipulation.
- View (JSP): Manages the user interface and displays data.
- Controller (Servlet): Controls request handling and application flow.

D. Project Deliverables

a. A storyboard
You need to prepare HTML files to show the flow/ structure of the web application and database ERD that have at least four tables.

b. A web application
You need to submit a web application project using Java Web Technology

c. User manual
You need to prepare a user manual for the web application.

E. Project Assessment (40%)

a. Project storyboard (10%)

b. Web application (25%)

c. Presentation (5%)

Table of Contents

1. INTRODUCTION

Wildlife conservation is the practice of protecting animal species and their habitats to ensure biodiversity and ecological balance. As human activities such as deforestation, urbanization, and poaching continue to threaten various species, conservation efforts have become crucial in mitigating the loss of biodiversity. Organizations and governments worldwide have implemented policies, such as protected areas, wildlife corridors, and anti-poaching laws, to safeguard vulnerable species (WWF, 2023). Conservation also involves restoring degraded ecosystems, reintroducing species to their natural habitats, and promoting sustainable human-wildlife coexistence.

The significance of wildlife conservation extends beyond environmental concerns; it also has economic, cultural, and scientific implications. Many communities depend on wildlife for tourism, which generates revenue and provides employment opportunities (IUCN, 2022). Additionally, preserving genetic diversity in wildlife contributes to medical and agricultural advancements. Climate change further exacerbates conservation challenges, making habitat protection and species adaptability crucial aspects of conservation strategies. As a result, conservationists emphasize global cooperation, policy enforcement, and public awareness to ensure the long-term survival of diverse species (UNEP, 2021).

Our group project focuses on developing a comprehensive Wildlife Conservation System using HTML, Java, and databases to enhance wildlife monitoring and protection efforts. This system will provide a digital platform for tracking endangered species, managing conservation data, and facilitating communication between researchers, conservationists, and authorities. The front-end, built with HTML, ensures an intuitive user interface, while Java powers the backend logic, enabling efficient data processing. Additionally, a robust database will store crucial information such as species population, habitat conditions, and reported threats. By integrating these technologies, our project aims to support wildlife conservation initiatives through real-time data accessibility, improved decision-making, and streamlined reporting mechanisms.

2.0 MVC Framework Design

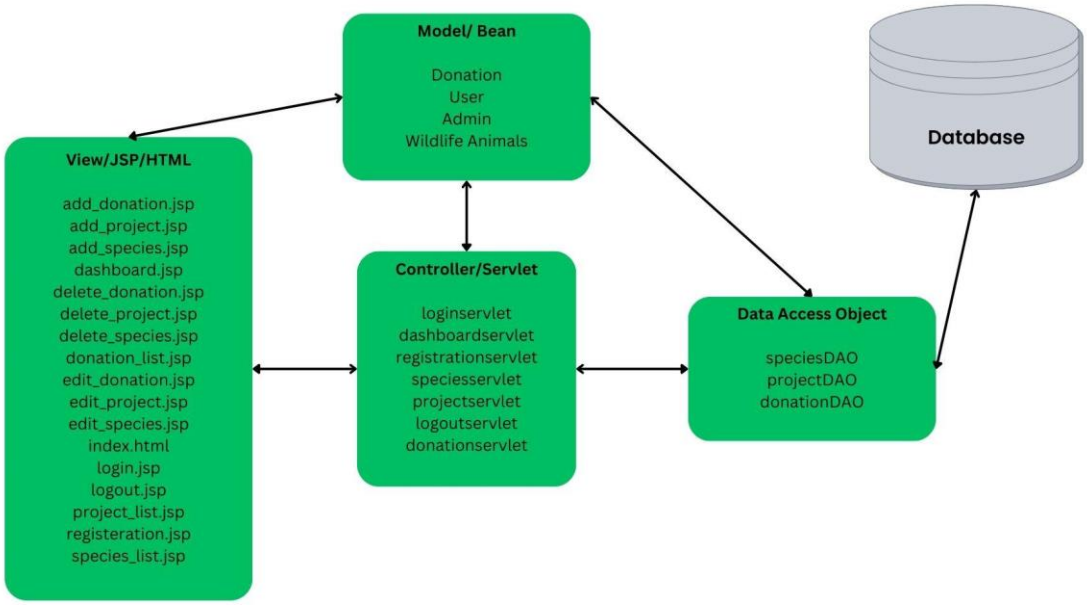
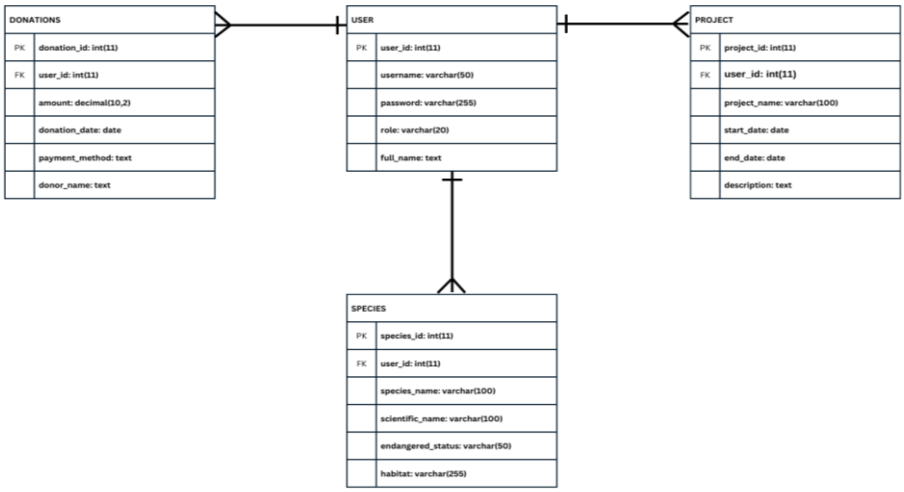


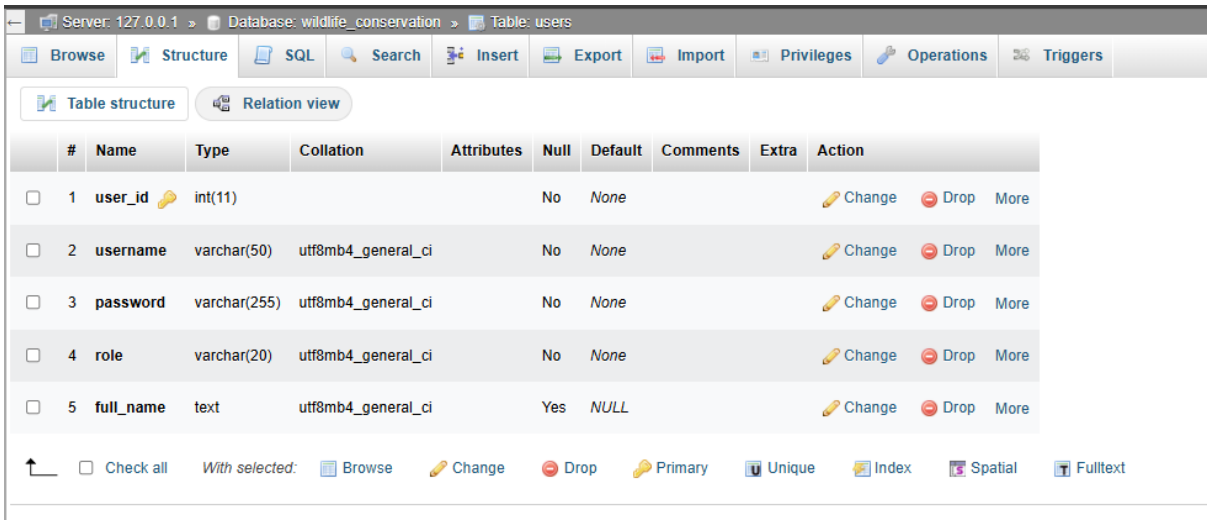
Figure 0: shows the Model View Controller (MVC) Framework Design for the Wildlift Conservation System

2.1 ENTITY RELATIONSHIP DIAGRAM

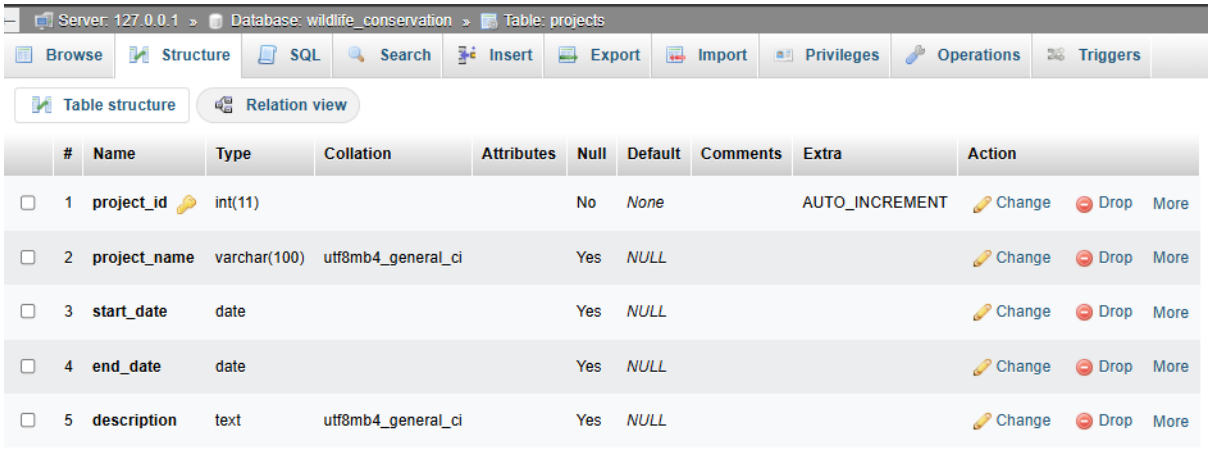


2.2 DATABASE TABLE

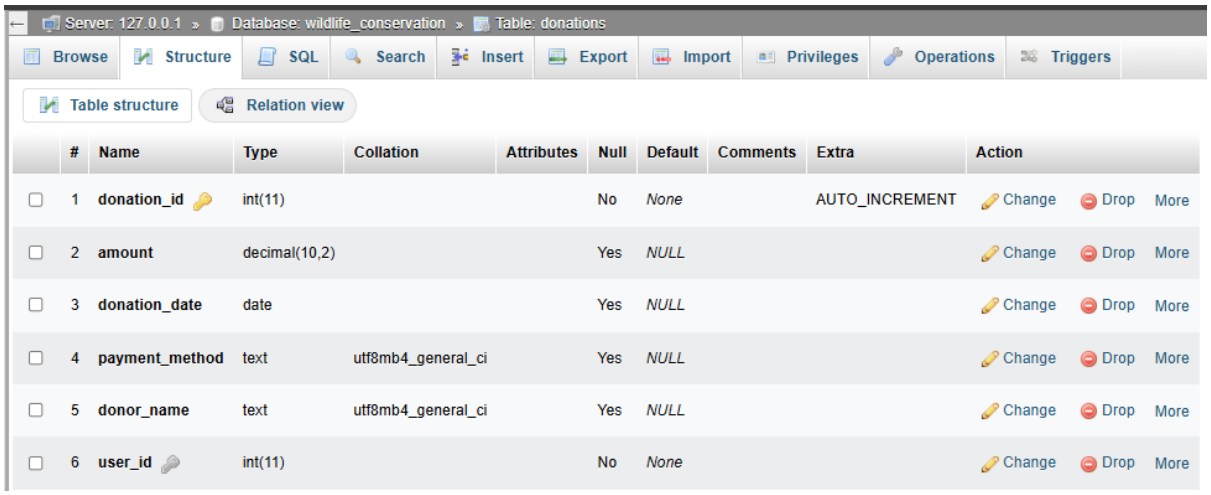
USER TABLE



PROJECT TABLE

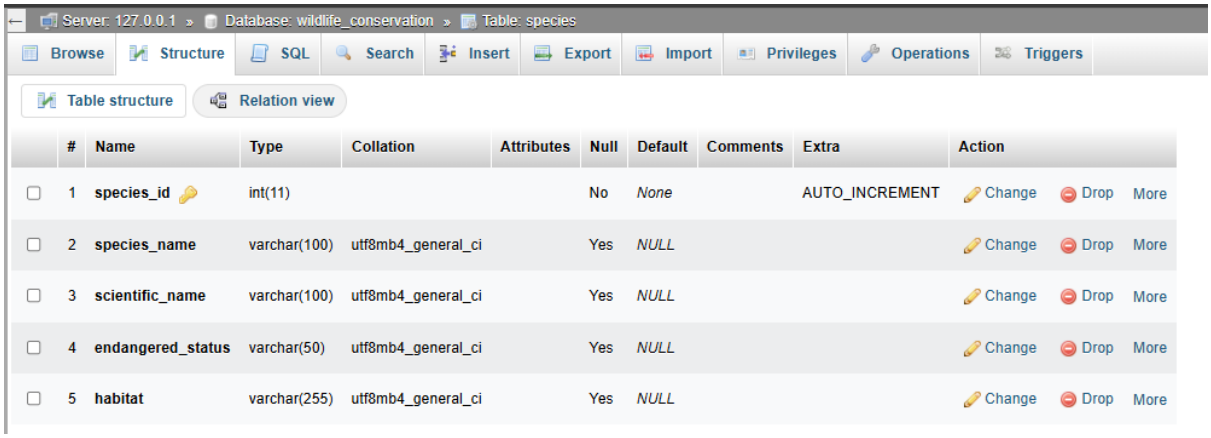


DONATION TABLE



#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	donation_id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	amount	decimal(10,2)			Yes	NULL			Change Drop More
3	donation_date	date			Yes	NULL			Change Drop More
4	payment_method	text	utf8mb4_general_ci		Yes	NULL			Change Drop More
5	donor_name	text	utf8mb4_general_ci		Yes	NULL			Change Drop More
6	user_id	int(11)			No	None			Change Drop More

SPECIES TABLE



#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	species_id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	species_name	varchar(100)	utf8mb4_general_ci		Yes	NULL			Change Drop More
3	scientific_name	varchar(100)	utf8mb4_general_ci		Yes	NULL			Change Drop More
4	endangered_status	varchar(50)	utf8mb4_general_ci		Yes	NULL			Change Drop More
5	habitat	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More

3. USER MANUAL

System complimentary of INSERT, UPDATE and DELETE.

1. HOMEPAGE

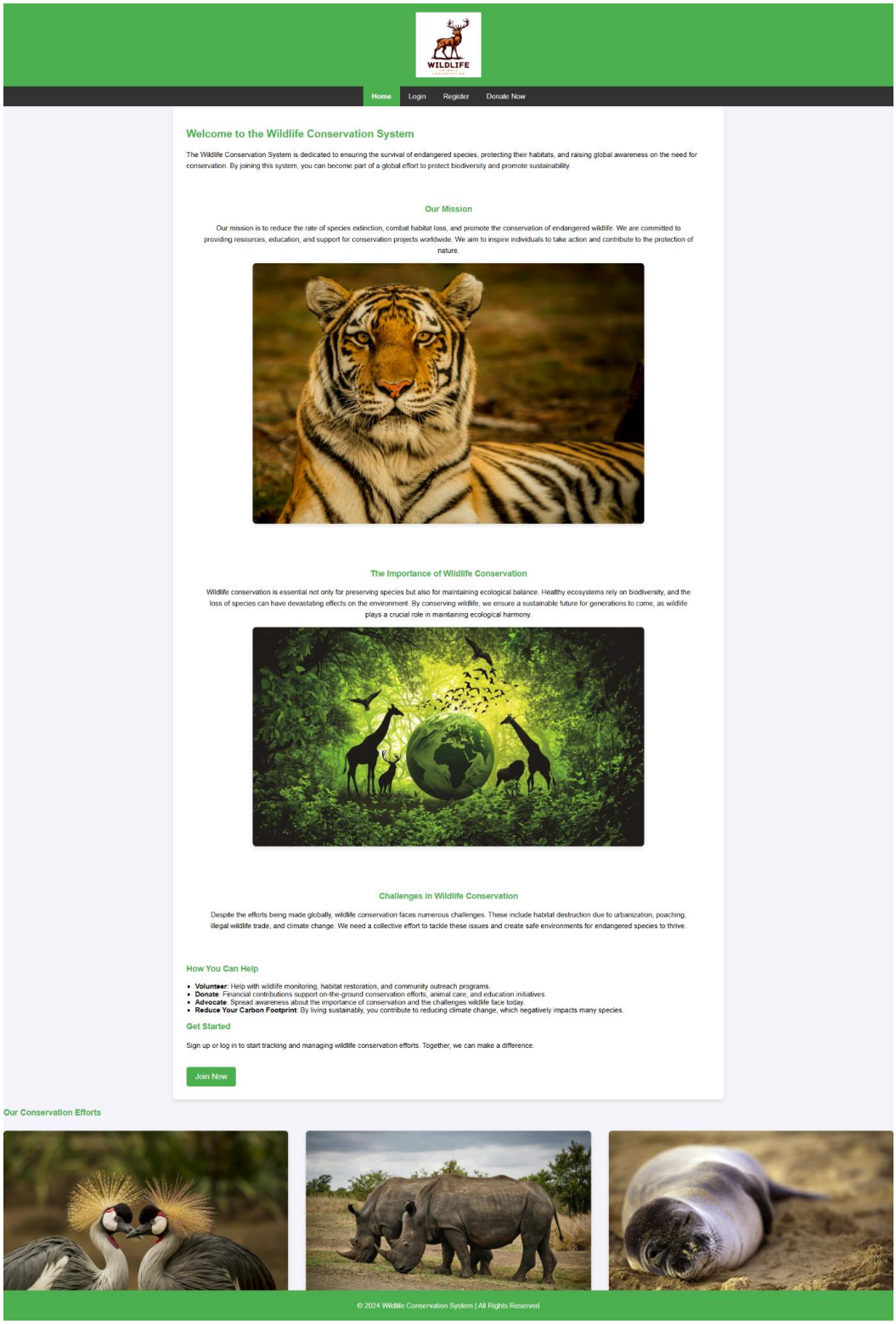


Diagram 1: Welcome page for the newcomer to get information about wildlife conservation.

2. LOGIN PAGE

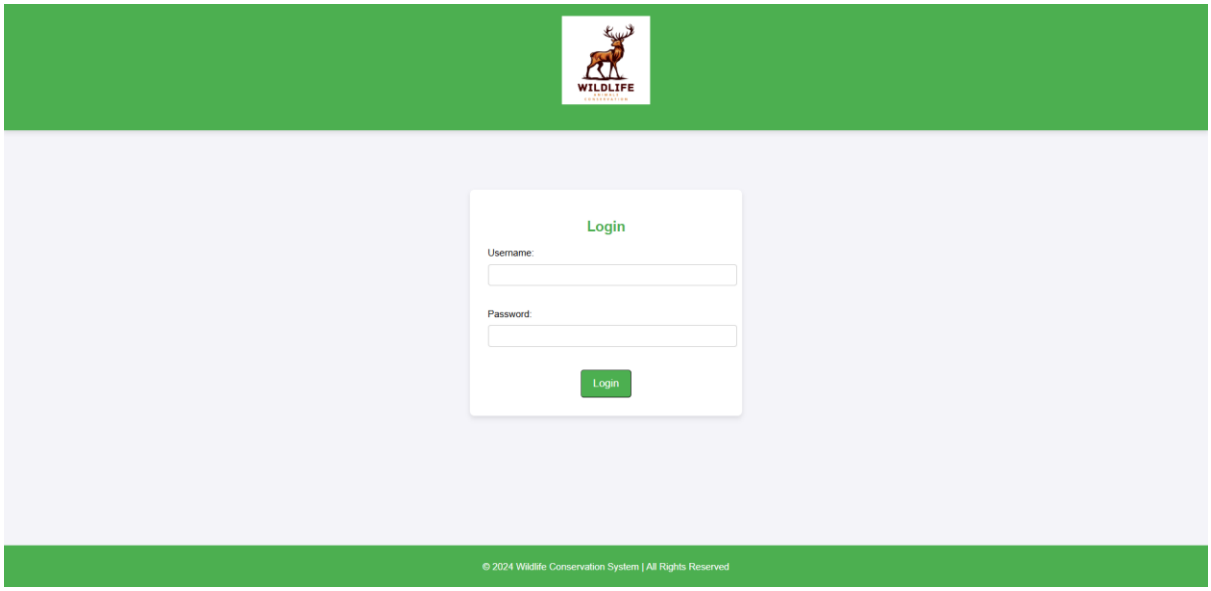


Diagram 2: Login page for the user and admin.

3. REGISTER PAGE

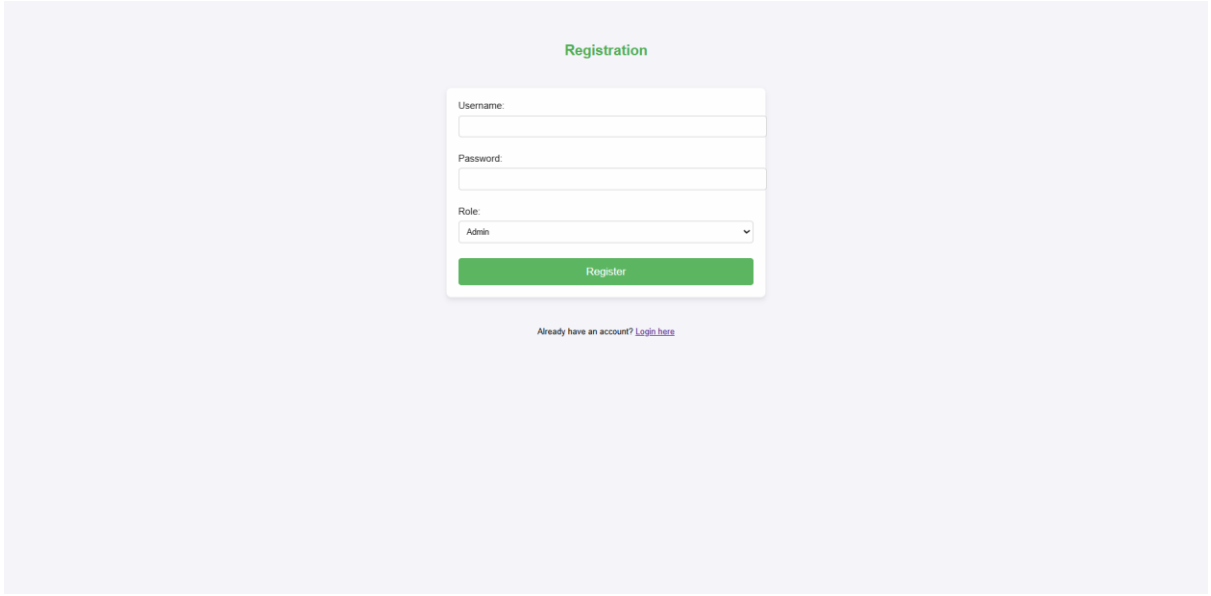


Diagram 3: Register page for the user and admin.

4. DONATION PAGE (ACCESS GUEST)

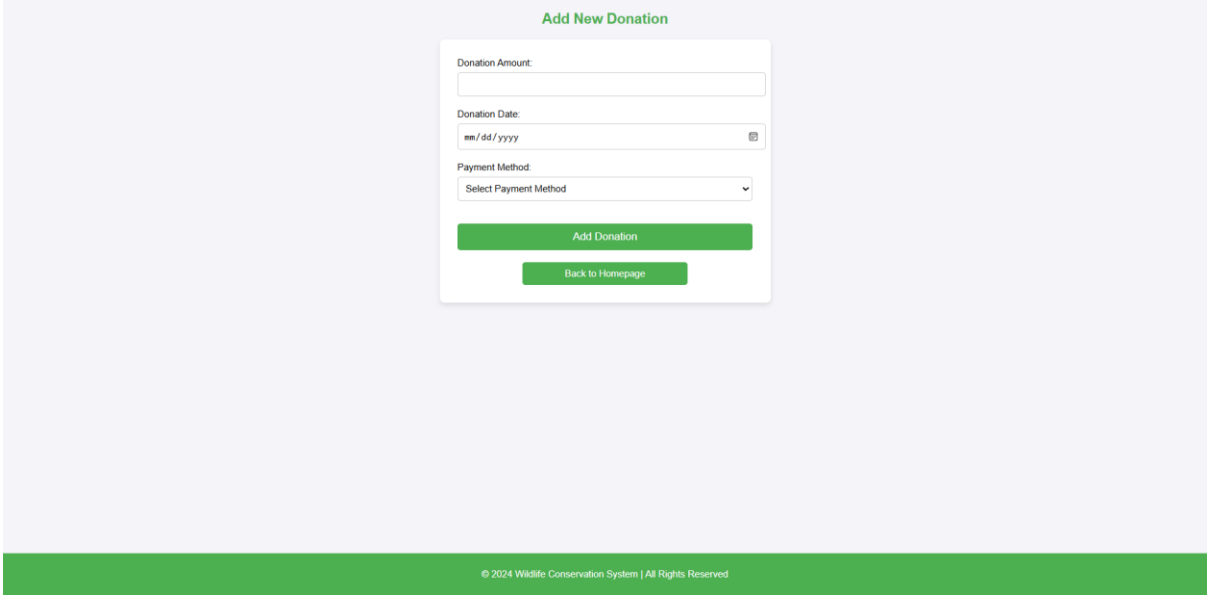


Diagram 4: Donation page for the guest.

5. DONATION PAGE (ACCESS ADMIN)

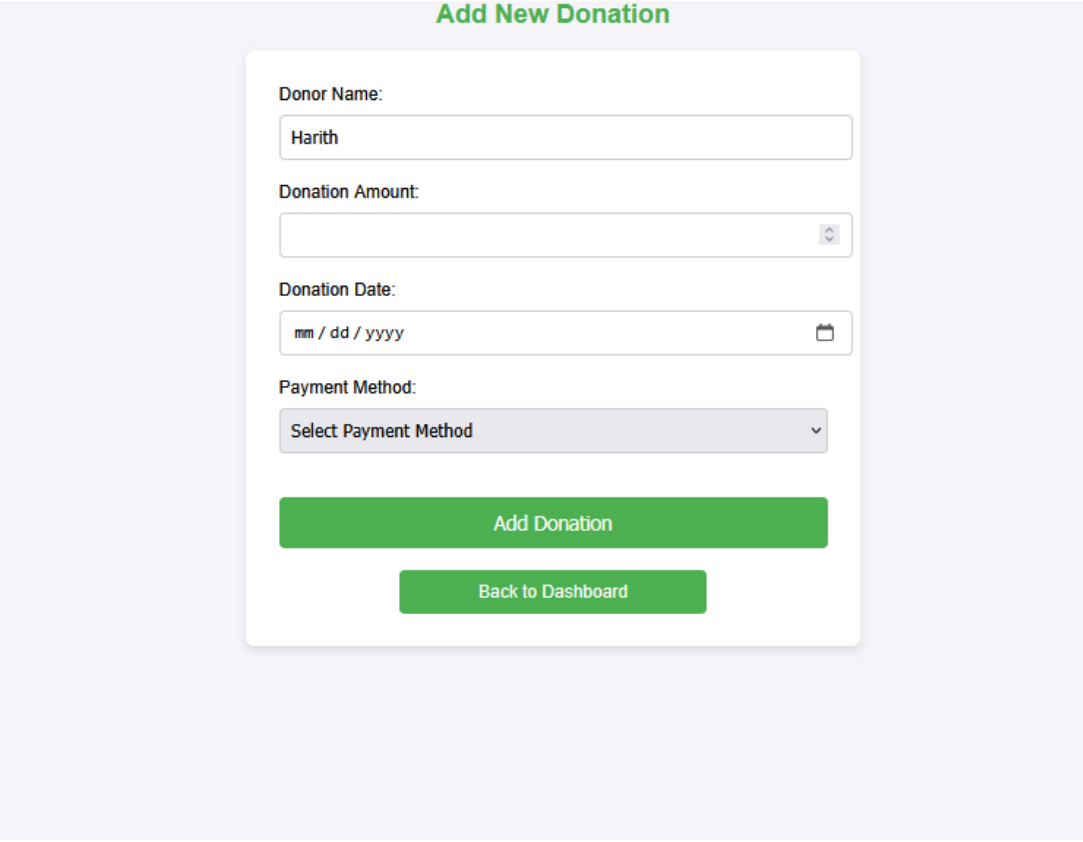


Diagram 5: Donation page for the admin.

6. ADMIN PAGE (SPECIES LIST)

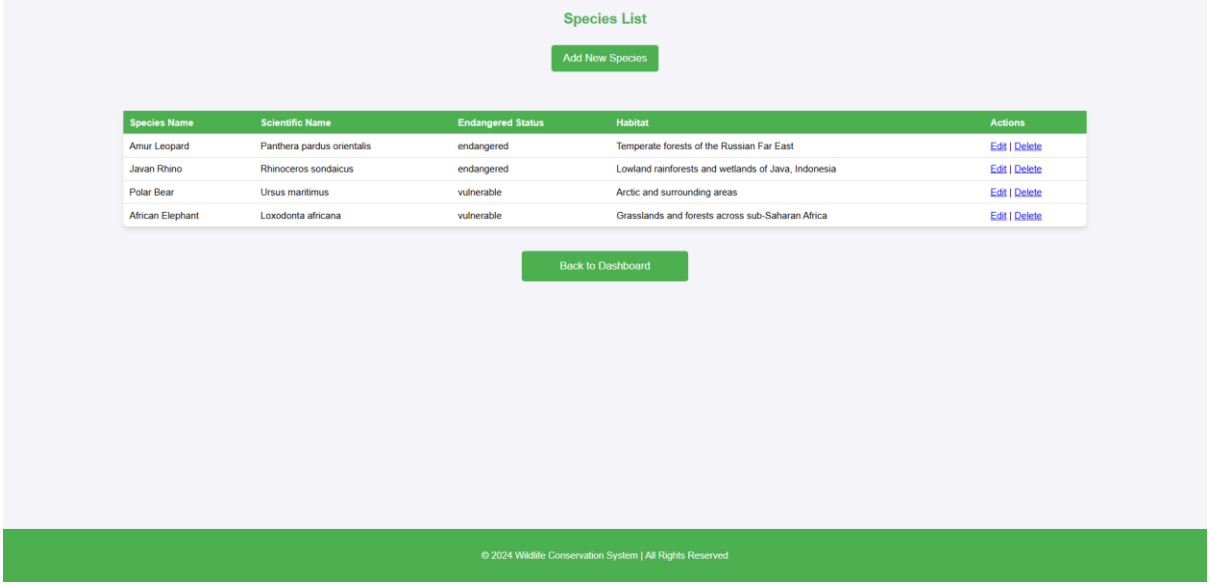


Diagram 6: Species listing page for the admin track the wildlife animals' status.

7. ADMIN PAGE (ADD SPECIES)

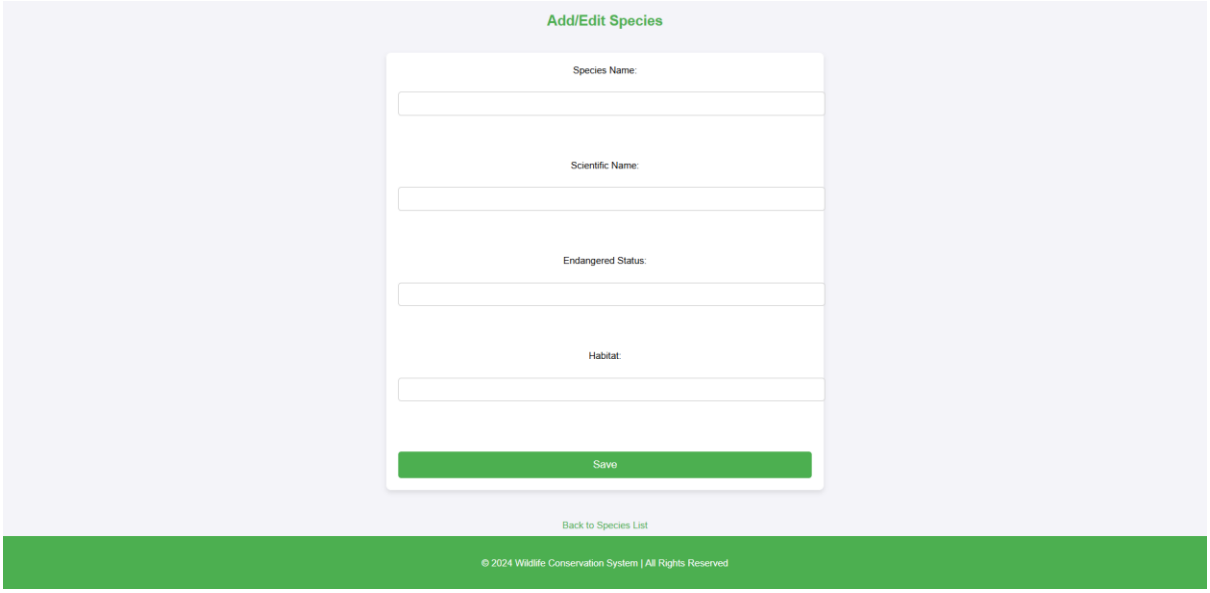


Diagram 7: Add new animal listing features that only admins are accessible. Admin can insert the data about the animals' species name, scientific name, endangered status, and habitat.

8. ADMIN PAGE (EDIT SPECIES)

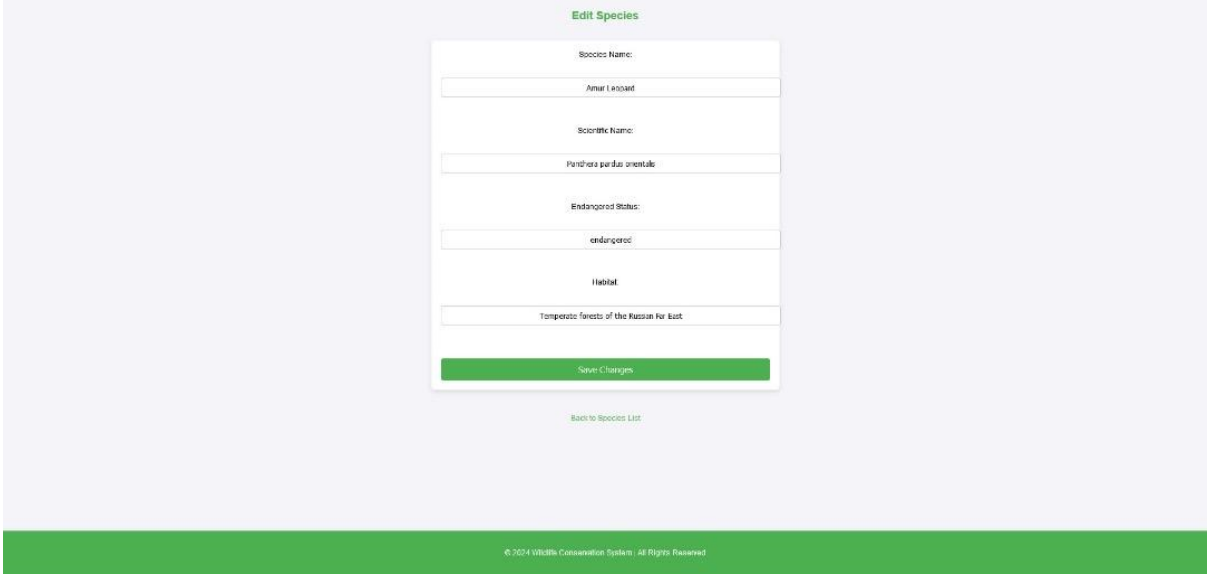


Diagram 8: Edit animal listing feature that only admins are accessible. Admin can edit the data about the animals' species name, scientific name, endangered status, and habitat.

9. ADMIN PAGE (DELETE SPECIES)

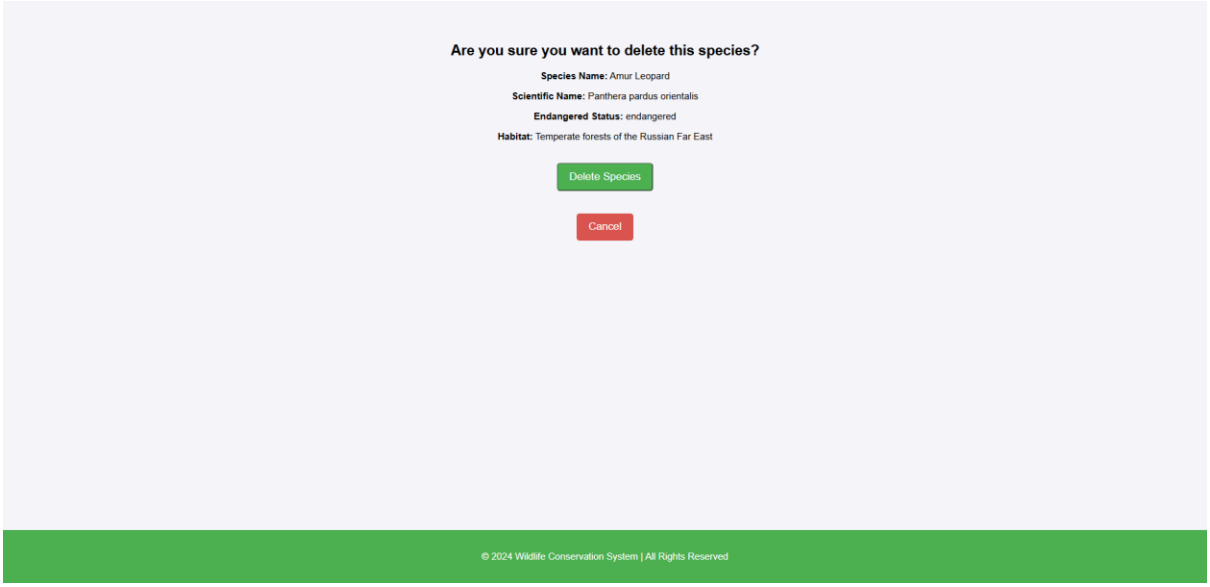


Diagram 9: Delete animal listing feature that only admins are accessible. Admin can delete the wildlife animals' status if required.

10. ADMIN PAGE (ADD PROJECT)

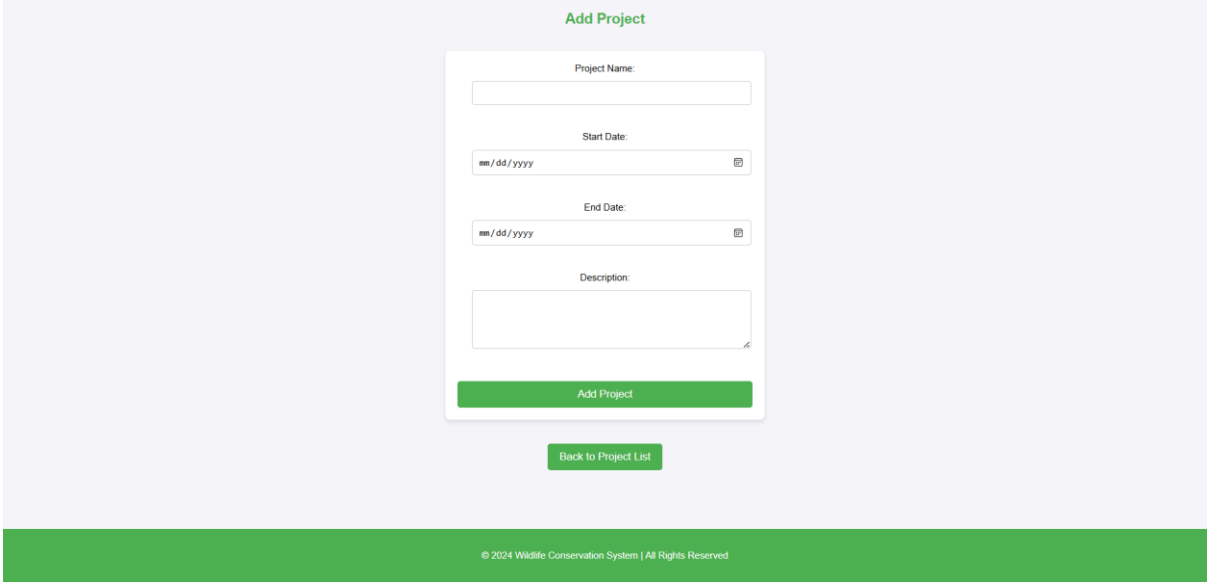


Diagram 10: Add new project features that only admins are accessible. Admin can add new articles or news regarding the project related to wildlife conservation.

11. ADMIN PAGE (EDIT PROJECT PAGE)

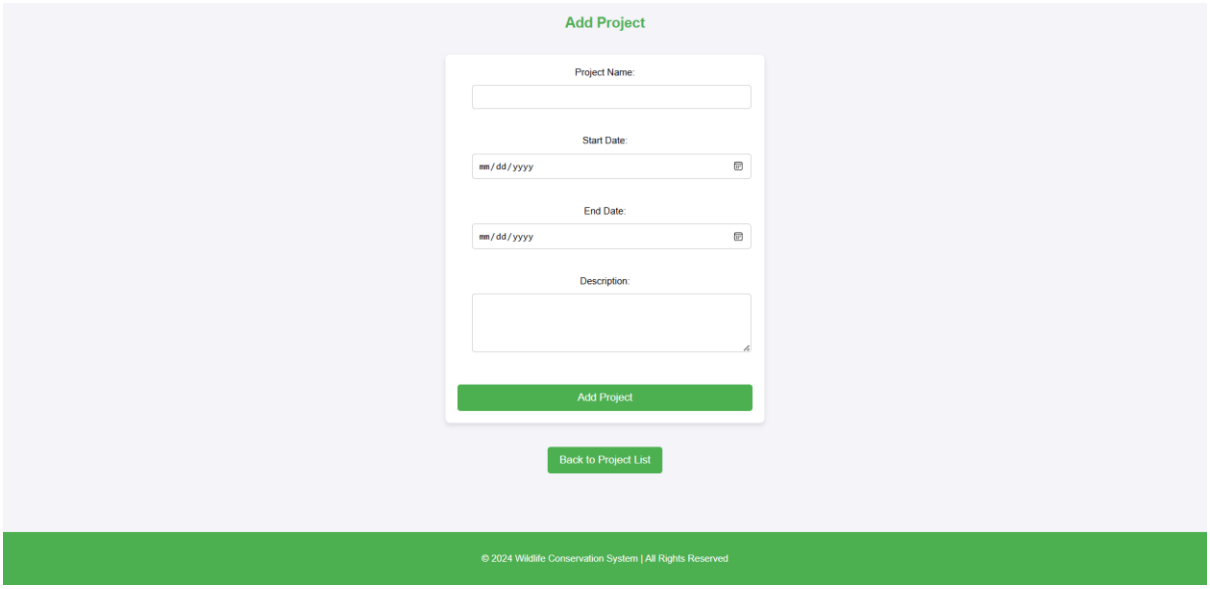


Diagram 11: Edit project feature that only admins are accessible. Admin can edit the data about the existing project in case there is an update about the current progress.

12. ADMIN PAGE (DELETE PROJECT)

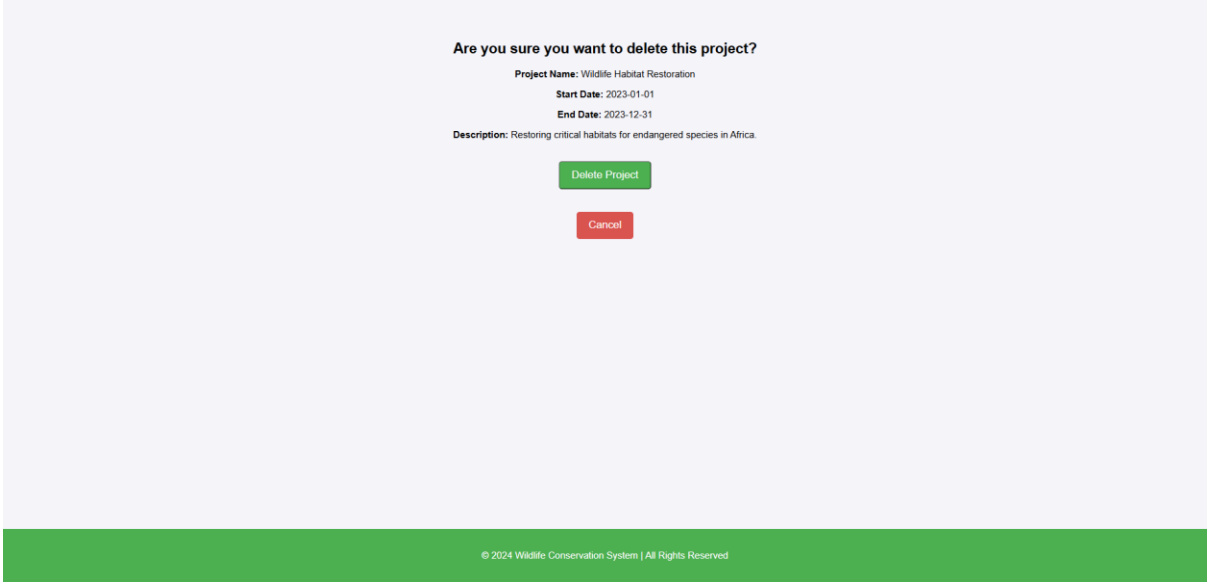


Diagram 12: Delete project feature that only admins are accessible. Admin can delete the project once it's not relevant anymore to be shown.

13. ADMIN PAGE (DONATION LIST)

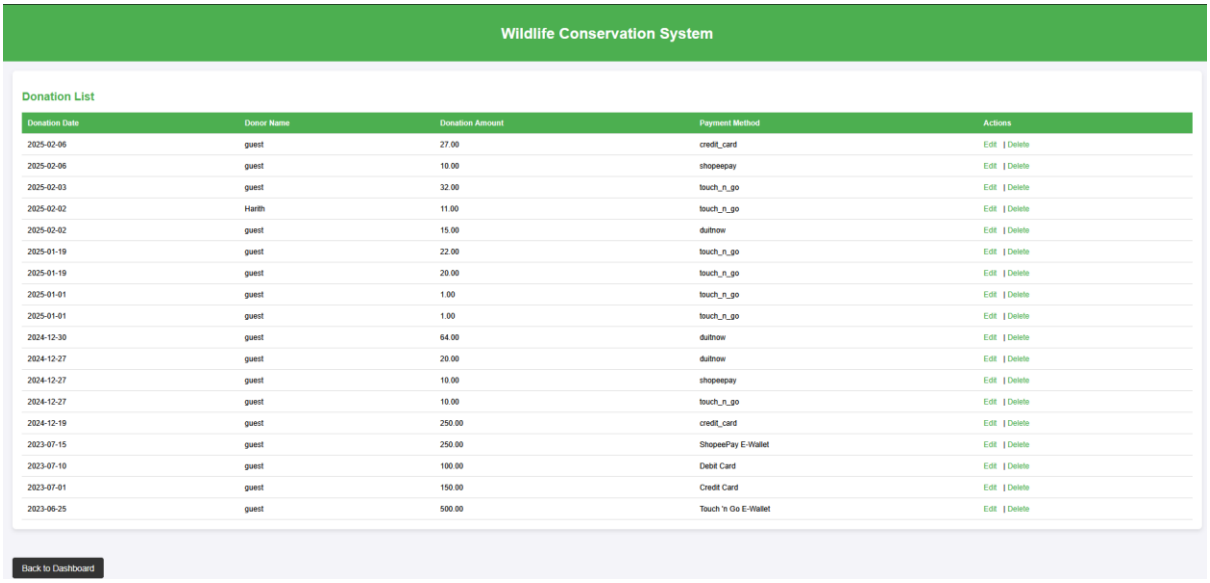


Diagram 13: Donation lists are only accessible to admins. Admin can view all the donations whether it comes from the user or the guest.

14. ADMIN PAGE (EDIT DONATION)

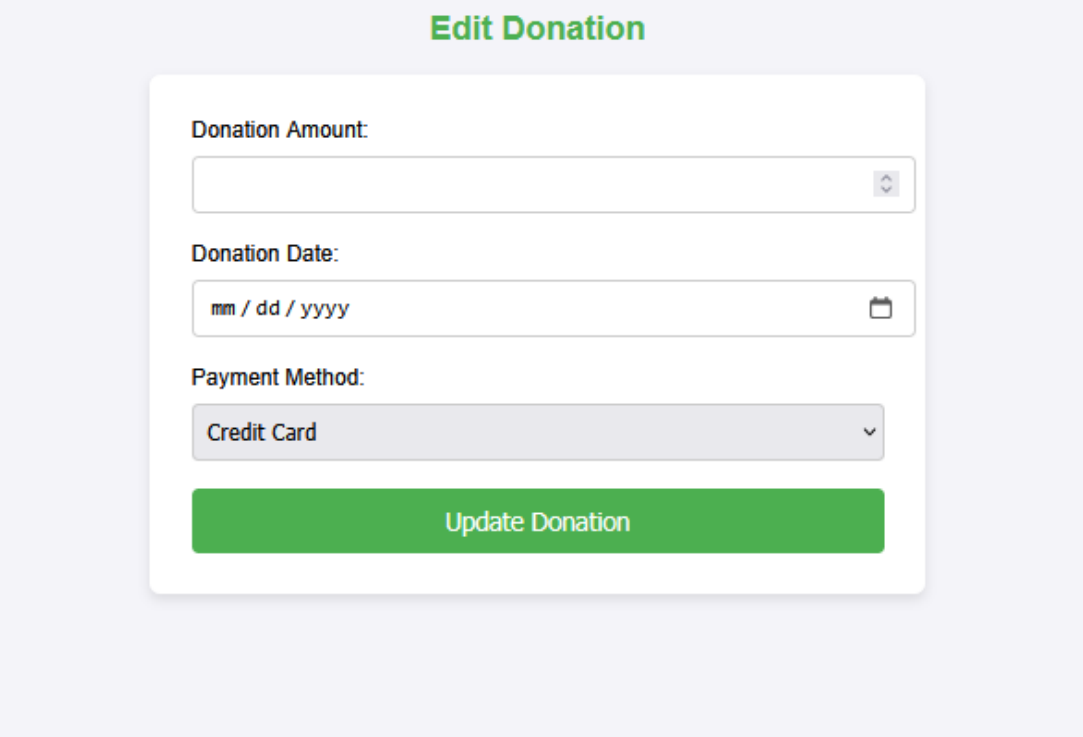


Diagram 14: Edit donation features are only accessible to admins. Admin can edit the data about the donation information.

15. ADMIN PAGE (DELETE DONATION)

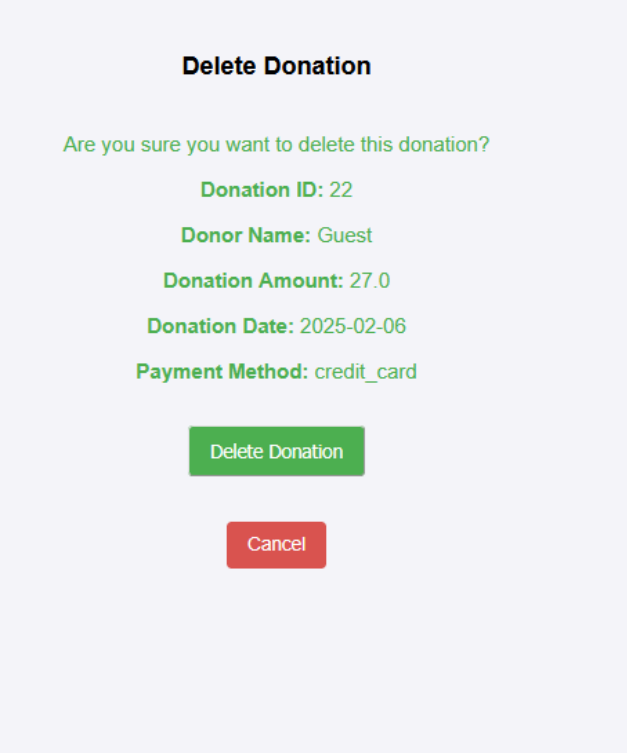


Diagram 15: Delete donation features are only accessible to admins. Admin can delete the donation history if required.

16. USER PAGE (SPECIES LIST – VIEW ONLY)

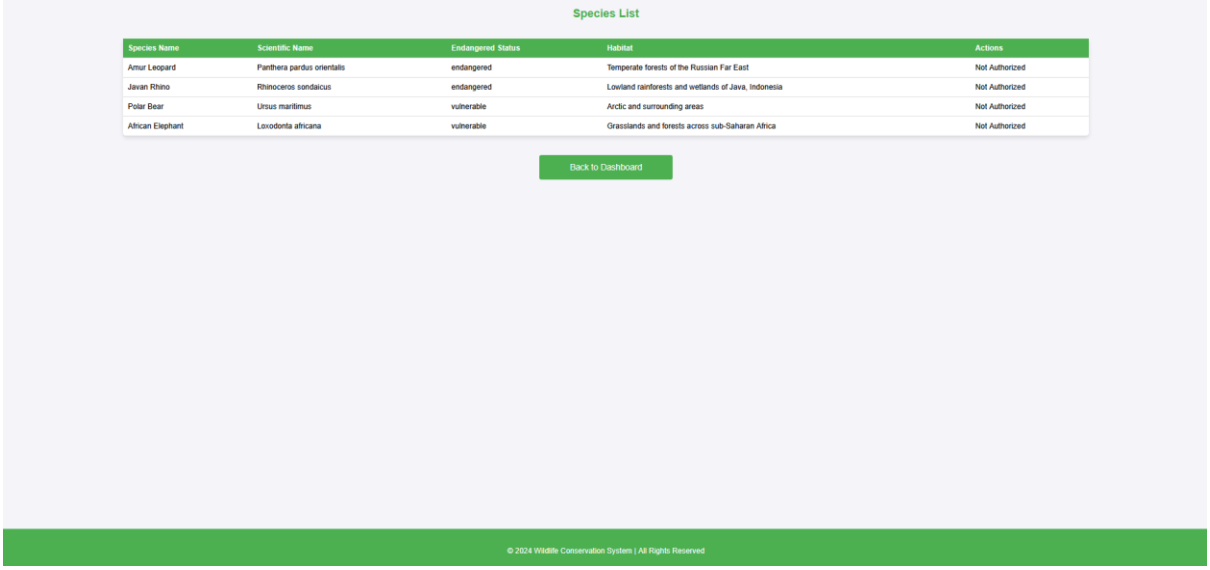


Diagram 16: The user can only view the species list. No additional features are granted.

17. USER PAGE (ADD DONATION – USER ONLY)

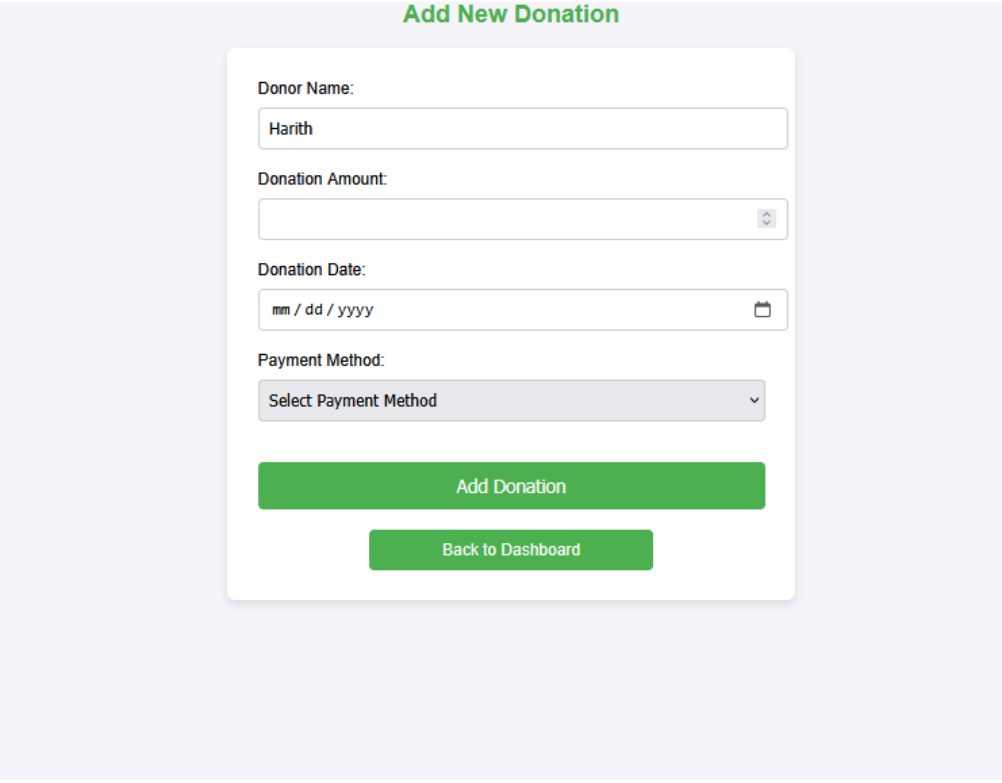


Diagram 17: The user can donate for the act of helping wildlife conservation. They have to enter their name, amount of donation, date, and also choose their preferred payment method.

18. Project list page (admin)

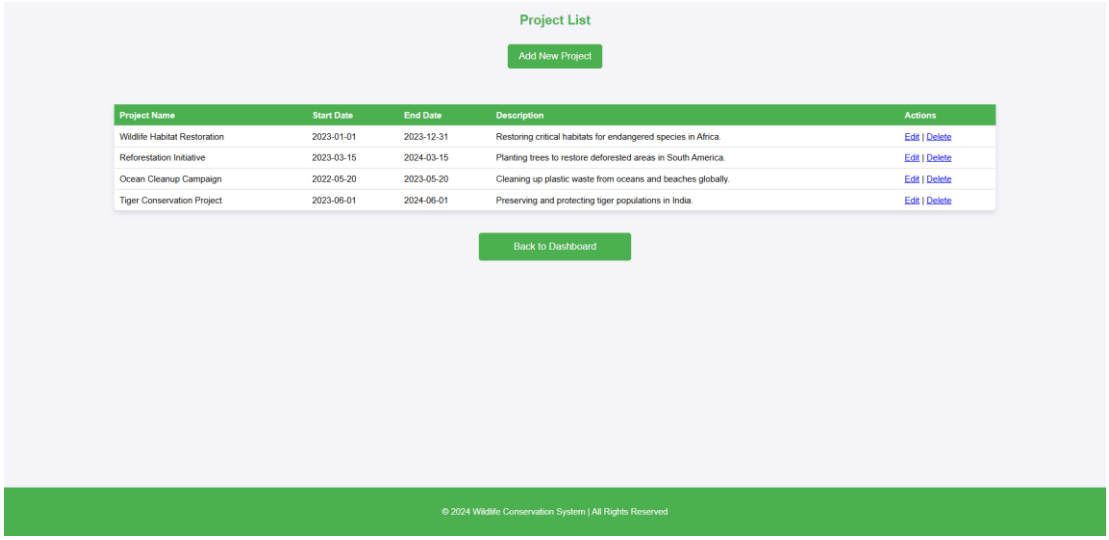
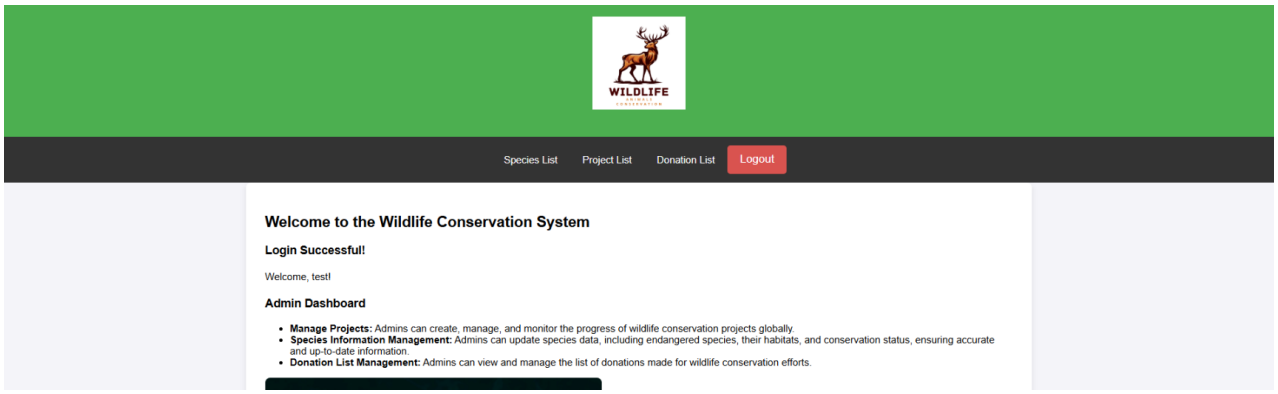
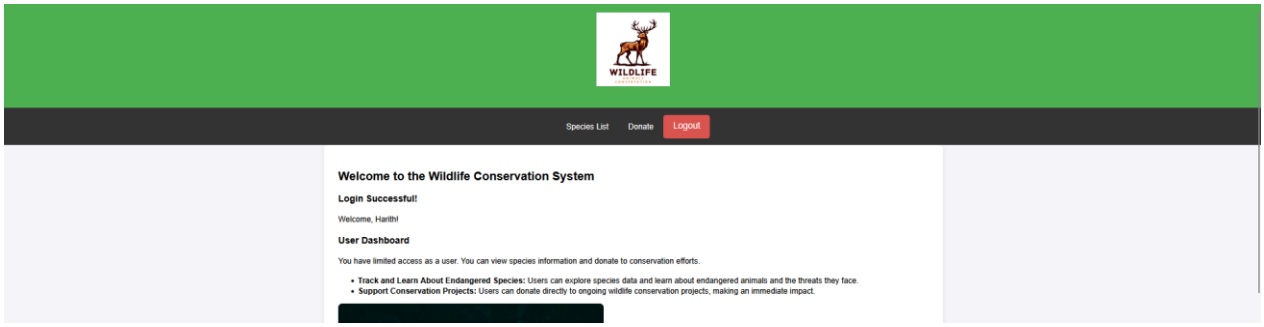


Figure 18

19. Dashboard (admin)



20. Dashboard (user)



IMPROVEMENT

-to add dashboard page that provide summary of data collected

4. CONCLUSION

The integration of technology into wildlife conservation has become increasingly vital in addressing challenges such as habitat loss, poaching, and human-wildlife conflict. Innovations like camera traps, drones, and machine learning algorithms have enhanced the ability to monitor and protect endangered species. For instance, camera traps have emerged as powerful tools for conservation and ecological research, enabling non-invasive monitoring of wildlife populations and behaviors (World Wildlife Fund [WWF], n.d.). Similarly, drones equipped with thermal cameras and machine learning capabilities have been utilized to monitor endangered animals automatically, aiding in efficient data collection and analysis (Fauna & Flora International, 2023).

Collaborative efforts among conservation organizations, researchers, and local communities are essential to maximize the impact of these technological advancements. By embracing innovative tools and fostering partnerships, conservationists can develop more effective strategies to protect biodiversity. The Technology for Wildlife Foundation exemplifies this approach by acquiring, analyzing, and visualizing spatial data to inform conservation decisions (Technology for Wildlife Foundation, n.d.). As technology continues to evolve, its thoughtful application in wildlife conservation holds promise for preserving ecosystems and ensuring the survival of diverse species for future generations.

In conclusion, our Wildlife Conservation System, developed using HTML, Java, and databases, serves as a technological solution to enhance wildlife monitoring and protection. By integrating a user-friendly interface, efficient backend processing, and a well-structured database, our system enables real-time tracking of endangered species, habitat conditions, and reported threats. This project demonstrates how technology can be leveraged to support conservation efforts, providing researchers and authorities with accessible and reliable data for informed decision-making. As conservation challenges continue to evolve, our system lays the foundation for future advancements in wildlife protection, emphasizing the importance of digital solutions in preserving biodiversity and promoting sustainable conservation practices.

5. REFERENCES

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