IMPROVING BIOSECURITY IN AQUACULTURE

Community Service Project Report Submitted to the Faculty of Engineering of

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA,KAKINADA

In partial fulfilment of the requirements for the award of the Degree of

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

By

1.T.Lakshmi Divya(22481A12A0) 2.J.Hemasri(22481A1268)

3.K.Akash(22481A1298) 4.J.Rohitha(22481A1271)

Under the Supervision of

Dr. CH.Suresh Babu, M.Tech., Ph.D

Professor

DEPARTMENT OF INFORMATION TECHNOLOGY

SESHADRI RAO GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK,Kakinada)

SESHADRIRAO KNOWLEDGE VILLAGE, GUDLAVALLERU – 521 356

ANDHRA PRADESH

2024-2025

Program Book

for

Community Service Project

Submitted in accordance with the requirement for the degree of B. Tech

Name of the Student: Lakshmi Divya Thota

Name of the College: Seshadri Rao Gudlavalleru Engineering College

Registration Number: 22481A12A0

Period of CSP: 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024

Name & Address of the Community/Habitation:
Bomminapadu, krishna district.

Community Service Project Report

Submitted in accordance with the requirement for the degree of B. Tech

Name of the College: Seshadri Rao Gudlavalleru Engineering College

Department: Information Technology

Name of the Faculty Guide: Dr. CH. Suresh Babu

Duration of the CSP: 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024

Name of the Student: Lakshmi Divya Thota

Programme of Study: Bachelor of Technology

Year of Study: III B. Tech

Register Number: 22481A12A0

Date of Submission: 15-11-2024

Student's Declaration

I, Lakshmi Divya Thota, a student of Community Service Program, Reg.No. 22481A12A0 of the Department of Information Technology, Seshadri Rao Gudlavalleru Engineering College do hereby declare that I have completed the mandatory community service from 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024 in bomminampadu, Krishna district of Andhra Pradesh under the Faculty Guideship of Dr. CH.Suresh Babu, Department of Information Technology in SeshadriRao Gudlavalleru Engineering College, Gudlavalleru.

(Signature and Date)

Endorsements:

Faculty Guide:

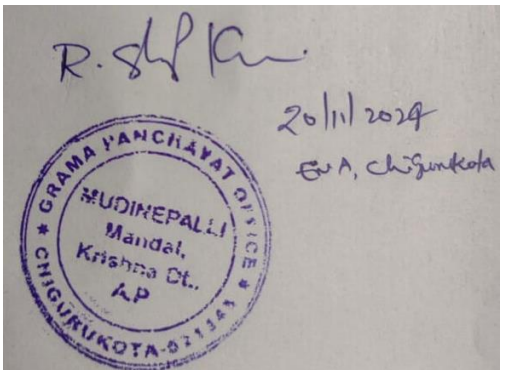
Master of Trainer(S):

Head of the Department:

Principle:

Certificate from Official of the Community

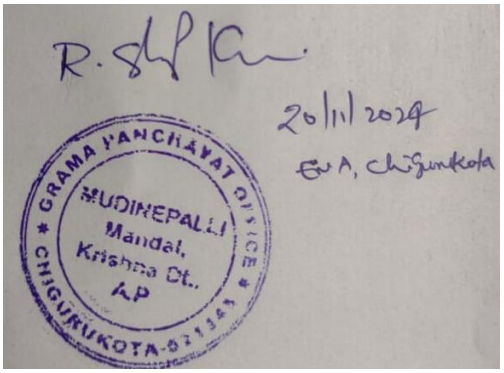
This is to certify that Lakshmi Divya Thota Reg. No 22481412A0 of Gudlavalleru Engineering College underwent community service in Bomminampadu from 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024.The overall performance of the Community Service Volunteer sharing his/her community service is found to be Satisfactory.



Authorized Signatory with Date and Seal

Certificate from Official of the Community

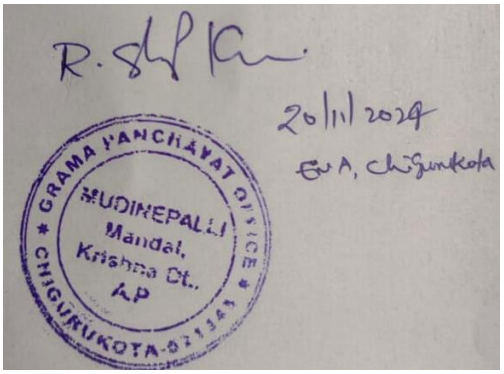
This is to certify that Jangala Hemasri Nagalakshmi Kumari Reg. No 2248141268 of Gudlavalleru Engineering College underwent community service in Bomminampadu from 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024.The overall performance of the Community Service Volunteer sharing his/her community service is found to be Satisfactory.



Authorized Signatory with Date and Seal

Certificate from Official of the Community

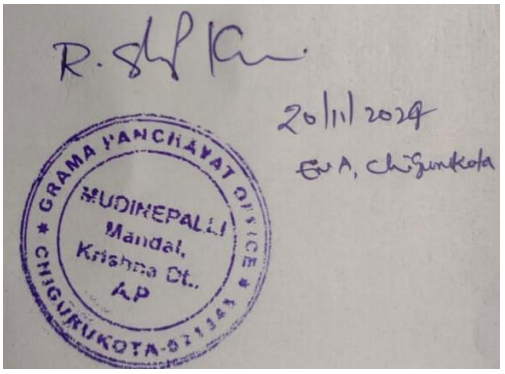
This is to certify that Kurra Akash Reg. No 2248141298 of Gudlavalleru Engineering College underwent community service in Bomminampadu from 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024.The overall performance of the Community Service Volunteer sharing his/her community service is found to be Satisfactory.



Authorized Signatory with Date and Seal

Certificate from Official of the Community

This is to certify that Jogi Rohitha Reg. No 2248141271 of Gudlavalleru Engineering College underwent community service in Bomminampadu from 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024.The overall performance of the Community Service Volunteer sharing his/her community service is found to be Satisfactory.



Authorized Signatory with Date and Seal

ACKNOWLEDGEMENTS

The satisfaction that accompanies the successful completion of any task would be incomplete without the mention of people who made it possible and whose constant guidance and encouragements crown all the efforts with success. We would like to express our deep sense of gratitude and sincere thanks to **Dr.CH. Suresh Babu** professor, Department of Information Technology for his constant guidance, super vision and motivation in completing the project work. We would like to thank **T. Balaji**, community service project coordinator for his support and guidance throughout the project.

We feel elated to express our heartfelt gratitude and sincere thanks to **Dr.D.N.V.S.L.S.Indira,** Head of the Department, Information Technology for her encouragement all the way during analysis of the project. Her encouragement is the key behind the successful completion of the project work. We would like to take this opportunity to thank our beloved principal **Dr. B. Karuna Kumar** for providing a great support for us in completing our project and giving us the opportunity for doing project. Our Special thanks to the faculty of our department and programmers of our computer lab.

Finally, we thank our family members, non-teaching staff, attendants and our friends, who had directly or indirectly helped and supported us in completing our project in time.

Project Associates:

T. Lakshmi Divya(22481A12A0)

J. Hemasri(22485A1268)

K. Akash(22481A1298)

J. Rohitha (22481A1271)

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CHAPTER 1: EXECUTIVE SUMMARY

The "Enhancing Biosecurity in Aquaculture" community service project aims to improve biosecurity practices among small-scale aquaculture farmers, preventing disease outbreaks, promoting sustainable aquaculture, and ensuring food security. Targeting farmers in [specific region/county], the project will conduct baseline surveys and focus groups to assess current biosecurity practices. Subsequently, biosecurity guidelines and training materials will be developed and distributed, accompanied by workshops and demonstrations on best practices.To ensure long-term sustainability, a community-led biosecurity committee will be established. By empowering small-scale aquaculture farmers with biosecurity knowledge and resources, this project contributes to a healthier and more sustainable aquaculture industry, ultimately enhancing food safety and security.

Learning Objectives:

1. Understand the importance of biosecurity in aquaculture.
2. Identify biosecurity risks and threats in aquaculture.
3. Develop skills to implement biosecurity measures.
4. Improve knowledge on disease prevention and management.
5. Enhance community engagement and awareness.

Learning Outcomes:

1. Knowledge of biosecurity principles, practices, and protocols in aquaculture.
2. Improved biosecurity practices among small-scale aquaculture farmers, reducing disease incidence and increasing productivity.
3. Appreciation for the impact of biosecurity on aquaculture sustainability.
4. Implementation of biosecurity measures on farms and regular monitoring/reporting of disease incidents.

CHAPTER 2: OVERVIEW OF THE COMMUNITY

The Communities is Bomminampadu

Bomminampadu

Bomminampadu is a rural village in West Godavari District, Andhra Pradesh, India, with a population of approximately 15,000. The community's economy is based on agriculture, fishing, and small-scale industries. Local schools provide education, and healthcare services are available through primary healthcare centers and private clinics. Bomminampadu faces challenges related to limited infrastructure, waterlogging, and unemployment. Infrastructure development is ongoing, with connecting roads, groundwater and piped water supply, individual and public toilets, and electricity availability. The community celebrates traditional Telugu festivals and cultural events. Despite facing challenges like limited access to quality education and healthcare, water scarcity, poverty, and unemployment, Bomminampadu has opportunities for growth through aquaculture and agriculture development, small-scale industries, entrepreneurship, and tourism.

Community engagement

Bomminampadu is strong and deeply rooted in a spirit of cooperation and mutual support. Given the high level of trust and collective effort, Bomminampadu is well-positioned to adopt new educational initiatives like the self-assessment and resource allocation platform. The community's support can be instrumental in implementing and maintaining this system, as parents, teachers, and community leaders are likely to play active roles in encouraging students to use these resources and providing feedback to improve its effectiveness.

CHAPTER 3: COMMUNITY SERVICE PART

During the aquaculture survey project in Bomminampadu, a series of strategic activities were undertaken to promote sustainable aquatic practices and enhance the livelihoods of local fishermen. The project commenced with community engagement, where introductory meetings with fishermen, village leaders, and local authorities helped build awareness of the project's objectives and secured vital community support. Following this, a comprehensive survey was conducted to assess the current state of aquaculture in Bomminampadu, with insights gathered through interviews and discussions with fishermen, farmers, and experts. This revealed specific challenges, opportunities, and priority areas for targeted support. Based on these findings, a customized database was developed to track aquatic resources, monitor water quality, and identify areas for improvement. Training sessions were held to familiarize fishermen and local authorities with the database, empowering them to leverage the data effectively. Additional workshops focused on sustainable fishing practices, aquaculture management, and market access. Feedback was gathered from stakeholders to refine and optimize the database's functionality. Adjustments were made to improve user experience and relevance of data. Through these activities, the project established a collaborative, sustainable system supporting informed decision-making, empowering Bomminampadu's fishing community to enhance their livelihoods while promoting environmentally conscious aquaculture practices.

ACTIVITY LOG FOR THE FIRST WEEK

DAY & DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME	Person In-charge Signature
MONDAY **Day –1** 20-05-2024			
TUESDAY **Day -2** 21-05-2024			
WEDNESDAY **Day –3** 22-05-2024			
THURSDAY **Day –4** 23-05-2024			
FRIDAY **Day –5** 24-05-2024			
SATURDAY **Day –6** 25-05-2024			

WEEKLY REPORT

WEEK – 1 (20-05-2024 TO 25-05-2024)

Objective of the Activity Done:
Detailed Report:

ACTIVITY LOG FOR THE SECOND WEEK

DAY & DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME	Person In-charge Signature
MONDAY **Day –1** 27-05-2024			
TUESDAY **Day -2** 28-05-2024			
WEDNESDAY **Day –3** 29-05-2024			
THURSDAY **Day –4** 30-05-2024			
FRIDAY **Day –5** 31-05-2024			
SATURDAY **Day –6** 01-06-2024			

WEEKLY REPORT

WEEK – 2 (27-05-2024 TO 01-06-2024)

Objective of the Activity Done:
Detailed Report:

ACTIVITY LOG FOR THE THIRD WEEK

DAY& DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOMES	Person In-charge Signature
MONDAY **Day –1** 03-06-2024			
TUESDAY **Day -2** 04-06-2024			
WEDNESDAY **Day –3** 05-06-2024			
THURSDAY **Day –4** 06-06-2024			
FRIDAY **Day –5** 07-06-2024			
SATURDAY **Day –6** 08-06-2024			

WEEKLY REPORT

WEEK – 3 (03-06-2024 TO 08-06-2024)

Objective of the Activity Done:
Detailed Report:

ACTIVITY LOG FOR THE FOURTH WEEK

DAY & DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME	Person In-charge Signature
MONDAY **Day –1** 10-06-2024			
TUESDAY **Day -2** 11-06-2024			
WEDNESDAY **Day –3** 12-06-2024			
THURSDAY **Day –4** 13-06-2024			
FRIDAY **Day –5** 14-06-2024			
SATURDAY **Day –6** 15-06-2024			

WEEKLY REPORT

WEEK – 4 (10-06-2024 TO 15-06-2024)

Objective of the Activity Done:
Detailed Report:

ACTIVITY LOG FOR THE FIFTH WEEK

DAY & DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME	Person In-charge Signature
MONDAY **Day –1** 17-06-2024			
TUESDAY **Day -2** 18-06-2024			
WEDNESDAY **Day –3** 19-06-2024			
THURSDAY **Day –4** 20-06-2024			
FRIDAY **Day –5** 21-06-2024			
SATURDAY **Day –6** 22-06-2024			

WEEKLY REPORT

WEEK – 5 (17-06-2024 TO 22-06-2024)

Objective of the Activity Done:
Detailed Report:

ACTIVITY LOG FOR THE SIXTH WEEK

DAY & DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME	Person In-charge Signature
MONDAY **Day –1** 24-06-2024			
TUESDAY **Day -2** 25-06-2024			
WEDNESDAY **Day –3** 26-06-2024			
THURSDAY **Day –4** 27-06-2024			
FRIDAY **Day –5** 28-06-2024			
SATURDAY **Day –6** 29-06-2024			

WEEKLY REPORT

WEEK – 6 (24-06-2024 TO 29-06-2024)

Objective of the Activity Done:
Detailed Report:

ACTIVITY LOG FOR THE SEVENTH WEEK

DAY & DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME	Person In-charge Signature
MONDAY **Day –1** 15-07-2024			
TUESDAY **Day -2** 16-07-2024			
WEDNESDAY **Day –3** 17-07-2024			
THURSDAY **Day –4** 18-07-2024			
FRIDAY **Day –5** 19-07-2024			
SATURDAY **Day –6** 20-07-2024			

WEEKLY REPORT

WEEK – 7 (15-07-2024 TO 20-07-2024)

Objective of the Activity Done:
Detailed Report:

ACTIVITY LOG FOR THE EIGHTH WEEK

DAY & DATE	BRIEF DESCRIPTION OF THE DAILY ACTIVITY	LEARNING OUTCOME	Person In-charge Signature
MONDAY **Day –1** 22-07-2024			
TUESDAY **Day -2** 23-07-2024			
WEDNESDAY **Day –3** 24-07-2024			
THURSDAY **Day –4** 25-07-2024			
FRIDAY **Day –5** 26-07-2024			
SATURDAY **Day –6** 27-07-2024			

WEEKLY REPORT

WEEK – 8 (22-07-2024 TO 27-07-2024)

Objective of the Activity Done:
Detailed Report:

CHAPTER 5: OUTCOMES DESCRIPTION

Details of the Socio-Economic Survey of the Village Habitation. Attach the questionnaire prepared for the survey

1. What is your main water source?
2. How do you treat your water?
3. How do you control water temperature?
4. What measures do you take for disease prevention?
5. What do you do to prevent algae growth?
6. How do you ensure feed quality and safety?
7. Do you have a waste treatment system in place?
8. Do you maintain records of water quality, animal health, and biosecurity practices?
9. What biosecurity challenges do you face?
10. How do you address disease outbreaks or water quality issues?
11. How do you keep records of water quality?
12. What do you do during seasonal changes?
13. What is your ideal pH level?
14. What challenges do you face with water quality?
15. How do you monitor animal health?
16. How do you ensure your practices are environmentally friendly?
17. What key water parameters do you check?
18. Do you use any monitoring technology?

Describe the problems you have identified in the community

Based on the community service project on improving biosecurity in aquaculture, the following problems have been identified in the communities:

- Frequent disease outbreaks have plagued the aquaculture community, resulting in significant economic losses and environmental damage. To address this issue, the project implemented biosecurity training programs for fish farmers and community members. The training focused on best practices for disease prevention, detection, and management
- Limited access to veterinary care has hindered the community's ability to respond effectively to disease outbreaks. The project established partnerships with local veterinary clinics and universities to provide pro-bono services and training.
- Poor water quality has contributed to disease outbreaks and environmental degradation. The project implemented water treatment systems and promoted sustainable aquaculture practices.
- Limited market access has restricted the community's ability to sell their products competitively. The project established market linkages with local businesses and promoted sustainable aquaculture products.
- Limited community engagement has hindered the adoption of biosecurity practices. The project implemented community-led initiatives and awareness.

Short-term and long-term action plan for possible solutions for the problems identified and that could be recommended to the concerned authorities for implementation.

SHORT-TERM ACTION PLANS:

1. Conduct surveys and interviews with farmers to identify strengths and weaknesses.
2. Document existing infrastructure, water quality, and disease management practices
3. Research local regulations and guidelines for aquaculture biosecurity.
4. Design and develop a website with the following sections:
5. Biosecurity guidelines and best practices
6. Disease management and prevention
7. Water quality management
8. Conduct usability testing and feedback sessions with farmers.
9. Launch the website and announce it to local aquafarmers.

LONG-TERM ACTION PLANS:

1. Develop comprehensive biosecurity plan and policy.
2. Develop and implement biosecurity training programs.
3. Develop and implement biosecurity monitoring systems.
4. Establish disease surveillance and reporting systems.
5. Conduct research on emerging diseases and biosecurity threats.
6. Provide advanced training on biosecurity and disease management.

Description of the community awareness programmes conducted w.r.t the problems and their outcomes

Description:

- A live demonstration of the aquaculture best practices database was presented, showing how farmers could use it to evaluate and improve their aquatic resource management.
- The program tackled common challenges identified in Bhomminampadu's aquaculture sector, such as disease outbreaks, water pollution, and limited market access.
- Solutions presented included:
    - Targeted training programs for disease management and water quality
    - Market linkage facilitation for better prices
    - Community-led aquaculture initiatives
    - Online resources for sustainable aquaculture practices

Problems:

- Water Aquafarmers faced challenges in maintaining optimal water quality for aquatic species.
- Sustainable Farming Practices: Lack methods, leading to environmental concerns of awareness and implementation of sustainable farming
- Quality of Feed: Concerns regarding the quality and nutritional value of feed provided to aquaculture species.
- Disease Management: Inadequate knowledge and resources for effective disease prevention and management.
- Environmental Impact: Lack of awareness regarding the broader environmental impact of aquaculture practices, including habitat disruption and pollution.

Outcomes:

- Increased Awareness: Community members gained a heightened understanding of the importance of sustainable aquaculture practices.
- Market Education and Access: Increased understanding of market dynamics and strategies to enhance market access and pricing negotiation skills
- Community Engagement: Focused discussions led to increased community engagement, collaboration, and a shared sense of responsibility
- Eco-friendly Farming Adoption: Positive behavioural changes observed as community members actively adopted eco-friendly farming methods.

Report of the community service project work done in the related subject w.r.t the habitation/village.

Project: Improving biosecurity in aquaculture

Introduction:

The Aquaculture Biosecurity Project aims to enhance the health and sustainability of aquatic resources in rural communities through improved biosecurity practices. Aquaculture, a vital source of income and nutrition for many families, faces significant threats from disease outbreaks and environmental degradation. This project will work closely with local fish farmers to identify and address biosecurity gaps, provide training and education, and implement practical solutions to prevent disease transmission and promote environmentally responsible aquaculture practices. By strengthening biosecurity measures, this project seeks to improve the livelihoods of fish farmers, protect public health, and conserve aquatic ecosystems for future generations.

Problems Identified:

"The community aquaculture sector faces numerous challenges that threaten its sustainability and productivity. Frequent disease outbreaks, poor water quality, and inadequate biosecurity practices result in significant economic losses and environmental degradation. Limited access to veterinary care, lack of awareness on biosecurity best practices, and inadequate infrastructure exacerbate these issues. Additionally, climate change and inadequate waste management further compromise the health and resilience of aquatic ecosystems. The consequences include reduced fish production, decreased income for farmers, and compromised food security for local communities. Furthermore, the sector's growth is hindered by inadequate regulatory frameworks, insufficient research and development, and limited market access.

Implementations:

Develop a user-friendly, easily accessible website. Designing website using basic scripting languages like HTML, CSS and JS. Conduct engaging workshops, presentations, and Q&A sessions to facilitate open dialogue. Utilize multimedis resources and field trips to provide a dynamic and immersive learning experience. Gathering information needed for farmers and including them in the website (including assessing the past data and graphs, reference videos) Implement regular feedback mechanisms to assess the impact of the awareness programs. Adjust and refine the curriculum based on feedback from framers and community members.

Outcomes and achievements:

The outcomes of the project were notable, including increased awareness, positive behavioral changes, collaborative initiatives, improved market access, and heightened environmentak stewardship. These achievements reflects the successful execution of the proposal solution and the project's impact on the aquaculture community.

Code:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Biosecurity in Aquaculture</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body class="home-page">

    <header>
        <h1>Aquaculture Biosecurity Awareness</h1>
        <p>Protecting Aquatic Life and Supporting Sustainable Communities</p>
    </header>

    <div class="nav-buttons">
        <button onclick="window.location.href='index.html'">Home</button>
        <button onclick="window.location.href='about.html'">About</button>
        <button onclick="window.location.href='why-biosecurity.html'">Why
Biosecurity?</button>
```

```
        <button onclick="window.location.href='get-involved.html'">Get Involved</button>
        <button onclick="window.location.href='resources.html'">Resources</button>
        <button onclick="window.location.href='interaction.html'">Biosecurity Bot</button>
        <button onclick="window.location.href='contact.html'">Contact Us</button>
    </div>

    <section id="about" class="boxed">
        <h2>About Aquaculture Biosecurity</h2>
        <p>Biosecurity in aquaculture involves practices that protect aquatic environments from harmful pathogens and contaminants. Effective biosecurity safeguards both the ecosystems and the communities that depend on them.</p>
    </section>

    <section id="importance" class="boxed">
        <h2>Why is Biosecurity Important?</h2>
        <p>Biosecurity practices are essential for preventing disease outbreaks, protecting fish populations, and ensuring the sustainability of aquaculture operations. Without biosecurity, the risks to biodiversity, local economies, and food security increase dramatically.</p>
    </section>

    <section id="tips" class="boxed">
        <h2>Top Biosecurity Tips for Aquaculture</h2>
        <ul>
            <li>Regularly clean and disinfect equipment and tanks.</li>
```

```
        <li>Limit access to facilities to prevent contamination.</li>
        <li>Quarantine new stock before introducing them into existing populations.</li>
        <li>Monitor water quality and promptly address any issues.</li>
        <li>Educate and train staff on biosecurity protocols.</li>
      </ul>
    </section>

    <section id="contact">
      <h2 style="color:white">Contact Us</h2>
      <p style="color:white" >If you have any questions or would like to learn more about aquaculture biosecurity, feel free to reach out.</p>
      <p style="color:white">Email: info@aquaculturebiosecurity.org</p>
    </section><br><br>

    <footer>
      <p>&copy; 2024 Aquaculture Biosecurity Awareness</p>
    </footer>
</body>
</html>
```

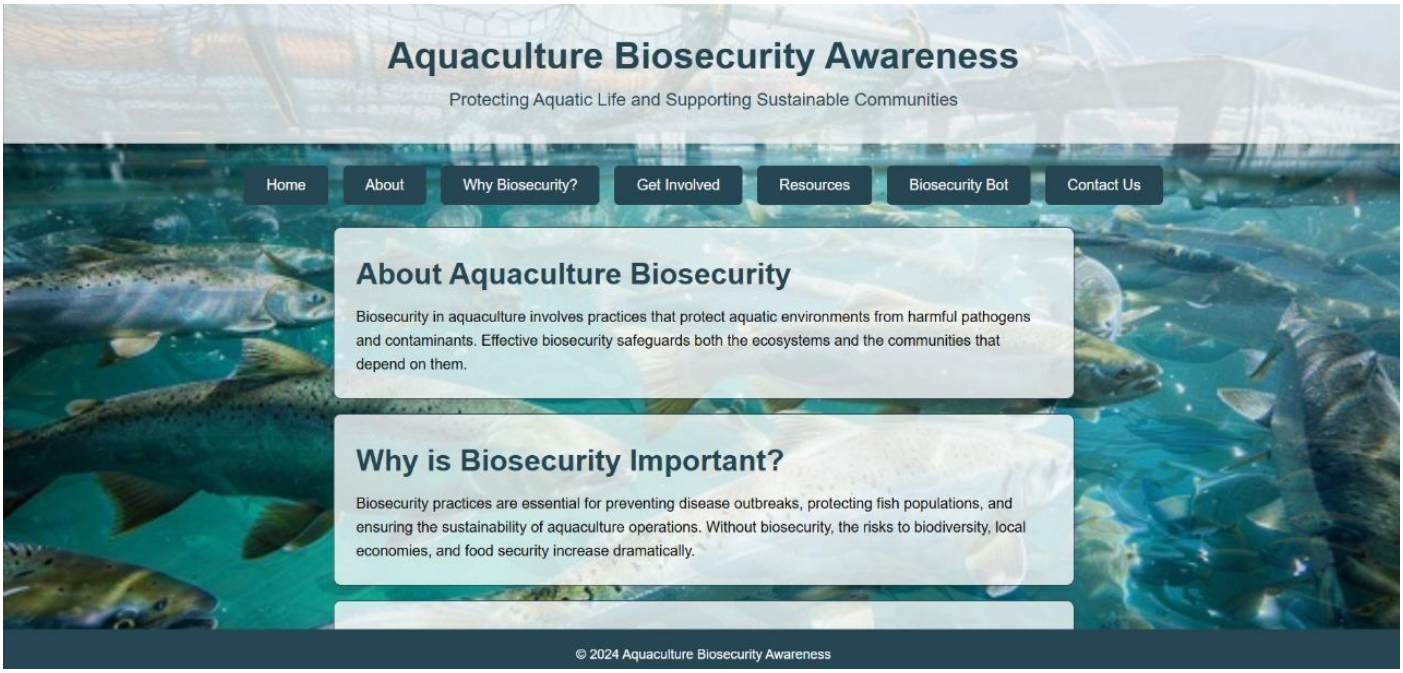
Styles.css

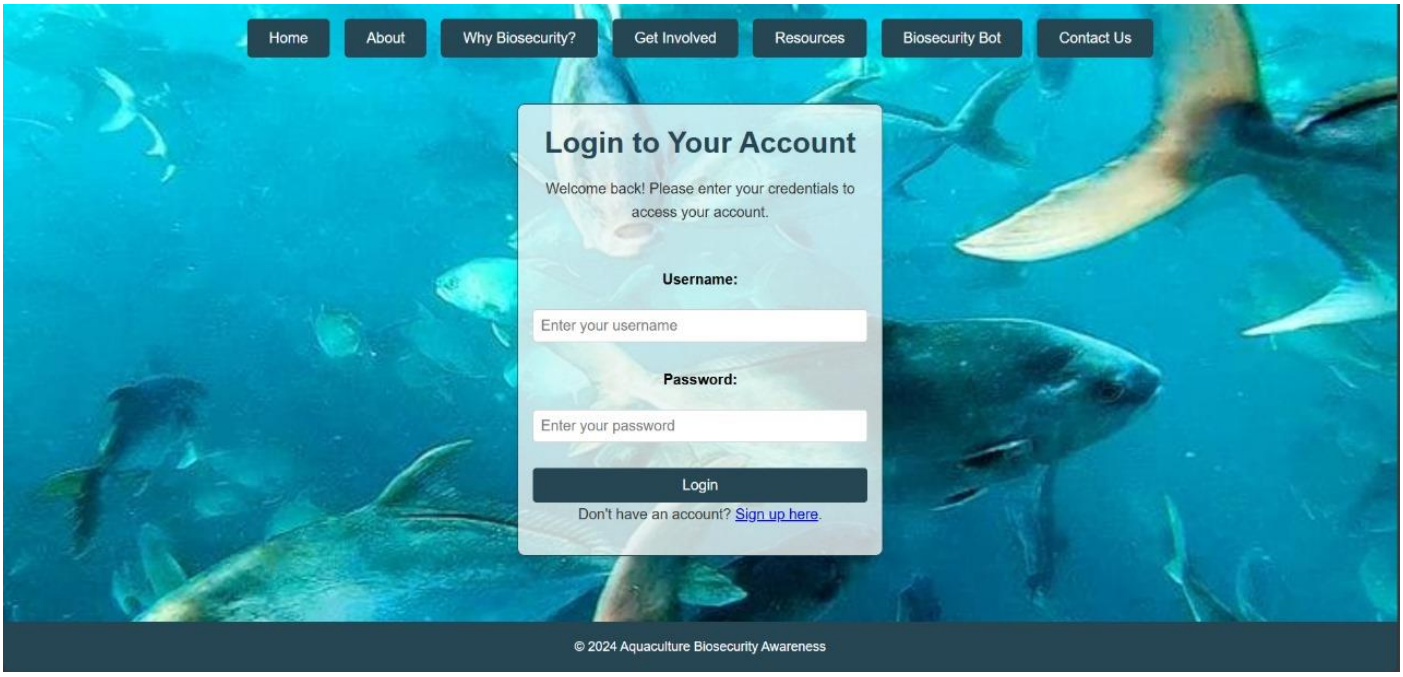
```
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 20px;
    background-color:white;
}

header {
    background: linear-gradient(rgb(104, 158, 176),rgb(82, 199, 235));
    color: #fff;
    padding: 10px 20px;
    text-align: center;
}

nav a {
    margin: 0 10px;
    color: #fff;
    text-decoration: none;
}

main {
    background: #fff;
    padding: 20px;
```

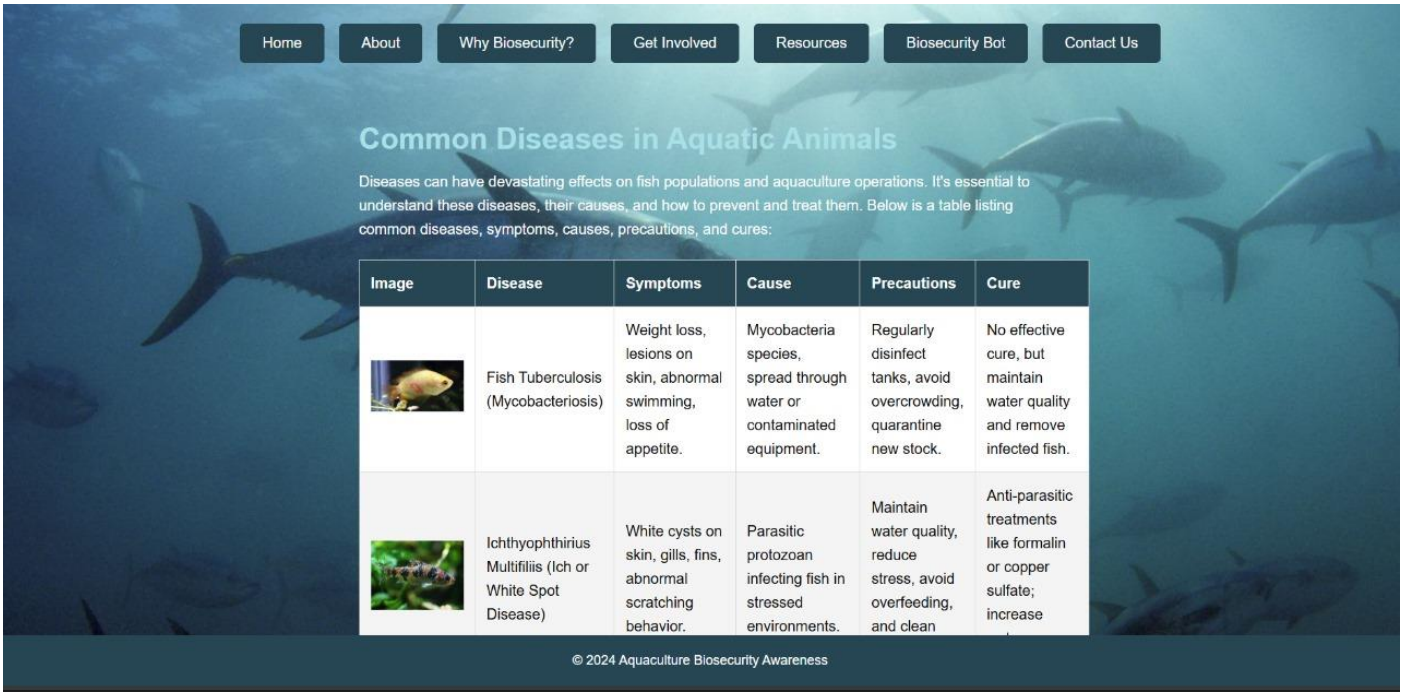
```
    border-radius: 5px;
    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}

table {
    border-collapse: collapse;
    width: 100%;
}

th, td {
    border: 1px solid #ddd;
    padding: 10px;
}

th {
    background-color: #f0f0f0;
}

table img {
    width: 100px;
    height: auto;
}
footer {
```

```
    margin-top: auto;
    padding: 15px;
    text-align: center;
    background-color: #264653;
    color: #ffffff;
    width: 100%;
}

footer {
    background-color: #264653;
    color: white;
    text-align: center;
    padding: 1rem;
    position: fixed;
    width: 100%;
    bottom: 0;
}

footer p {
    font-size: 0.9rem;
}
```

Website images:






Home
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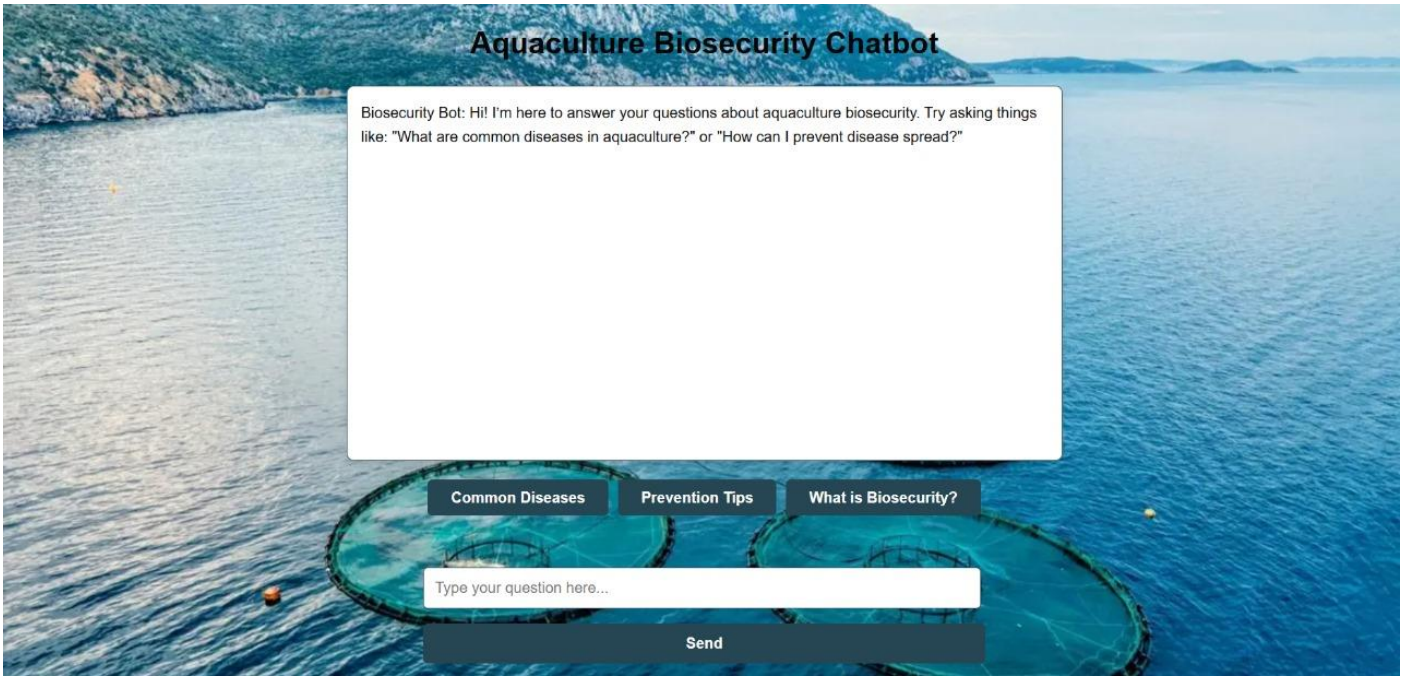
Common Diseases in Aquatic Animals
Diseases can have devastating effects on fish populations and aquaculture operations. It's essential to understand these diseases, their causes, and how to prevent and treat them. Below is a table listing common diseases, symptoms, causes, precautions, and cures:
Image
Disease
Symptoms
Cause
Precautions
Cure
Fish Tuberculosis (Mycobacteriosis)
Weight loss, lesions on skin, abnormal swimming, loss of appetite.
Mycobacteria species, spread through water or contaminated equipment.
Regularly disinfect tanks, avoid overcrowding, quarantine new stock.
No effective cure, but maintain water quality and remove infected fish.
Ichthyophthirius Multifiliis (Ich or White Spot Disease)
White cysts on skin, gills, fins, abnormal scratching behavior.
Parasitic protozoan infecting fish in stressed environments.
Maintain water quality, reduce stress, avoid overfeeding, and clean
Anti-parasitic treatments like formalin or copper sulfate; increase
© 2024 Aquaculture Biosecurity Awareness


Aquaculture Biosecurity Chatbot
Biosecurity Bot: Hi! I'm here to answer your questions about aquaculture biosecurity. Try asking things like: "What are common diseases in aquaculture?" or "How can I prevent disease spread?"
Common Diseases
Prevention Tips
What is Biosecurity?
Type your question here...
Send

CHAPTER 6: RECOMMENDATIONS AND CONCLUSIONS OF THE MINI PROJECT

Recommendations:

The establishment of a community-led aquaculture association to oversee and coordinate biosecurity efforts. Regular training and capacity-building programs for fish farmers and community members. Development of a comprehensive biosecurity protocol and emergency response plan. Strengthening of partnerships with local government, private sector, and research institutions. Exploration of alternative funding sources to support long-term project sustainability.

Conclusion:

The community service project has demonstrated significant impact in improving biosecurity practices and reducing disease outbreaks in the aquaculture community. Key achievements include:

Enhanced community awareness and knowledge on biosecurity best practices. Improved infrastructure, including upgraded ponds and water treatment systems. Reduced disease outbreaks and improved aquatic animal health. Increased economic benefits for fish farmers and community members.

The project's success highlights the importance of community-led initiatives, capacity building, and multi-stakeholder partnerships in addressing biosecurity challenges. Sustainability and scalability will require continued support, funding, and policy advocacy.

Students Self-Evaluation for the Community Service Project

Rating Scale:1 is lowest and 5 is highest rank

Student Name: T. Lakshmi Divya

Registration No: 22481A12A0

Period of CSP: 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024

Date of Evaluation:

Name of the person in-charge: T. Lakshmi Divya

1) Oral communication	1	2	3	4	5
2) Written communication	1	2	3	4	5
3) Proactiveness	1	2	3	4	5
4) Interaction ability with community	1	2	3	4	5
5) Positive Attitude	1	2	3	4	5
6) Self-confidence	1	2	3	4	5
7) Ability to learn	1	2	3	4	5
8) Work Plan and organization	1	2	3	4	5
9) Professionalism	1	2	3	4	5
10) Creativity	1	2	3	4	5
11) Quality of work done	1	2	3	4	5
12) Time Management	1	2	3	4	5
13) Understanding the Community	1	2	3	4	5
14) Achievement of Desired Outcomes	1	2	3	4	5
15) OVERALL PERFORANCE	1	2	3	4	5

Date: Signature:

Please rate the Student performance in the following areas:

Please note that your evaluation shall be done independent of the Student self-evaluation rating. Scale: 1 is lowest and 5 is highest rank

Student Name: T.Lakshmi Divya

Registration No: 22481A12A0

Period of CSP: 20-05-2024 to 29-06-2024 & 15-07-2024 to 27-07-2024

Date of Evaluation:

Name of the person incharge: Dr.CH.Suresh.Babu

1) Oral communication	1	2	3	4	5
2) Written communication	1	2	3	4	5
3) Proactiveness	1	2	3	4	5
4) Interaction ability with community	1	2	3	4	5
5) Positive Attitude	1	2	3	4	5
6) Self-confidence	1	2	3	4	5
7) Ability to learn	1	2	3	4	5
8) Work Plan and organization	1	2	3	4	5
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13) Understanding the Community	1	2	3	4	5
14) Achievement of Desired Outcomes	1	2	3	4	5
15) OVERALL PERFORANCE	1	2	3	4	5

Date: Signature:

Survey images: