

We Care for Urban Fauna: Animal Rescue and NGO Connection

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Abstract- 'We Care' is an online tool that aims at enabling people with information on how to help injured animals so that such needy animals can be assisted by organizations that can assist in such cases. This platform works in a central hub where the user can report a request whenever they come across an injured animal. The website requires users to go through a request form where they input information such as the location and upload an image of the injured animal. It is then sent to an organisation that considers and allocate requests as per its reception. These requests are then reviewed by the organization, or a specific department or team and assigned to a user within the organization for handling. The request shall be accepted or rejected by the assigned organization depending on the severity level and genuineness of the request. This, in turn, will help to simplify the process of helping injured animals with calls sending users to organizations that can help an animal.

1. INTRODUCTION

"We Care" is a web-based concept to solve the problem of injured animals with the help of developing a website that any users who have found injured animals can turn to because this website will have the list of organizations which can help. The platform eliminates all these challenges by enabling the users to submit the requests through the website and offering other key details, including the location of the animals and photos of injured animals. All these requests are analysed and matched to organizations that can provide the aid required. These requests are scrutinized by the assigned members of the organization and then distributed to the particular members of the organization for required action and response depending upon the urgency and legitimacy of the request. Through this connection of the users with the organizations, We Care hopes to enhance the manner of assisting injured animals by increasing efficiency. The present work focuses on the understanding of the operations of "We Care" and the possibility of enhancing

its function within the context of responding to the needs of injured animals with a focus on proposed online system.

2. EXISTING SYSTEM

Individuals who found the animals to be in distress usually underwent a few processes to try and seek help. They would have to type in Google, contact details of nearby animal shelters, wildlife rescue centres or veterinary hospitals. This frequently entailed picking up the telephone several times, sending out email messages, or posting on social media to obtain assistance from someone.

There was no communication protocol about how the location and status of the animal should be described in detail. It was clarified that the absence of a one-stop-destination made it difficult for responders to access information that could have greatly assisted in their efforts, and at times, there was no response provided at all. Moreover, the organizations dealing with these issues had to deal with unmanageable and large report formats to the extent that prioritizing and addressing these cases was becoming increasingly challenging to handle.

This disorderly approach led to delayed responses and minimizing the likelihood of interventions in a timely fashion, the lives of injured animals at risk of worsening or not receiving the proper care or attention as needed.

3. PROPOSED SYSTEM

The proposed "We Care" system enables users to register and log in, allowing them to raise requests for injured animals by providing details and photos. Organizations can access a dashboard to evaluate and assign these requests to users within their group, who can then approve or reject requests based on their authenticity. Additionally, end users have the option to join organizations, subject to organization approval, to participate in animal rescue

efforts. Users can also leave organizations when needed, fostering flexibility. This streamlined system promotes efficient communication and collaboration among users, organizations, and assignees, ultimately enhancing animal welfare.

4. OBJECTIVE

- The objective of the project is to develop a web-based platform, "We Care," aimed at facilitating the efficient reporting and resolution of injured animals by connecting end users who encounter injured animals with animal welfare organizations.
- The platform's development reflects a proactive approach towards leveraging digital solutions to enhance animal welfare and promote efficient responses to incidents involving injured animals.
- The project underscores the significance of utilizing technology to facilitate prompt and coordinated responses to incidents involving injured animals, thereby contributing to their overall well-being and care.
- The project aligns with the growing importance of leveraging web-based platforms to address societal and environmental challenges effectively.

5. SCOPE

- It aims to help users report injured animals by sending comprehensive requests to the platform and provides the means to input essential data like the animal's location and photographs that can facilitate assessment and action.
- Engaging the community, both local and global, to participate in animal welfare by creating a means for easy post and follow up on any request touching on animals that have been wounded.
- The platform can also be extended to provide services like animal adoption and increase awareness for street animals or animals who need assistance.
- The potential future expansion of the platform can be the inclusions of features that will enable the real-time monitoring of reported cases and also include collaboration with emergency services together with associations of wildlife conservation for handling of other crisis relating to animals.

6. METHODOLOGY

6.1 Iterative Waterfall Model

- The proposed methodology for the "We Care" project, based on an iterative waterfall approach, aligns seamlessly with the project's workflow. It starts with iterative cycles for refining requirements and architectural design
- . During implementation, core features are developed iteratively. Testing and deployment occur in stages, with a focus on real-world testing and user feedback.
- Monitoring and feedback loops ensure continuous improvement, aligning with the project's mission to provide timely assistance to animals while engaging users and organizations in animal welfare.

6.2 Advantages of the Development Model

- This model has feedback loop that makes the project to be checked and improved through the developmental stages.
- The iterative nature of the model results in its ability to better incorporate changes and updates to the project requirements ensuring the final deliverable meets the needs on the stakeholders.
- The iterative waterfall model can increase project efficiency and can make the project more visible and transparent, because of stakeholders' involvement into the feedback cycle, which results in greater comprehension as to what the project's aims and main milestones are.
- The applied iterative waterfall model can raise the level of project efficiency, and can also make a project more visible and transparent, due to the involvement of the stakeholders in the formation of the feedback cycle, and thus – the greater understanding of the objectives and main goals of a project.
- The iterative waterfall model enables feedback on issues hence the identification and avoiding of such obstacles that may hinder the project's progression early enough.
- The iterative waterfall development model is an effective approach for software development because it combines rigorous methodology with

adaptable planning, and thus helps teams build sophisticated products that would satisfy current stakeholders as well as those who join the process later.

6.3 Struts Framework

The Apache Struts framework is a widely used open-source framework for building Java web applications following the Model-View-Controller (MVC) architectural pattern. It helps developers organize their code by separating it into three key components: the Model, which represents data and business logic; the View, responsible for rendering the user interface typically using JavaServer Pages (JSP); and the Controller, which manages user requests and connects them to the appropriate Model and Views[9]. Struts provides features like form handling, validation, and error handling, making it a valuable tool for developing scalable and maintainable web applications. While Struts has been a popular choice for Java web development, the landscape has evolved, with many developers now considering alternatives like Spring MVC for building modern web applications. [10]

6.4 AJAX Query and jQuery

An AJAX (Asynchronous JavaScript and XML) query, often referred to simply as an AJAX request, is a fundamental technique in web development that allows a web page to

send and receive data from a server asynchronously without the need to refresh the entire page. This technology relies on JavaScript and a set of web technologies like XMLHttpRequest or the newer Fetch API to make these asynchronous data exchanges possible. When a user interacts with a web page, such as submitting a form or clicking a button, an AJAX query can be triggered to communicate with the server in the background. This enables dynamic updates to specific parts of the page, enhancing the user experience by providing real-time data without disrupting the overall flow of the website[8]

jQuery is a fast, lightweight, and cross-platform JavaScript library that simplifies client-side web development. It streamlines tasks like DOM manipulation, event handling, animation, and AJAX interactions, making it easier for developers to create dynamic and interactive web applications. jQuery abstracts browser-specific complexities, allowing developers to write code that works consistently across various web browsers. Its extensive collection of plugins and a simple, concise syntax have made it immensely popular in the web development community for over a decade. While its prominence has somewhat diminished with the advent of modern JavaScript frameworks and libraries, jQuery remains a valuable tool for enhancing the functionality and user experience of web applications.[11]

7. SYSTEM DESIGN

7.1 Class Diagram

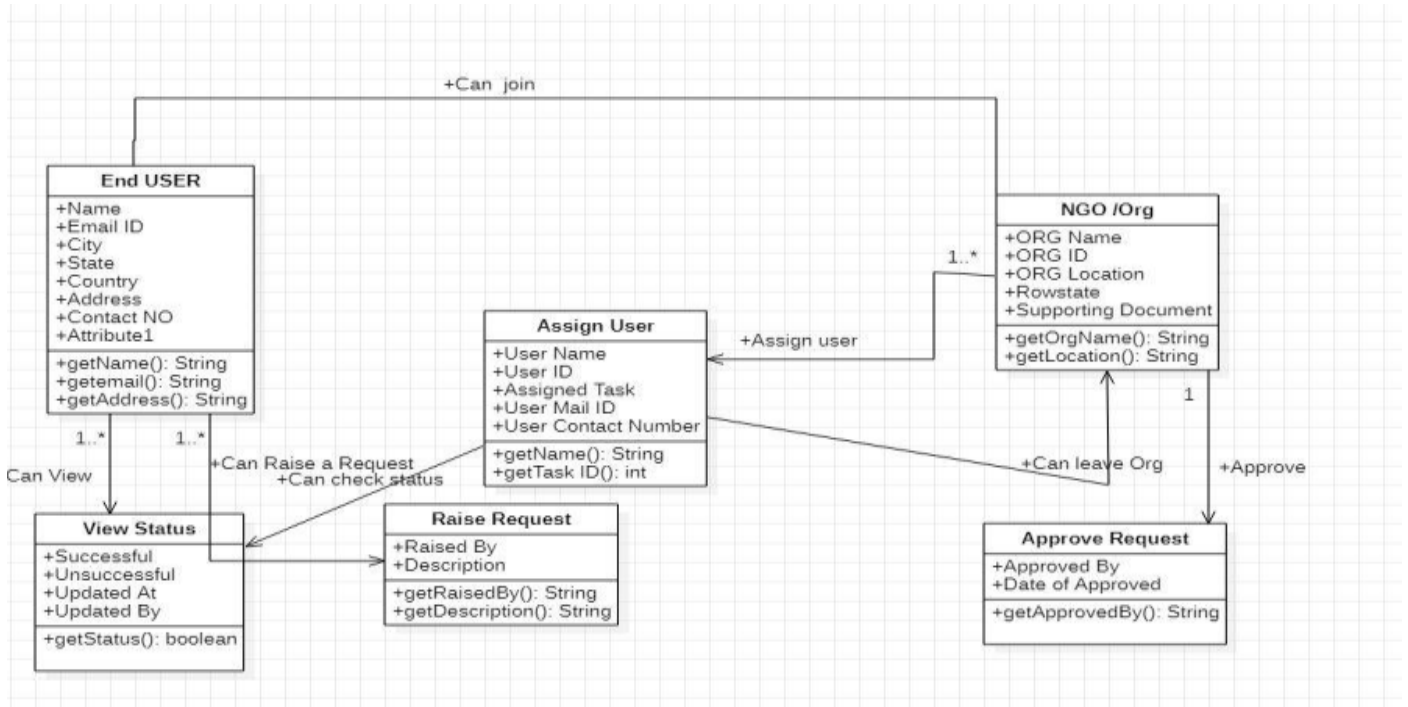


Fig. 1 Class Diagram

7.2 Use Case Diagram

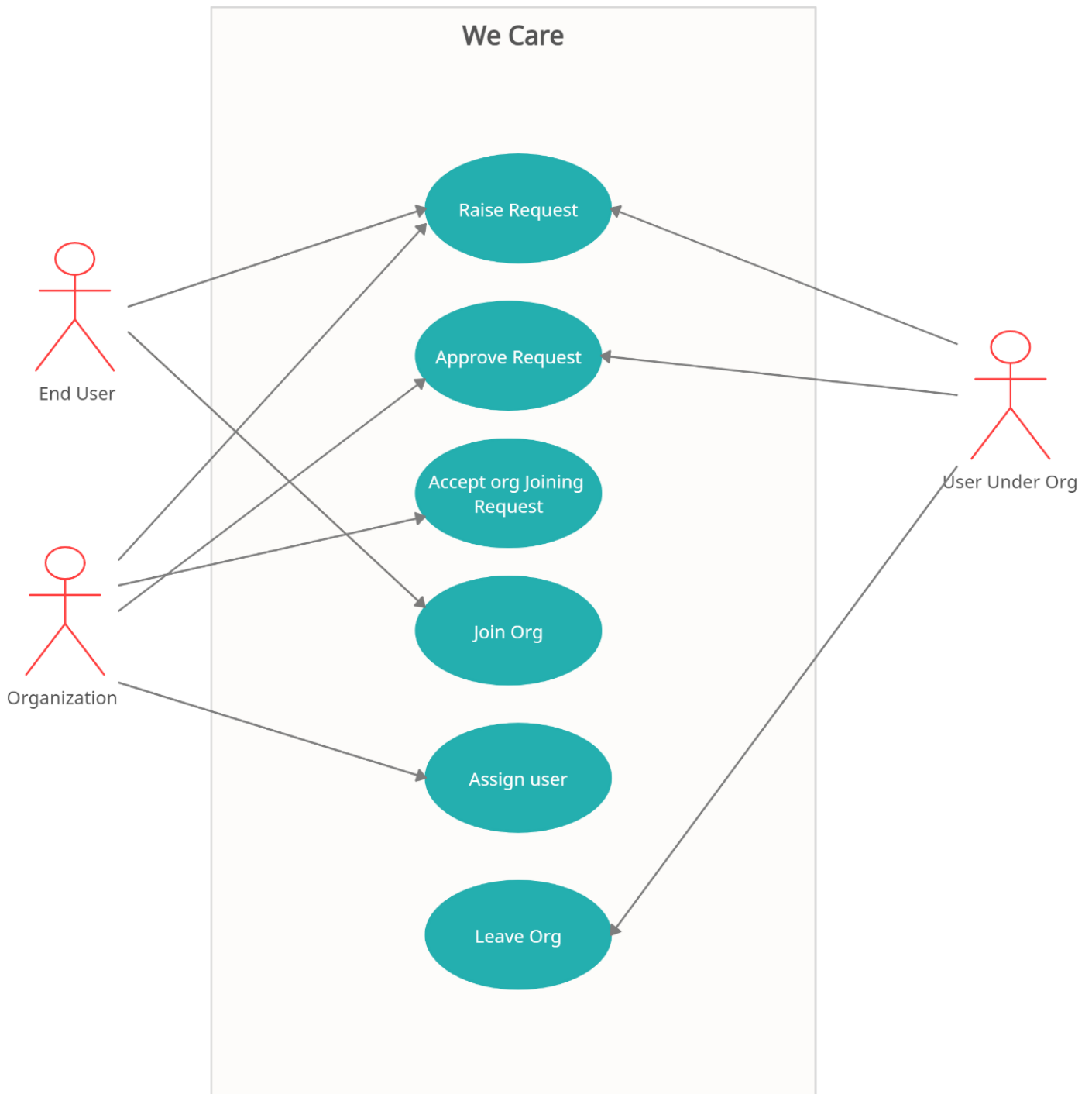


Fig. 2 Use Case Diagram

7.3 Sequence Diagram

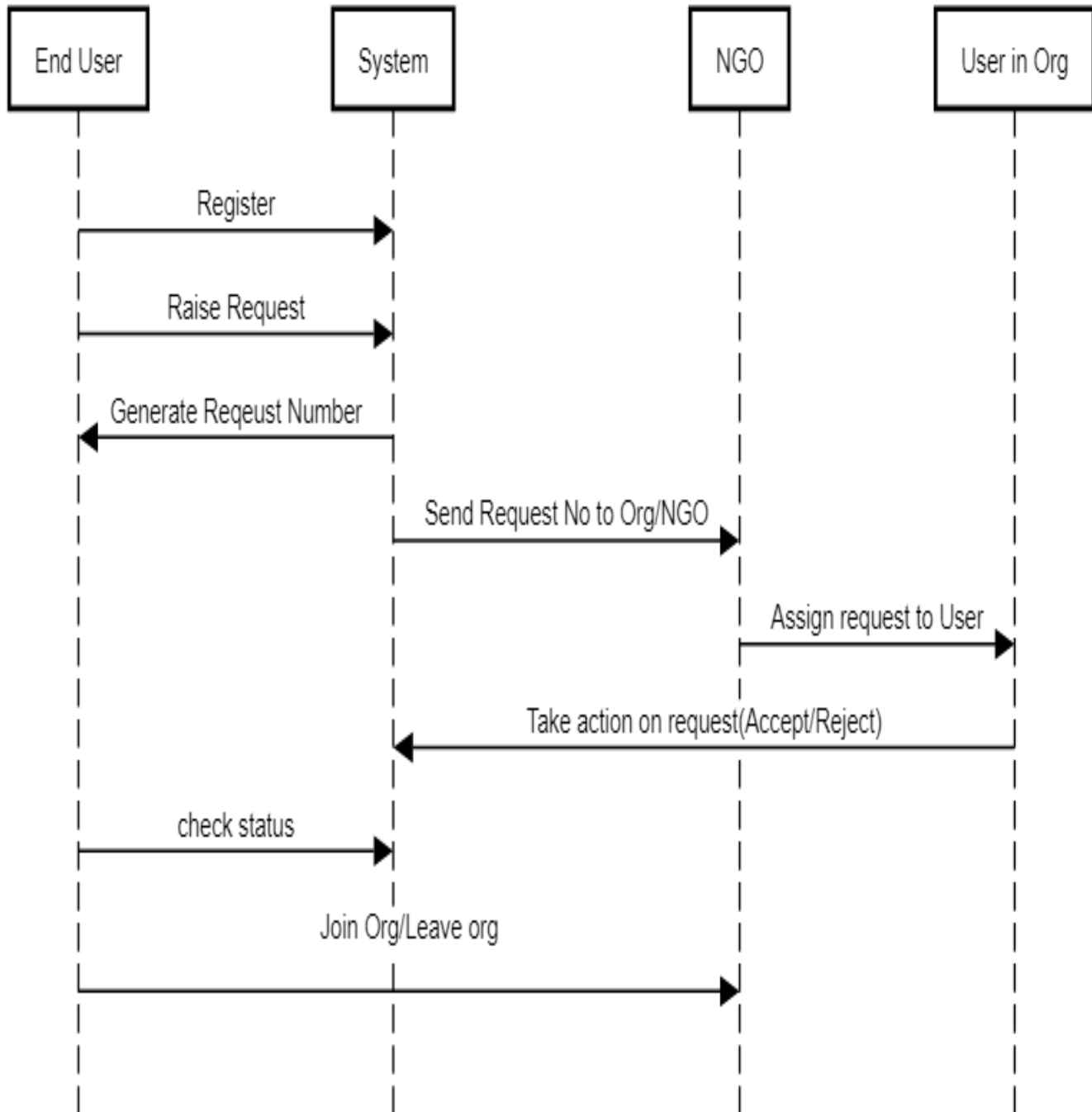


Fig. 3 Sequence Diagram

8. IMPLEMENTATION

1. On viewing the web application, user will be able to see the home page where he/she can opt to sign-up or sign-in

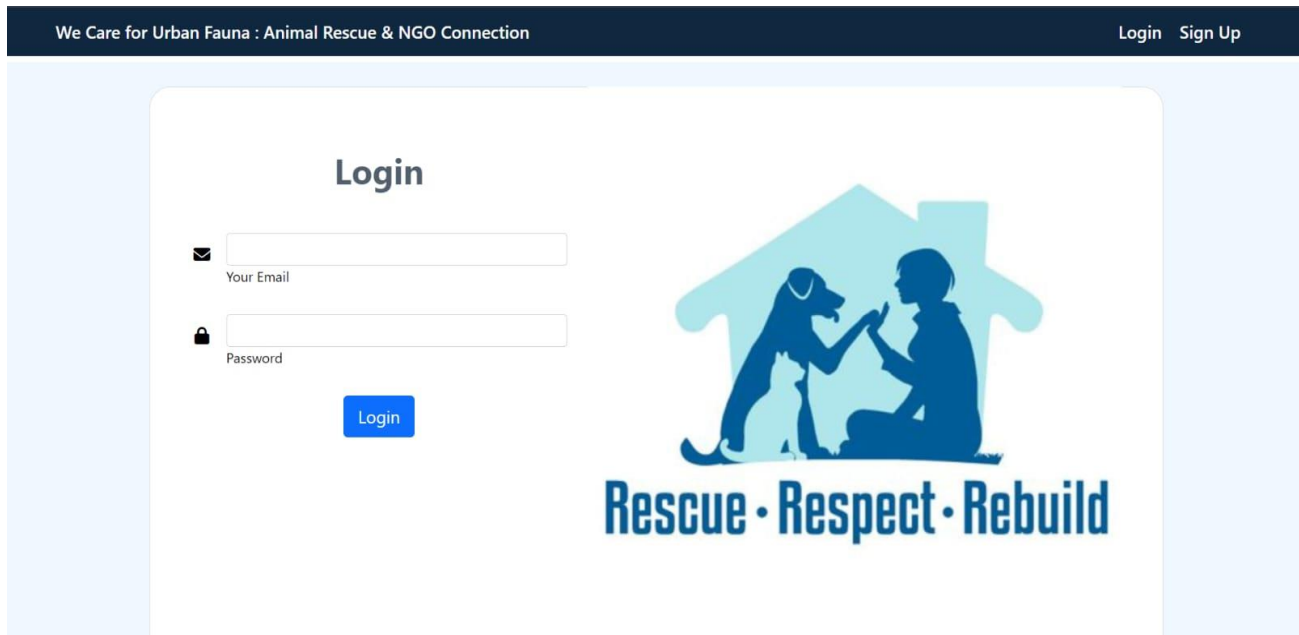


Fig. 4 Home Page

2. New users are required to register themselves by giving required details. While registering, user needs to provide locality, state, phone number etc.

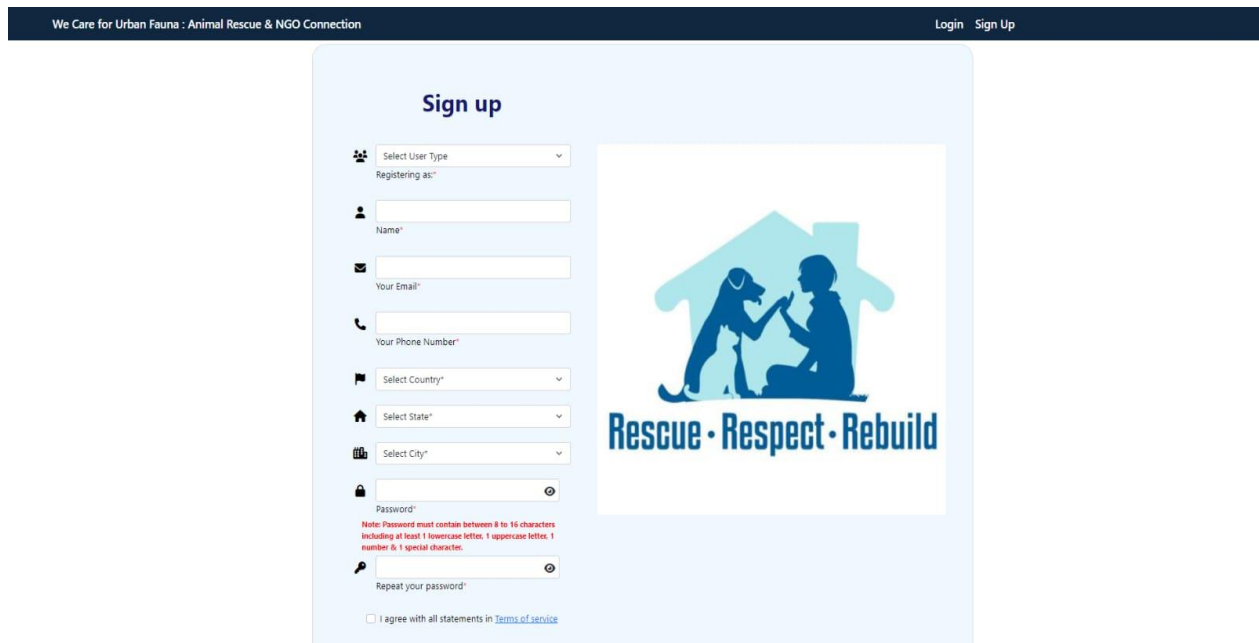


Fig. 5 Sign-up page

- 3. Registered users, can directly move to the login page. To login, user requires to enter the registered email. and password.
- 4. After login, user can see their dashboard having details. User can also raise request, view logged request, join organization etc.

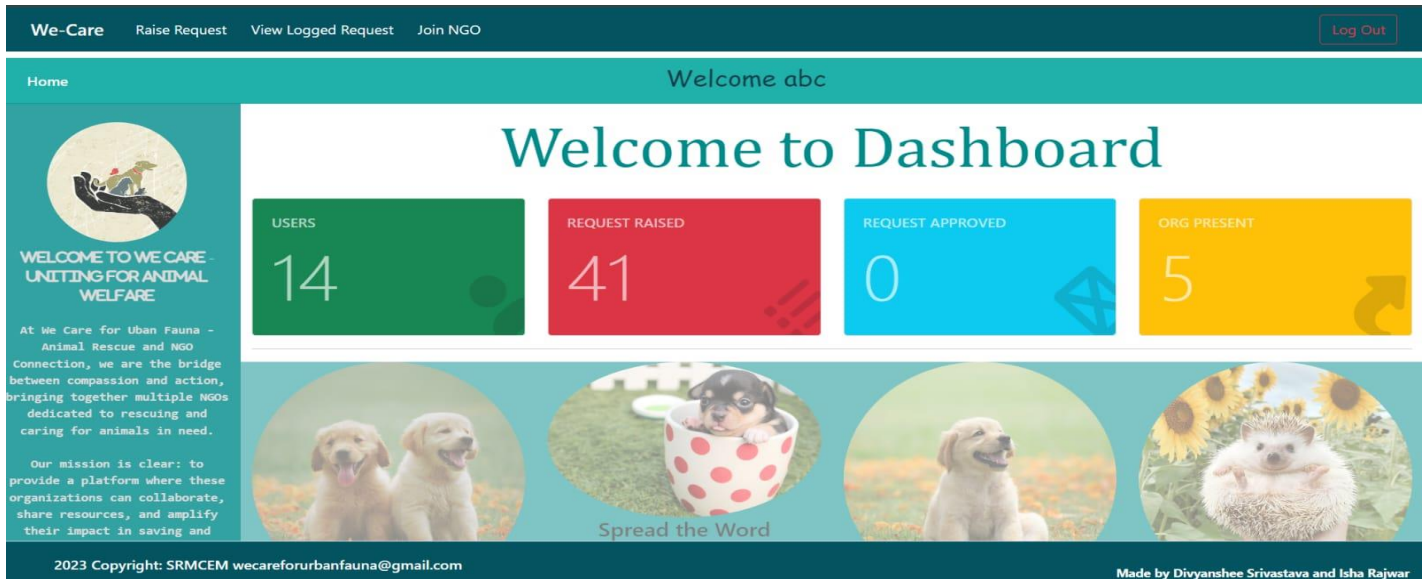


Fig. 6 Dashboard after login

- 5. If one logs in , one can raise a request for animal rescue.

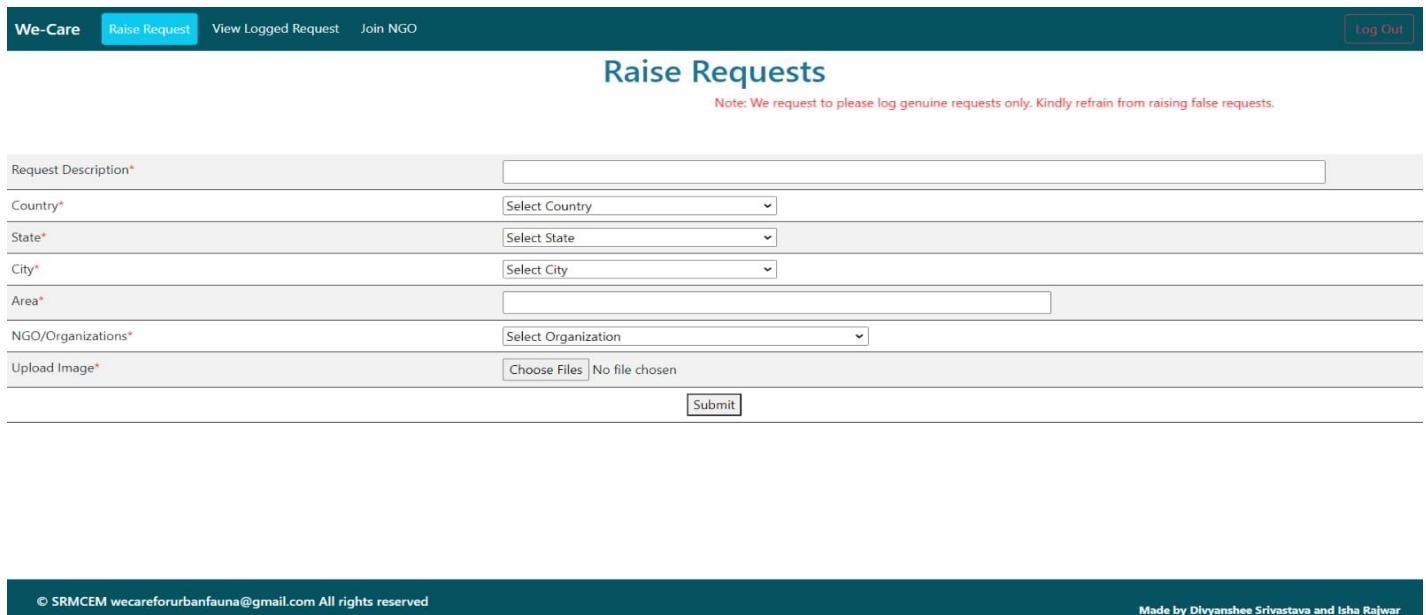


Fig.7 Raise Request

We-Care
Log Out

Approve Rescue Request
Assign User
Accept NGO Join Request

Request No	Description	Rescue Location	Image	Raised By	Contact Info	Request Logged Date	Status	Action
26	need help for dog stuck in road material	near indira nagar hanuman mandir, Lucknow, Uttar Pradesh, India	req2.jpg	abc	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Approved	No Action allowed
27	need help for dog stuck in road material	near indira nagar hanuman mandir, Lucknow, Uttar Pradesh, India	req2.jpg	abc	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Approved	No Action allowed
28	need help for dog stuck in road material	near indira nagar hanuman mandir, Varanasi, West Bengal, India	req2.jpg	abc	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Approved	No Action allowed
29	need help for dog stuck in road material	near indira nagar hanuman mandir, Lucknow, Uttar Pradesh, India	req2.jpg	abc	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Rejected	No Action allowed
30	aaaa	aaa, Lucknow, Uttar Pradesh, India	req2.jpg	abc	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Open	✔ ✕
31	aaa	aaaa, Lucknow, Uttar Pradesh, India	req2.jpg	abc	Email - abc@gmail.com Phone -	2024-05-20 00:00:00	Open	✔ ✕

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Fig.8 Approve Rescue Request

6. On login as a NGO one can approve or reject rescue request, assign users, accept NGO join request.

We-Care
Log Out

Approve Rescue Request
Assign User
Accept NGO Join Request

Request Id	Description	Raised By	Rescue Location	Contact Info	Request Logged Date	Status	Select User/ Assigned User	Action
33	Injured dog medical attention needed	abc	indira nagar, Lucknow, Uttar Pradesh, India	Email - abc@gmail.com Phone -	2024-05-20 00:00:00	Approved	User2	NA
26	need help for dog stuck in road material	abc	near indira nagar hanuman mandir, Lucknow, Uttar Pradesh, India	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Approved	abc	NA
27	need help for dog stuck in road material	abc	near indira nagar hanuman mandir, Lucknow, Uttar Pradesh, India	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Approved	User2	NA
28	need help for dog stuck in road material	abc	near indira nagar hanuman mandir, Varanasi, West Bengal, India	Email - abc@gmail.com Phone -	2024-05-19 00:00:00	Approved	Select User 	Assign

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Fig.9 Assign User

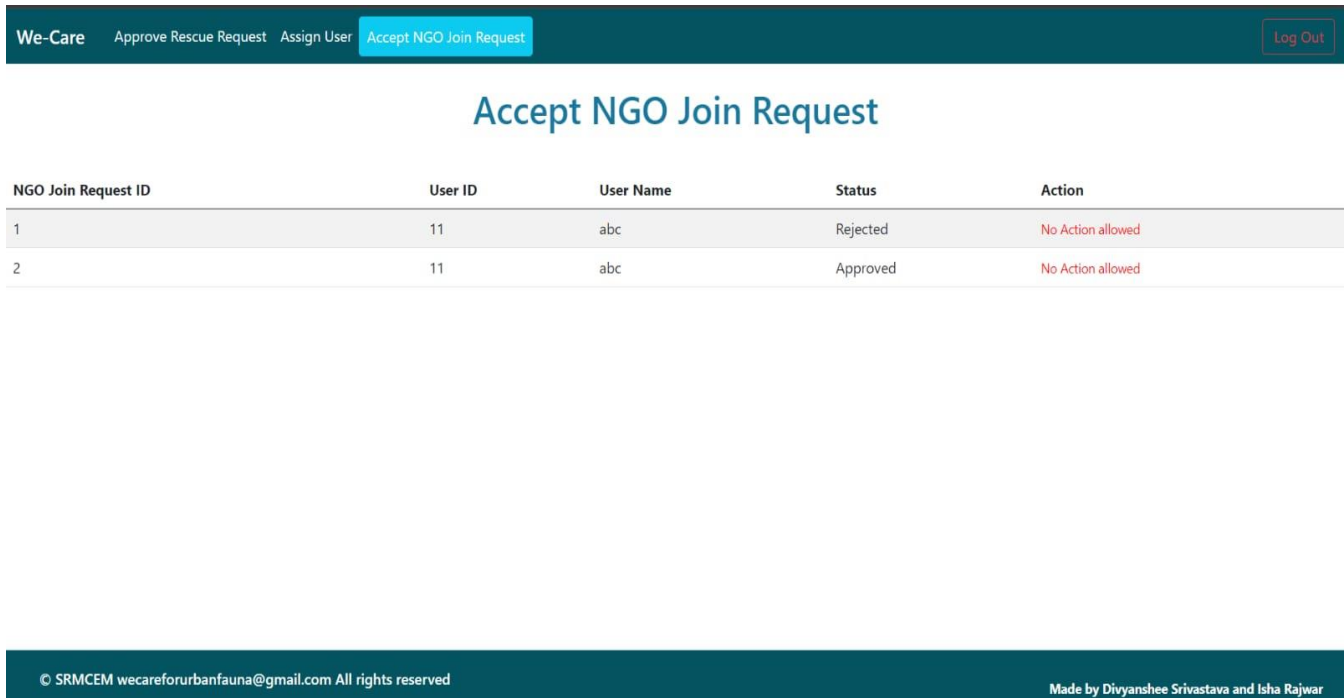


Fig.10 Accept NGO Join Request

9. SYSTEM REQUIREMENTS

9.1 Software Requirements

Backend Frameworks: Java (Struts Framework)

Front End Frameworks: HTML5, CSS3, JavaScript, Bootstrap, AJAX, jQuery

Runtime Environment: Chrome

Database Tool: MySQL

IDE: Eclipse

Application Server: Apache Tomcat Server

9.2 Hardware Requirements

PROCESSOR: I3 processor Pentium

RAM: 8GB or above

HDD: 5 GB or minimum (Free Space)

SSD: Optional

O.S: Windows 8.1 or higher

Screen: VGA Monitor or Laptop Screen

Mouse: Standard Mouse

Keyboard: Standard Keyboard (QWERTY)

Power Backup: 24/7

10. SYSTEM FLOW

Process starts when a user finds an injured animal in need of help which would make him/her to type the URL of the 'We Care' website in a device. Once the user is on the platform, he has to complete the specific desire form and indicate the following among others; where the injured animal is; descriptions of the injury and an image of the animal. After this, the user submits the filled form to proceed toward sending the details to the main system of 'We Care.'

Once the request is received, the central system directs it to the correct organization depending on the factors including geographic location and the type of injury for further processing and handling.

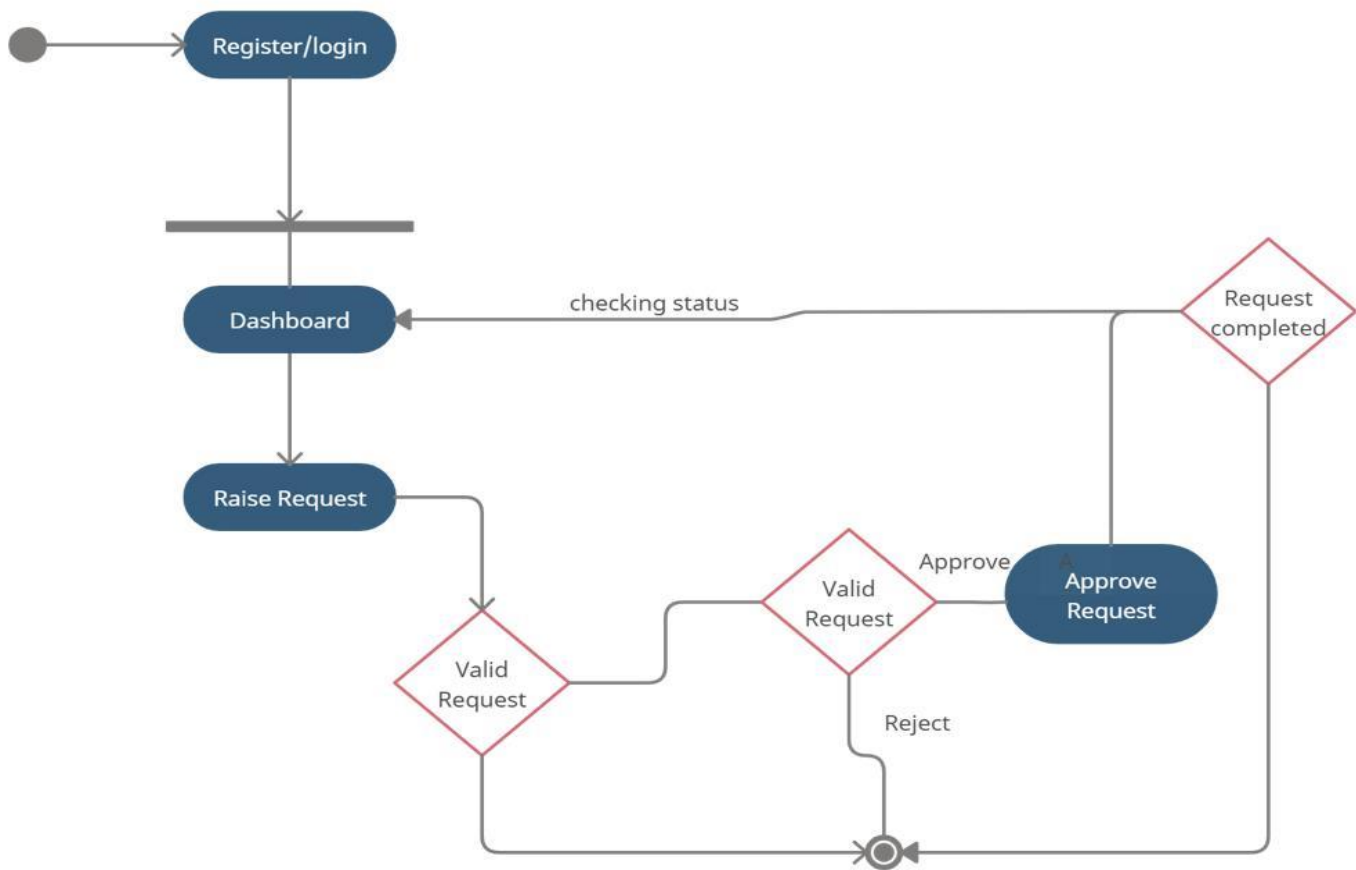


Fig. 12 System flow diagram

In acknowledgment of the request, the assigned organization examines the data and information tendered in the request, considers the extent of injury to the employee, and authorizes the request or notifies the employee that the request lacks integrity. Subsequently, the subsequent assessment by the user highlights the available NGO within a given place or region. Then the NGO has a pre-selected internal user also known as a handler carefully scrutinises the request if they decide to take it as genuine and severe enough, they give the said NGO's recipient admission while if the request is unfathomable fake or not severe enough it is rejected. Implementation, in the case of accepting the call, is done immediately by the handler in the form of perhaps sending a rescue team to help the injured animal. On the other hand, the response above will be sent to the user notifying them that the request has been denied and may contain the reason for rejection.

Additionally, there may be further questions that the organization would ask the user to fill in more data, or inform the status of the saved animal. After the escalation is done and the injured animal has been treated and rescued, such a case is then considered as closed within the system. This meticulous and orderly orientation enhances the flow of reporting and handling injured animals, as well as improves the efficiency and effectiveness of rescue efforts promoted through the 'We Care' initiative.

11. RESULT

The "we care" is an effective way to address the issue of injured animals by providing a centralized platform which connects the users who come in contact with injured animals to the organizations that can provide help to the animal. It encourages the collaboration between end organizations and volunteers maximizing resources. The system focuses on the user's need and feedback, leading to a more user-friendly platform.

12. CONCLUSION

The "We Care" project, driven by an iterative waterfall methodology, signifies a crucial advancement in the domain of animal welfare. By creating a centralized platform and leveraging an iterative approach, the project endeavours to streamline the reporting and resolution processes for issues concerning animal welfare. Through the facilitation of collaboration among users, NGOs, and government entities, the platform not only expedites the aid provided to injured animals but also fosters a community actively dedicated to the welfare of animals. The project's emphasis on continuous refinement and active user participation underlines its commitment to achieving tangible and sustainable improvements in the lives of distressed animals.

During the Implementation phase, iterative development ensures that core features are built in a structured manner, laying the foundation for the platform's functionality. It starts with addressing the most critical functionalities, such as reporting and request handling. As the project progresses through iterations, the platform takes shape, ultimately becoming a user-friendly portal that facilitates the reporting and resolution of animal welfare concerns.

With its focus on continuous improvement and user engagement, the project stands poised to leave a lasting and substantial impact on the well-being of countless animals in need.

REFERENCES

- [1] Joshi, D., Deshpande, D., Chandollikar, N., & Jadhav, R. Designing Service-Oriented Approach for Animal Welfare.
- [2] Valarmathi, V., Sathya, T., Buvana, C., & Srinithi, S. (2022, December). Animal Welfare and Health Abided System with Integrated Website. In 2022 International Conference on Data Science, Agents & Artificial Intelligence (ICDSAAI) (Vol. 1, pp. 1-4). IEEE.
- [3] Khubchandani, A., Ray, A., Shenoy, S., Cardoza, C. R., & Chavan, C. P. (2022, April). Emergency Reporting System for Animals. In 2022 IEEE 7th International conference for Convergence in Technology (I2CT) (pp. 1-6). IEEE.
- [4] FOR JAVA: <https://www.java.com/en/>
- [5] FOR HTML & CSS: <https://www.w3schools.com/>
- [6] FOR SQL & DATABASES: <https://www.w3schools.com/MySQL/default.asp>

[7] FOR BOOTSTAP: <https://getbootstrap.com/>

[8] FOR AJAX: <https://developer.mozilla.org/en-US/docs/Web/Guide/AJAX>

[9] FOR STRUTS FRAMEWORK: <https://www.mygreatlearning.com/blog/introduction-to-struts-in-java/>

[10] FOR STRUTS FRAMEWORK: <https://www.geeksforgeeks.org/introduction-and-working-of-struts-web-framework/>

[11] FOR JQUERY: <https://api.jquery.com/jquery.ajax/>