

DEVELOPMENT OF FISHERIES MANAGEMENT SYSTEM

BY

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This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

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DAFFODIL INTERNATIONAL UNIVERSITY

DHAKA, BANGLADESH

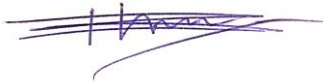
SEPTEMBER 2021

APPROVAL

This Project/internship titled “**Development of Fisheries Management System**”, submitted by **Md. Sadik Hasan**, ID No: **143-15-4544** to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on **11th September 2021**.

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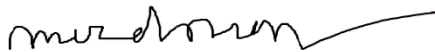
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DECLARATION

We hereby declare that this project has been done by us under the supervision of **Md. Sazzadur Ahamed, Senior Lecturer, and Department of CSE** at Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree or diploma.

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We would like to thank our entire course mate in Daffodil International University, who took part in this discuss while completing the course work.

Finally, we must acknowledge with due respect the constant support and patience of our parents.

ABSTRACT

In most cases, the present lifestyles of mankind are legitimately digital and automated that people want to find anything faster and easier than before it was, where the internet has a sweeping impact on the human race. “Management System software” plays an important role to give them ease. Again, ours is an agro-based country. Fishes are one of those product categories which hold the major economy for Bangladesh. Though the country is being digitalized, the agro-based system is still in the ancient period. Every count is of manual calculation here. For this and fusing these ideas, we thought to build something in the web-based application management form that has a practical use to agricultural product-related users which will help them in the strenuous situation of calculation of their product. My project name is “A Web-Based Project on Fisheries Management System”.

Working in **Fisheries Management System** added huge experiences in my future or upcoming careers. Working with the actual problems of the client, was another key point to gain experiences. This report takes us through all the details of an actual project and experience gathered during this 2 month’s working time.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Here the project is named Fisheries Management System. The entire work of this project has been done on fish farming. To put it clearly, I have created this web application based on fish farming. In our agricultural country, the demand for fish has increased at a tremendous rate.

The agricultural system is moving in the same way as other organizations in our country. Fisheries occupy a large part of it. Its role in fish farming has been going on for a long time in our country. Many people are benefiting immensely by cultivating fish. Where they are earning foreign exchange by cultivating domestic and foreign fish. And most of the unemployment in the country is being eliminated through fish farming.

Based on all this, I have created this web application.

This whole system has been developed though which they are HTML5, CSS3, Bootstrap, Java Script, j query, PHP Laravel and MySQL.

1.2 Motivation

I was motivated to do this project from our own fish farming. Where we have five ponds and with those ponds different types of fish are farmed. And based on this, I have created this web application.

1.3 Objective

My main objective is to make fish farming management easier with storing and accessing all the necessary data precisely. Thus, we can take right decisions upwards.

More specifically these are called technical objectives which are as follow:

To make a complete management system for fish farming.

To make this web application is easier to use.

To preserve the description in each separate pond.

To preserve the description in each individual fish.

To add many fish farming features to the system.

To fuse the agricultural and ICT field together.

To enhance and speed up the agricultural economy.

To make the company processes easier.

To ensure the security of the system.

These all are the main objectives I wish to fulfill.

1.4 Expected Outcome

Those are the outcomes we will get at the end of this project.

- A pond owner can easily save all the data of his pond in under this web application.
- Using this web application will reduce both time and cost.
- A pond owner or a user can use this application from anywhere.
- Data accuracy will be increased. Overwritten data will be fresh as there is no paper and pen.
- Time efficiency will be increased. It is easier to type than write.
- The agro-based economy will speed up by using the system.

I expect these results at the end of this project.

1.5 Report Layout

This is started in the format of the report, how this report format was created?

Basically, I worked on four chapters here and they are...

In “Chapter 1” Introduction:

Chapter number one is mentioned the introduction, motivation, objectives, and expected outcome of the project have been discussed which was followed by the report layout later.

In “Chapter 2” Design Specification:

Chapter number two is mentioned the project front-end and back-end design specifications.

In “Chapter 3” Overall Implementation:

Chapter number three is mentioned my overall implementation at the time of the project. Here is what I did to make this whole project.

In “Chapter 4” Conclusion and Future Scope:

Chapter number four is mentioned the future work of this web-based project and the conclusion of this project.

CHAPTER 2

DESIGN SPECIFICATION

Here is a sample of my design in this system. It has been explained that I have applied and implemented all the things and technologies to complete this application. Here I have demonstrated how it is tested after presenting my application system.

2.1 Front-end or UI Design

The regular front-end or UI worked on the introduction layer. It outlined to the user it is just a best approach to interact with our framework. Front-end or UI configuration also play a fundamental role in the user experience of the user. The main objectives of planning a site or application are that how user effectively contact with the UI for their essential option. For instance, from Wikipedia or the assault overflow application which is jump to: navigation, search, show the default vital choice that the majority of the client needed. Front-end or UI advancement also called customer side or client site development is the act of provenance default. The developers or designers make constitutive segments and highlights that are by implication entranced by a user through a front-end application or framework.

For Front-end or UI design what we need:

- Need knowledge about information of Google material design
- Need a well review manager.
- Has to knowledge of Bootstrap, MD Bootstrap.
- About the knowledge of HTML, CSS or more points are required

2.2 Interaction Design and UX

For assuring a better user experience, on 19 August 2015 bootstrap announces a new version for web and mobile app development which is called Bootstrap 4. Bootstrap's original name is Twitter Blueprint. Bootstrap is a process-oriented open source and open framework. Anybody can learn that what ought to improve UX. How the client can connect to this design or UI, implement the exhibition and practice.

2.3 Back-end Design

The back-end is a machine that the client never sees and the client has nothing to do with the back-end, yet it's continually running out of sight. Back-end connected with database for store data. The back-end is the code that runs on the server, control requests from the client, back end also contains the logic. There one type of back-end service for web-application which is an online backend system. And we develop this back-end system using python language and the Django framework. Most of the developers prefer python because the huge of resource of the python framework for web development. Shown in figure 2.1.

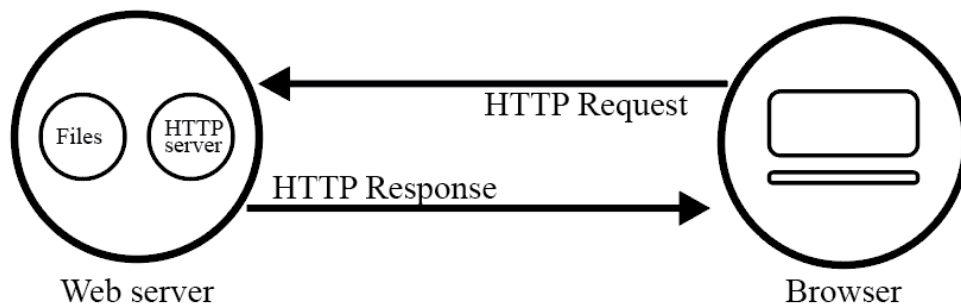


Fig – 2.1 Connect Server to Browser

2.3.1 PHP Laravel

Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.

Laravel offers a rich set of functionalities that incorporates the basic features of PHP frameworks like Code Igniter, Yei and other programming languages like Ruby on Rails. Laravel has a very rich set of features that will boost the speed of web development.

If I familiar with Core PHP and Advanced PHP, Laravel will make your task easier. It saves a lot of time if I am planning to develop a website from scratch. Moreover, a website built in Laravel is secure and prevents several web attacks.

2.3.2 Database

MySQL, pronounced either "My S-Q-L" or "My Sequel," is an open source relational database management system. It is based on the structure query language (SQL), which is used for adding, removing, and modifying information in the database. As shown in figure no 2.2.

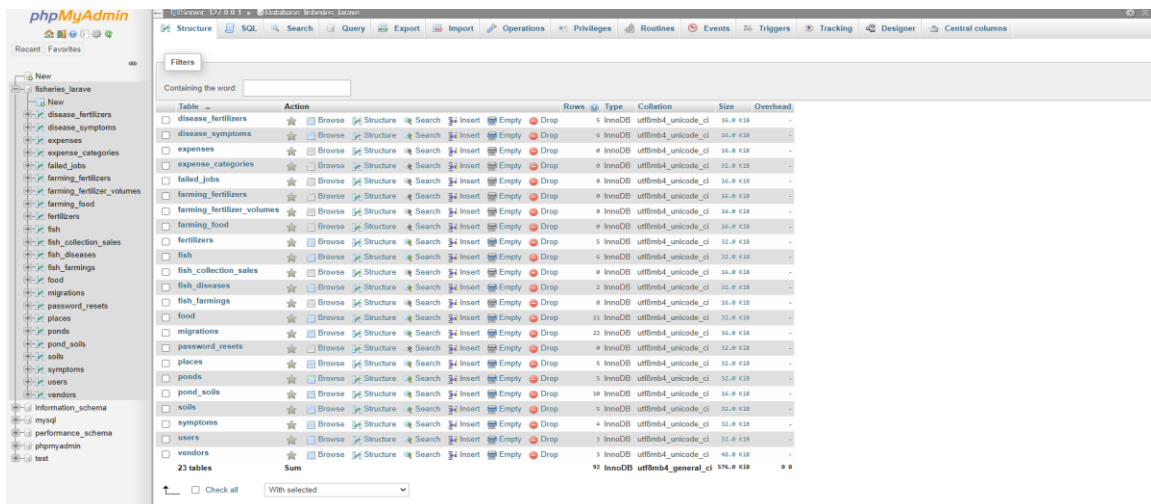


Figure 2.2 Database

2.4 Implementation Requirements

- ❖ HTML 5
- ❖ CSS3
- ❖ Bootstrap
- ❖ JavaScript
- ❖ jQuery
- ❖ MySQL
- ❖ PHP Laravel
- ❖ git

CHAPTER 3

OVERALL IMPLEMENTATION

3.1 Fisheries Management Web App

The Fisheries management is an online based web application that help an organization to manage their fish farming. It helps the organization to keep all the necessary data to maintain a sustainable fisheries management. Through data base authorities can access any kind of data to do rescuers for better business and organization management.

3.1.1 Overview

This is my first ever project on fisheries organization with the help of Mondol Fisheries & Agro. I tried my level best to implement all the necessary data in this project. The things to learn to create this technology HTML, CSS, JavaScript, Bootstrap, PHP Larval and many programming language. All though I was given a short period of time for the COVID-19 pandemic I had to do a lot of hard work on a regular basis on this project. By implementing this web application any Agro Organization can manage their fisheries business easily but preciously.

3.1.2 Technologies

Here I use for web Front End and Back End those language

- ❖ HTML5
- ❖ CSS3
- ❖ Bootstrap
- ❖ JavaScript
- ❖ jQuery
- ❖ MySQL
- ❖ PHP Laravel
- ❖ git

3.1.3 Tools

- ❖ Windows 10
- ❖ XAMPP
- ❖ Code editor

3.1.4 Launch Page

All the assigned admins can access to this web app by logging in with their user ID and Password. As shown in figure 3.1.

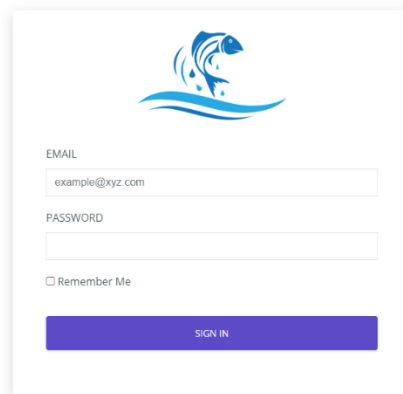


Figure – 3.1 Launch Page

After this page arrives, the main admin of the organization or those who will be given access will be able to go to the next page by logging in.

3.2 Dashboard

After logging in admin will redirect to this page. This page shows an overall summary of the organization. As shown in figure 3.2

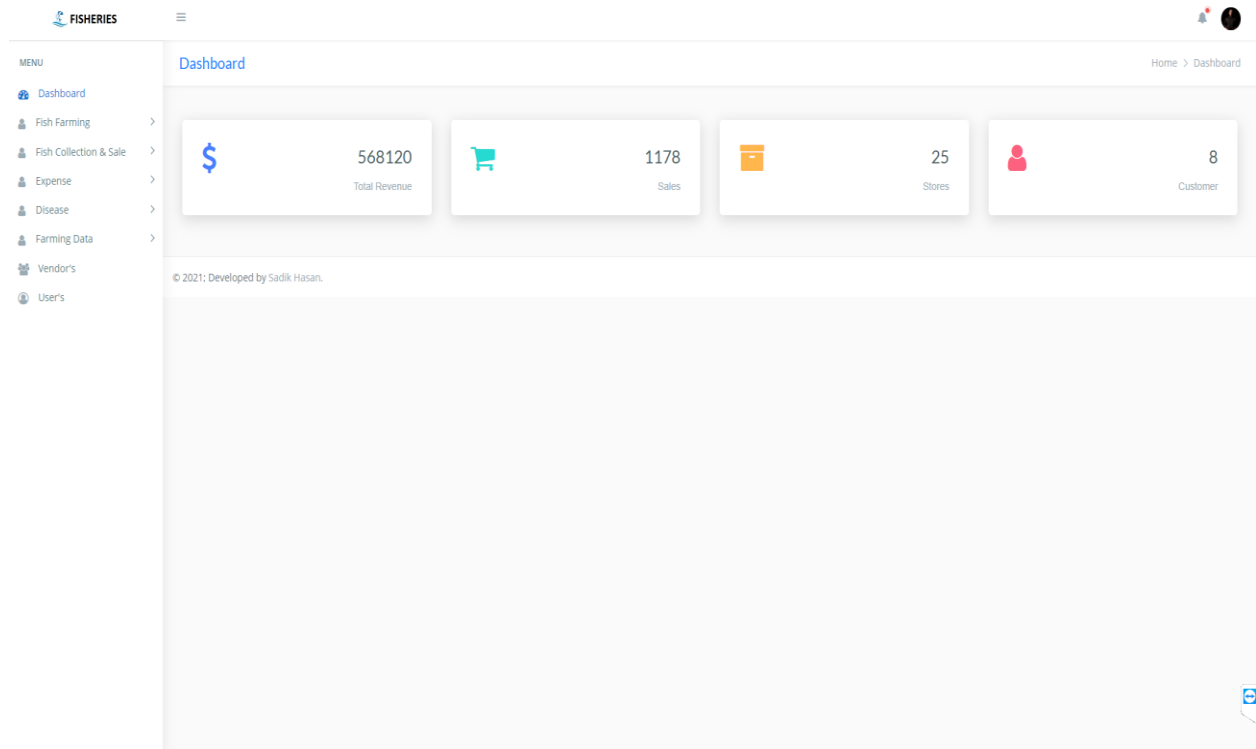


Figure – 3.2 Dashboard

After logging in, we will redirect the dashboard. Where we will see some menus and dashboard summary like as Fish Farming, Fish Collection & Sale, Expense, Disease, Farming Data, Vendor's and User's.

3.2.1 Overview

When the launch screen is displayed, the app is on a static screen when the app is loaded. As we can see in the dashboard summary Total Revenue, Sales, Stores and Customer. From here we can observe our summary properly. After Once this page arrives we will be able to work with the home page. I've only worked here at Fisheries Disease.

3.2.2 Technologies

When I got to know about the project I used GitHub and Programming Community BD to use latest coding languages techniques to implement all the necessary things.

- ❖ HTML
- ❖ CSS
- ❖ JavaScript
- ❖ Bootstrap
- ❖ Php
- ❖ MySQL

3.2.3 Tools

- ❖ Windows
- ❖ XAMPP
- ❖ Code Editor

3.3 Fisheries Management Disease Details

A disease can harm any type of organism. Even a disease can harm an organism and push it to death. In the same way, there can be various diseases of fish that can be harmed. The treatment of that organism is based on the symptoms of a particular disease. In this part, I have shown the diagnosis of fish and its cure.

3.3.1 Create Disease

We can see under Create Disease Option Select Fish, Disease Name, Select Symptoms, Symptoms Description, Select Fertilizer, and Solution Description. Which we have to fill-up and then Click submit for complete the Create Disease option. Fig 03 shows the Create Disease option. As shown in figure 3.3

Create Disease Disease > List > Create

Select Fish *

Disease Name *

Select Symptoms *

Symptoms Description

Select Fertilizer *

Fertilizer	Quantity	Volume	Mixer	Description	+
<input type="text"/>					

Solution Description

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Figure – 3.3 Create Disease

We can see under Create Disease Option Select Fish, Disease Name, Select Symptoms, Symptoms Description, Select Fertilizer, and Solution Description. Which we have to fill-up and then Click submit for complete the Create Disease option. Fig 03 shows the Create Disease option.

3.3.2 Disease List

Here we see the PDF option, Search option and created disease list. We have already made a list of the diseases. Here we can find out about the diseases of the fish through the search option. As shown in fig 3.4

Disease List Disease > List

Create New Disease PDF

Show 10 entries Search: _____

#	Fish	Disease Name	Symptoms	Fertilizers	Action
1	Labeo rohita(Rui Fish)	Bacterial infection (Aeromonas, Pseudomonas)	TATTERED FINS, TAIL SKIN SORES SWOLLEN ABDOMEN	ISOLATE SICK FISH & ANTIBIOTICS	+ ?
2	Catla catla (Catla Fish)	Yellow Eye Disease	SKIN SORES SWOLLEN ABDOMEN BULGING EYES, RED FINS, SKIN	EURIA FERTILIZER TRIPLE SUPER PHOSPHATE (TSP) PHOSPHORUS POTASSIUM PERMANGANATE	+ ?

Showing 1 to 2 of 2 entries Previous 1 Next

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Figure – 3.4 Disease List

Pond owner can download the disease list file from here through the PDF option. Here we attach a screen shot for showing our pdf file. As shown in figure no 3.5

Disease List				
#	Fish Name	Disease Name	Symptoms	Fertilizers
1	Labeo rohita(Rui Fish)	Bacterial infection (Aeromonas, Pseudomonas)	Tattered fins, tail; Skin sores; Swollen abdomen;	Isolate sick fish & antibiotics;
2	Catla catla (Catla Fish)	Yellow Eye Disease	Skin sores; Swollen abdomen; Bulging eyes, Red fins, skin;	Euria Fertilizer; Triple Super Phosphate (TSP); Phosphorus; Potassium Permanganate;

Figure – 3.5 Disease PDF

3.3.3 Fisheries Management Symptoms Details

There may be different types of symptoms to determine the disease of fish. Here we need to find those symptoms and list them. So that by looking at the list, it can be said what disease the fish has.

3.3.4 Create Symptoms

Inside the Create Symptom we can list the name of the fish and the name of its disease symptoms. Here we can also take measures to prevent fish diseases symptoms. We can move from one place to another by looking at the list of fish symptoms. Fig 06 shows Create symptoms option. As shown in figure no 3.6

Create Symptoms

Symptoms > List > Create

Name *

Description

Submit Back

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Figure – 3.6 Create Symptoms

Submit with the name and description of the fish inside the Create Symptom option.

3.3.5 Symptoms List

Here we can find any ongoing symptoms that the fishes having from this menu we can easily find out the specific disease and therefore take necessary steps for prevention. As shown in figure no 3.7

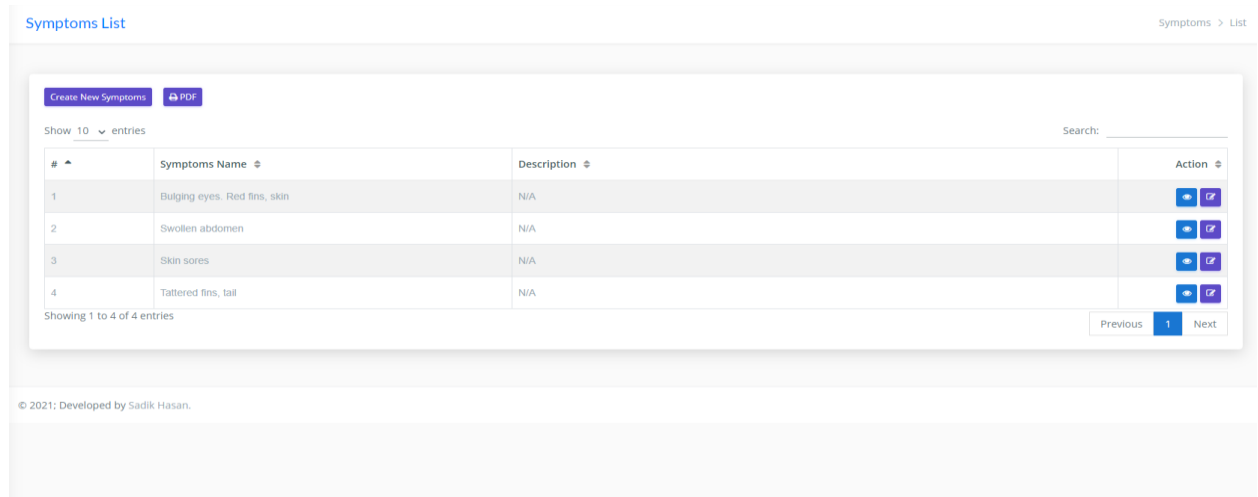


Figure – 3.7 Symptoms List

Pond owner can download all the symptoms data by clicking PDF option. As shown in figure no 3.8

Symptoms List		
#	Name	Description
1	Tattered fins, tail	N/A
2	Skin sores	N/A
3	Swollen abdomen	N/A
4	Bulging eyes. Red fins, skin	N/A

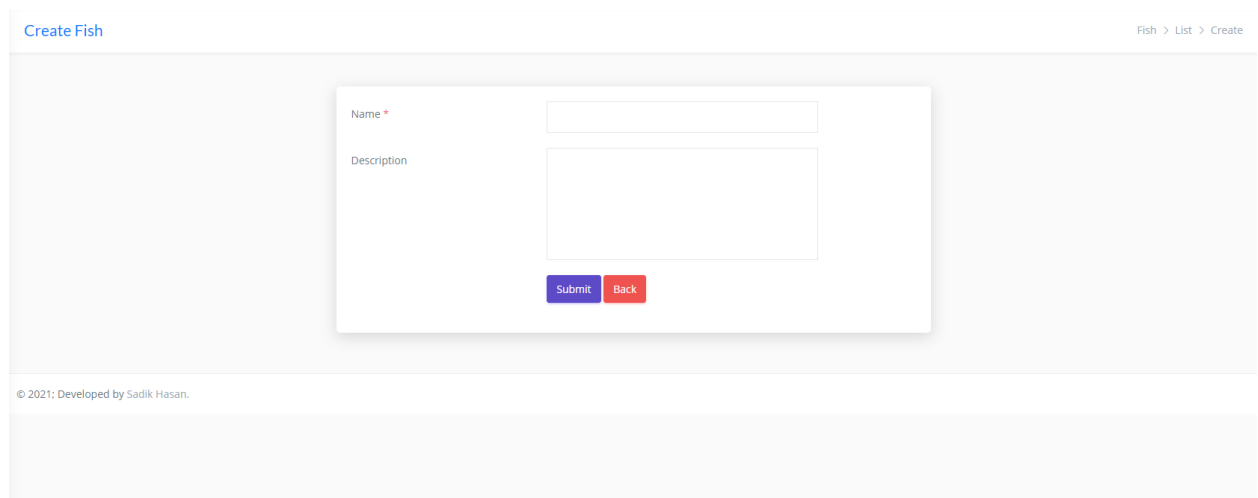
Figure – 3.8 Symptoms List PDF

3.4 Fisheries Management Farming Data details

Farming data is very important for the organization to keep tracking all the ongoing activities in their fisheries. In this segment all the necessary data like Fish, Soil, Pond, Food, Fertilizer, and Market/Place.

3.4.1 Create Fish

Here the owner of the pond can describe what kind of fish he wants to cultivate. This is why fish Name and Description have been used here. As shown in fig 3.9



The screenshot shows a web form titled "Create Fish". At the top left, there is a link "Create Fish" and at the top right, a breadcrumb "Fish > List > Create". The form itself is a white box with a light gray border. It contains two input fields: "Name *" (with an asterisk indicating it is required) and "Description". Below these fields are two buttons: a blue "Submit" button and a red "Back" button. At the bottom left of the form area, there is a small copyright notice: "© 2021: Developed by Sadik Hasan."

Figure – 3.9 Create Fish

3.4.2 Fish List

Here pond owner will find a list of which fishes are being cultivating in the fisheries ponds. Pond owner can easily edit the name and description of the fish from the edit option. As shown in figure no 3.10

Create New Fish PDF

Show 10 entries Search: _____











#	Fish Name	Description	Action
1	Katla fish	Katla is va good fish for health.	 
2	Oreochromis niloticus (Tilapia Fish)	Tilapia fish do mainly freshwater fish inhabit shallow streams, ponds, rivers, and lakes, and less commonly found living in brackish water. Historically, they have been of major importance in artisanal fishing in Africa, and they are of increasing importance in aquaculture and aquaponics. Tilapia can become a problematic invasive species in new warm-water habitats such as Australia,[3] whether deliberately or accidentally introduced, but generally not in temperate climates due to their inability to survive in cold water.	 
3	04. Fish Name: Hypophthalmichthys molitrix (Silver carp)	The silver carp (Hypophthalmichthys molitrix) is a species of freshwater cyprinid fish, a variety of Asian carp native to China and eastern Siberia. Although a threatened species in its natural habitat, it has long been cultivated in China. By weight more silver carp are produced worldwide in aquaculture than any other species of fish except for the grass carp. Silver carp are usually farmed in polyculture with other Asian carp, or sometimes with catla or other fish species. The silver carp reaches an average length of 60–100 cm (24–39 in) with a maximum length of 140 cm (55 in) and weight of 50 kg (110 lb).	 
4	Cirrhinus cirrhosis (Mrigal Carp)	The mrigal carp is known as the white carp, is a species of ray-finned fish in the carp family. Native to streams and rivers in India, the only surviving wild population is in the Cauvery River, leading to its IUCN rating as vulnerable. It is widely aqua farmed and introduced populations exist outside its native range. It reaches a maximum length of 1 m (3.3 ft).	 
5	Catla catla (Catla Fish)	Catla, also known as the major South Asian carp, is an economically important South Asian freshwater fish in the carp family Cyprinidae. It is native to rivers and lakes in northern India, Bangladesh, Myanmar, Nepal, and Pakistan, but has also been	 

Figure – 3.10 Fish List

Pond owner can download the fish list by going to the PDF option. As shown through figure no 3.11

Fish List		
#	Name	Description
1	Labeo rohita(Rui Fish)	The rui fish is a large, silver-colored fish of typical cyprinid shape, with a conspicuously arched head. Adults can reach a maximum weight of 45 kg (99 lb) and maximum length of 2 m (6.6 ft) but average around 12 m (1.6 ft).
2	Catla catla (Catla Fish)	Catla, also known as the major South Asian carp, is an economically important South Asian freshwater fish in the carp family Cyprinidae. It is native to rivers and lakes in northern India, Bangladesh, Myanmar, Nepal, and Pakistan, but has also been introduced elsewhere in South Asia and is commonly farmed.
3	Cirrhinus cirrhosis (Mrigal Carp)	The mrigal carp is known as the white carp, is a species of ray-finned fish in the carp family. Native to streams and rivers in India, the only surviving wild population is in the Cauvery River, leading to its IUCN rating as vulnerable. It is widely aqua farmed and introduced populations exist outside its native range. It reaches a maximum length of 1 m (3.3 ft).
4	04. Fish Name: Hypophthalmichthys molitrix (Silver carp)	The silver carp (Hypophthalmichthys molitrix) is a species of freshwater cyprinid fish, a variety of Asian carp native to China and eastern Siberia. Although a threatened species in its natural habitat, it has long been cultivated in China. By weight more silver carp are produced worldwide in aquaculture than any other species of fish except for the grass carp. Silver carp are usually farmed in polyculture with other Asian carp, or sometimes with catla or other fish species. The silver carp reaches an average length of 60–100 cm (24–39 in) with a maximum length of 140 cm (55 in) and weight of 50 kg (110 lb).
5	Oreochromis niloticus (Tilapia Fish)	Tilapia fish do mainly freshwater fish inhabit shallow streams, ponds, rivers, and lakes, and less commonly found living in brackish water. Historically, they have been of major importance in artisanal fishing in Africa, and they are of increasing importance in aquaculture and aquaponics. Tilapia can become a problematic invasive species in new warm-water habitats such as Australia,[3] whether deliberately or accidentally introduced, but generally not in temperate climates due to their inability to survive in cold water.
6	Katla fish	Katla is va good fish for health.

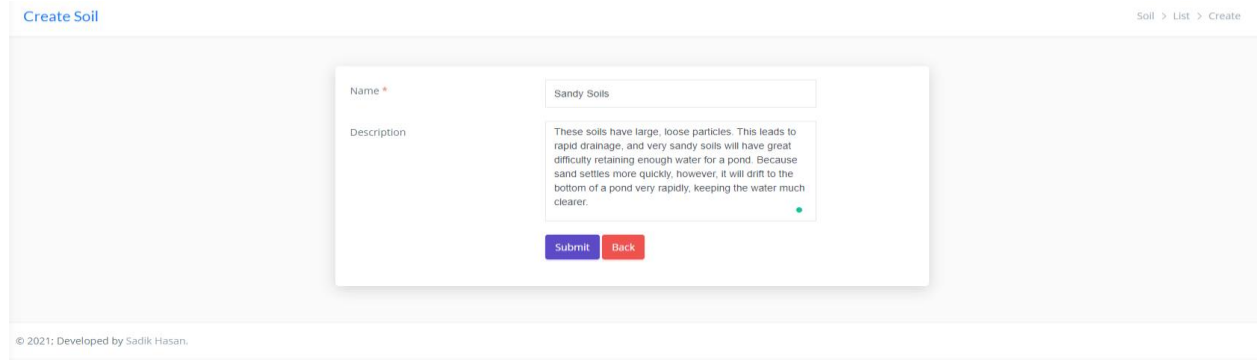
Figure – 3.11 Fish list PDF

3.4.3 Soil

Overall, the importance of soil on the water of this reservoir and directly and indirectly in terms of fish food production, fish breeding, breeding, fish growth, taste, and smell is immense. Fish production is significantly improved for the soil. The nature of the soil and its structure depends on a variety of factors.

3.4.4 Create Soil

A Pond owner should look at the soil of the pond before cultivating a pond. This is a very important issue for fish farming. In the interest of understanding the owner of the pond, the name of the soil and its description are given here. Shown in fig 3.12



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Figure – 3.12 Create Soil

3.4.5 Soil List

Here is a list of the types of soil and a description of soil. Seeing that, the pond owner can understand what kind of soil is it. Shown in fig 3.13

#	Soil Name	Description	Action
1	Sand soils	Silty soils have medium-sized particles and retain water much better than sandy soils. When these soils are saturated with water, however, they move and flow more easily, increasing erosion and causing greater buildup on the bottom of a pond or breakdown of the pond's edges.	
2	Sandy	These soils have large, loose particles. This leads to rapid drainage, and very sandy soils will have great difficulty retaining enough water for a pond. Because sand settles more quickly, however, it will drift to the bottom of a pond very rapidly, keeping the water much clearer.	
3	Silty soils	N/A Silty soils have medium-sized particles and retain water much better than sandy soils. When these soils are saturated with water, however, they move and flow more easily, increasing erosion and causing greater buildup on the bottom of a pond or breakdown of the pond's edges.	
4	Clayey	Clay is composed of very fine, densely packed particles, and it compacts well to hold water without losing large volumes to drainage. Because these particles are so small, however, they stay suspended in the water much longer, leading to darker or murkier water.	
5	Clay	N/A	

Figure – 3.13 Soil List

Pond owner downloads the soil list file from here through the PDF option. Here we attach a screenshot for showing our PDF file. As shown in fig 3.14

Soil List		
#	Name	Description
1	Clay	N/A
2	Clayey	Clay is composed of very fine, densely packed particles, and it compacts well to hold water without losing large volumes to drainage. Because these particles are so small, however, they stay suspended in the water much longer, leading to darker or murkier water.
3	Silty soils	N/A Silty soils have medium-sized particles and retain water much better than sandy soils. When these soils are saturated with water, however, they move and flow more easily, increasing erosion and causing greater buildup on the bottom of a pond or breakdown of the pond's edges.
4	Sandy	These soils have large, loose particles. This leads to rapid drainage, and very sandy soils will have great difficulty retaining enough water for a pond. Because sand settles more quickly, however, it will drift to the bottom of a pond very rapidly, keeping the water much clearer.
5	Sand soils	Silty soils have medium-sized particles and retain water much better than sandy soils. When these soils are saturated with water, however, they move and flow more easily, increasing erosion and causing greater buildup on the bottom of a pond or breakdown of the pond's edges.

Figure – 3.14 Soil list PDF

3.4.6 Pond

An inland body of standing water that is smaller than a lake. Natural ponds form in small depression and are usually shallow to support rooted vegetation across most or all of their areas.

3.4.7 Create Pond

The size of the pond is an important factor in fish farming. Because of the total amount of water, the total volume will depend on the number of fish, etc. You will benefit or lose by farming fish. The size of the pond can be used to determine how much medicine or food or even what type of food should be applied, how much water, how many fish, etc. Shown through fig no 3.15

The screenshot shows a web application interface for creating a pond. The form is titled "Create Pond" and is located within a navigation context of "Pond > List > Create". The form fields are as follows:

Field Name	Value / Content
Name *	<input type="text"/>
Pond Width *	30 Feet/Meter
Pond Height *	100 Feet/Meter
Water Level *	Center: 10 Feet/Meter, Around: 3-5 Feet/Meter
Soil *	Please Select
Description	<input type="text"/>

At the bottom of the form, there are two buttons: "Submit" (blue) and "Back" (red). The footer of the page reads "© 2021; Developed by Sadik Hasan."

Figure – 3.15 Create Pond

3.4.8 Pond List

Here are the ponds list we created in the previous session. The owner of the pond can understand how many ponds there are listed. And from here pond owner can find out the name of the pond, how many feet height, and width for each and every pond, how many feet, and how much water is in the pond. Shown through fig no .316

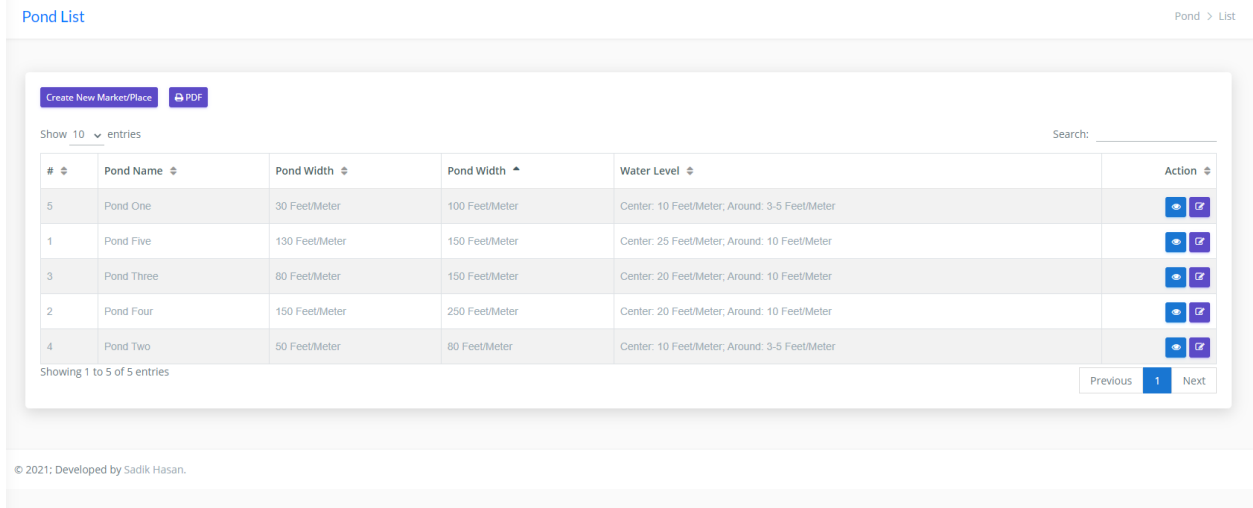


Figure – 3.16 Pond List

Pond owner can download the pond list file from here through the PDF option. Here we attach a screen shot for showing our pdf file. As shown in fig 3.17

Pond List						
#	Pond Name	Pond Width	Pond Height	Water Level	Soil	Description
1	Pond One	30 Feet/Meter	100 Feet/Meter	Center: 10 Feet/Meter; Around: 3-5 Feet/Meter	Clay; Clayey;	N/A
2	Pond Two	50 Feet/Meter	80 Feet/Meter	Center: 10 Feet/Meter; Around: 3-5 Feet/Meter	Silty soils; Sandy; Sand soils;	N/A
3	Pond Three	80 Feet/Meter	150 Feet/Meter	Center: 20 Feet/Meter; Around: 10 Feet/Meter	Clay; Sand soils;	N/A
4	Pond Four	150 Feet/Meter	250 Feet/Meter	Center: 20 Feet/Meter; Around: 10 Feet/Meter	Clay;	N/A
5	Pond Five	130 Feet/Meter	150 Feet/Meter	Center: 25 Feet/Meter; Around: 10 Feet/Meter	Clay; Silty soils;	N/A

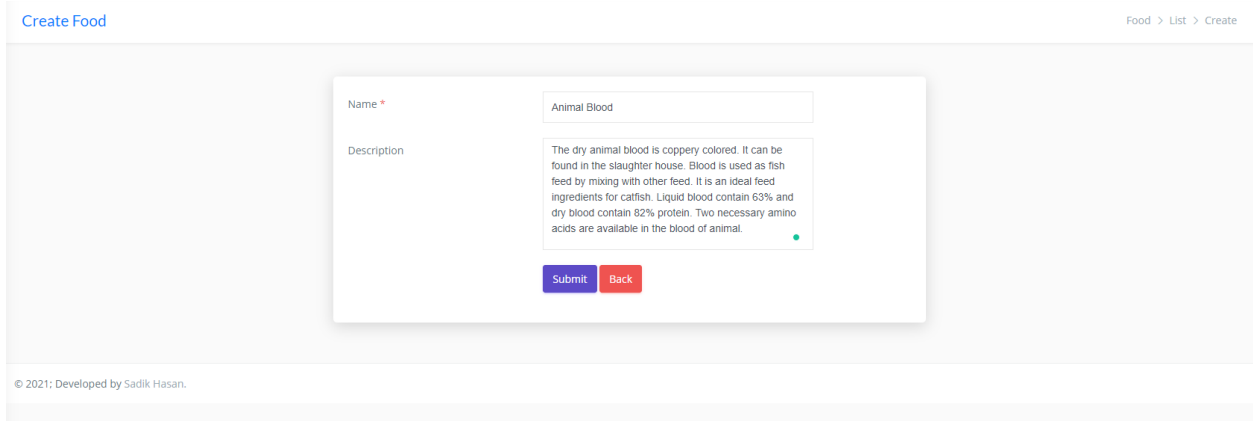
Figure – 3.17 Pond List PDF

3.4.9 Food

The ingredients of fish food depend on whether your fish are omnivores, herbivores or carnivores, but common ingredients include shrimp meal, fish meal, squid meal, spirulina, and earthworms. The ingredients found in fish food will vary depending on the quality of the feed as well as the type of fish you have.

3.4.10 Create food

The Create Food option gives the name of the fish and a description of the food that will be given to the fish. Here will be able to list it in the description. Shown through fig no 3.18

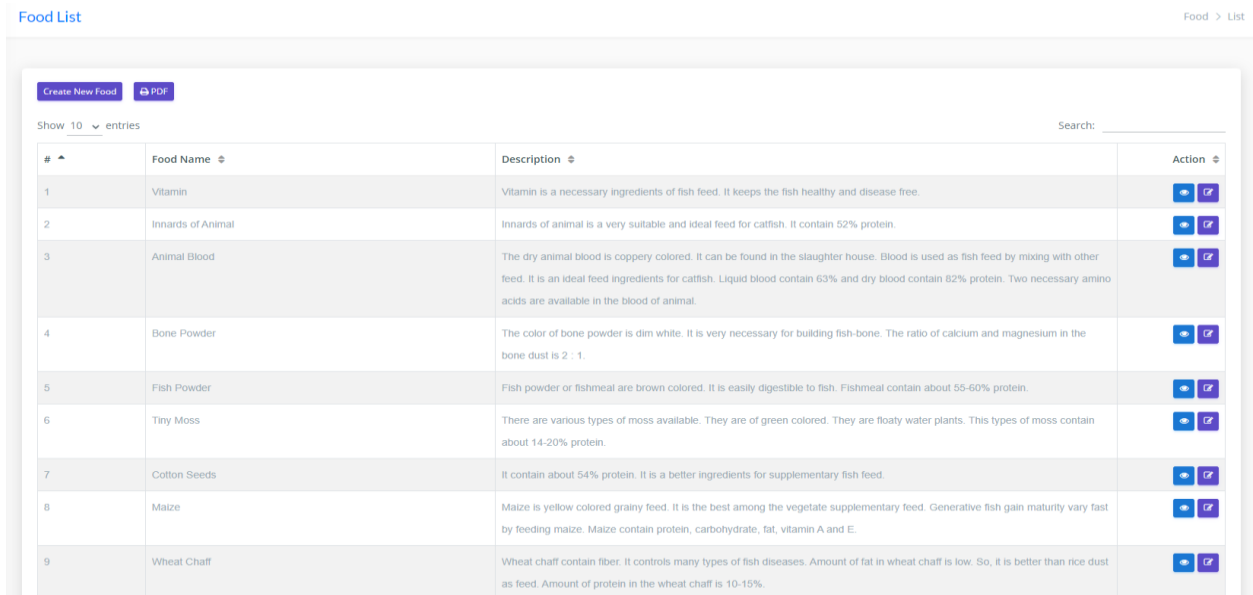


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Figure – 3.18 Create Food

3.4.11 Food List

A pond owner will see the food list here and he will be able to understand what kind of food is needed for what type of fish. Shown through fig no 3.19



#	Food Name	Description	Action
1	Vitamin	Vitamin is a necessary ingredients of fish feed. It keeps the fish healthy and disease free.	
2	Innards of Animal	Innards of animal is a very suitable and ideal feed for catfish. It contain 62% protein.	
3	Animal Blood	The dry animal blood is coppery colored. It can be found in the slaughter house. Blood is used as fish feed by mixing with other feed. It is an ideal feed ingredients for catfish. Liquid blood contain 63% and dry blood contain 82% protein. Two necessary amino acids are available in the blood of animal.	
4	Bone Powder	The color of bone powder is dim white. It is very necessary for building fish-bone. The ratio of calcium and magnesium in the bone dust is 2 : 1.	
5	Fish Powder	Fish powder or fishmeal are brown colored. It is easily digestible to fish. Fishmeal contain about 55-60% protein.	
6	Tiny Moss	There are various types of moss available. They are of green colored. They are floaty water plants. This types of moss contain about 14-20% protein.	
7	Colton Seeds	It contain about 54% protein. It is a better ingredients for supplementary fish feed.	
8	Maize	Maize is yellow colored grainy feed. It is the best among the vegetate supplementary feed. Generative fish gain maturity vary fast by feeding maize. Maize contain protein, carbohydrate, fat, vitamin A and E.	
9	Wheat Chaff	Wheat chaff contain fiber. It controls many types of fish diseases. Amount of fat in wheat chaff is low. So, it is better than rice dust as feed. Amount of protein in the wheat chaff is 10-15%.	

Figure – 3.19 Food List

A pond owner can download the food list by going to the PDF option. As shown through fig no 3.20

Food List		
#	Name	Description
1	Rice Bran	Rice dust is like powder. It is very common and cheap. It is a better fish feed. Rice dust contain about 10-14% of protein. Rice dust also contain vitamin B1, B2, B6 and small quantity of enzyme.
2	Mustard Cake	Mustard cake can be found in small sized pieces. It is slightly yellow colored. Mustard cake has to served to fish by mixing with other food. Fat may gather in the liver of fish for long time consuming of cake. As a result the fish may die. Mix maximum 40% of cake in the fish feed. But don't use dry cake more than 20%. Mustard cake contain 30-32% protein. It also contain a high rate of fat.
3	Wheat Chaff	Wheat chaff contain fiber. It controls many types of fish diseases. Amount of fat in wheat chaff is low. So, it is better than rice dust as feed. Amount of protein in the wheat chaff is 10-15%.
4	Maize	Maize is yellow colored grainy feed. It is the best among the vegetate supplementary feed. Generative fish gain maturity vary fast by feeding maize. Maize contain protein, carbohydrate, fat, vitamin A and E.
5	Cotton Seeds	It contain about 54% protein. It is a better ingredients for supplementary fish feed.
6	Tiny Moss	There are various types of moss available. They are of green colored. They are floaty water plants. This types of moss contain about 14-20% protein.
7	Fish Powder	Fish powder or fishmeal are brown colored. It is easily digestible to fish. Fishmeal contain about 55-60% protein.
8	Bone Powder	The color of bone powder is dim white. It is very necessary for building fish-bone. The ratio of calcium and magnesium in the bone dust is 2 : 1.
9	Animal Blood	The dry animal blood is coppery colored. It can be found in the slaughter house. Blood is used as fish feed by mixing with other feed. It is an ideal feed ingredients for catfish. Liquid blood contain 63% and dry blood contain 82% protein. Two necessary amino acids are available in the blood of animal.
10	Innards of Animal	Innards of animal is a very suitable and ideal feed for catfish. It contain 52% protein.
11	Vitamin	Vitamin is a necessary ingredients of fish feed. It keeps the fish healthy and disease free.

Figure – 3.20 Food List PDF

3.4.12 Fertilizer

Fertilizers are chemical substances supplied to the crops or anything to increase their productivity. These are used by the farmers daily to increase crop yield. The fertilizers contain the essential nutrients required by the plants, including nitrogen, potassium, and phosphorus.

3.4.13 Create Fertilizer

A pond owner may need chemical fertilizers to cultivate his pond. That is why here we have given the name of chemical fertilizer and its description and how to use it. As an example in the Create Fertilizer option, we have shown the name of a fertilizer and its description in short from fig 3.21

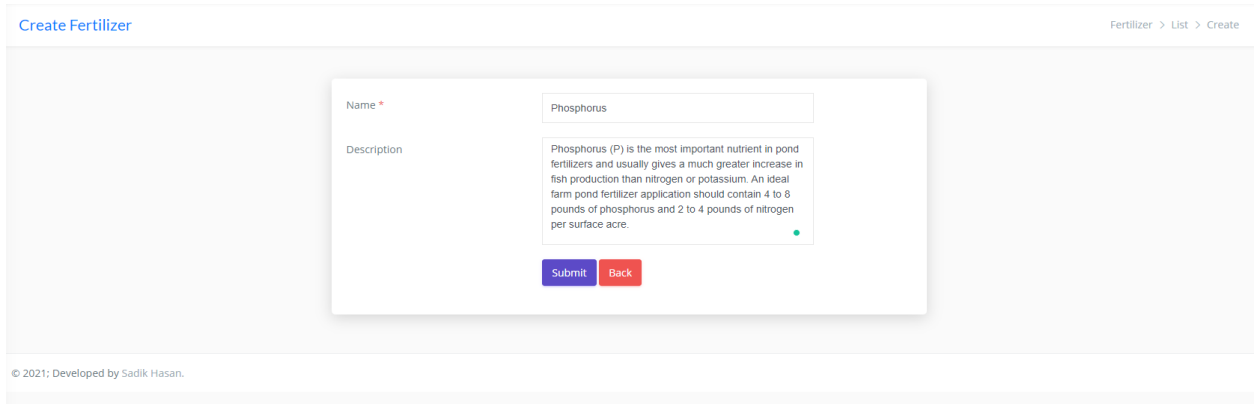


Figure – 3.21 Create Fertilizer

3.4.14 Fertilizer List

A pond owner will see the fertilizer list here and he will be able to understand what kind of fertilizer is needed for what type of fish or pond. Shown through fig no 3.22

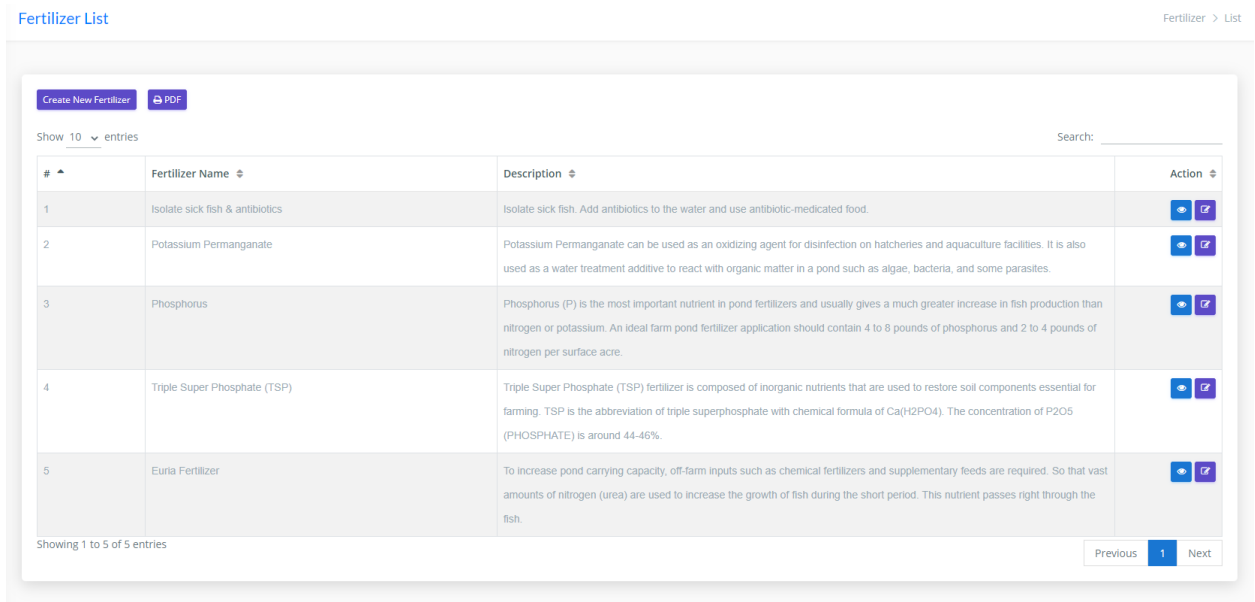


Figure – 3.22 Fertilizer List

A pond owner can download the fertilizer list by going to the PDF option. Shown through fig no 3.23

Fertilizer List		
#	Name	Description
1	Euria Fertilizer	To increase pond carrying capacity, off-farm inputs such as chemical fertilizers and supplementary feeds are required. So that vast amounts of nitrogen (urea) are used to increase the growth of fish during the short period. This nutrient passes right through the fish.
2	Triple Super Phosphate (TSP)	Triple Super Phosphate (TSP) fertilizer is composed of inorganic nutrients that are used to restore soil components essential for farming. TSP is the abbreviation of triple superphosphate with chemical formula of Ca(H ₂ PO ₄). The concentration of P ₂ O ₅ (PHOSPHATE) is around 44-46%.
3	Phosphorus	Phosphorus (P) is the most important nutrient in pond fertilizers and usually gives a much greater increase in fish production than nitrogen or potassium. An ideal farm pond fertilizer application should contain 4 to 8 pounds of phosphorus and 2 to 4 pounds of nitrogen per surface acre.
4	Potassium Permanganate	Potassium Permanganate can be used as an oxidizing agent for disinfection on hatcheries and aquaculture facilities. It is also used as a water treatment additive to react with organic matter in a pond such as algae, bacteria, and some parasites.
5	Isolate sick fish & antibiotics	Isolate sick fish. Add antibiotics to the water and use antibiotic-medicated food.

Figure – 3.23 Fertilizer List PDF

3.4.15 Market/Place

Before starting a business, a pond owner must first have an idea about the marketplace. Because the owner of the pond should know well where to sell the fish after cultivating the fish and this is a very important issue for a pond owner.

3.4.16 Create Market/Place


We have given the name, address and description of the marketplace to know about the marketplace on this page. Shown through fig no 3.24

Create Market/Place Market/Place > List > Create

Market Name *

Address *

Description



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Figure – 3.24 Create Market/Place

3.4.17 Create Market/Place

Here is a list of market places where the owner of the pond will sell his fish. Where market place names are identified, market addresses, and market description. As shown in fig 3.25

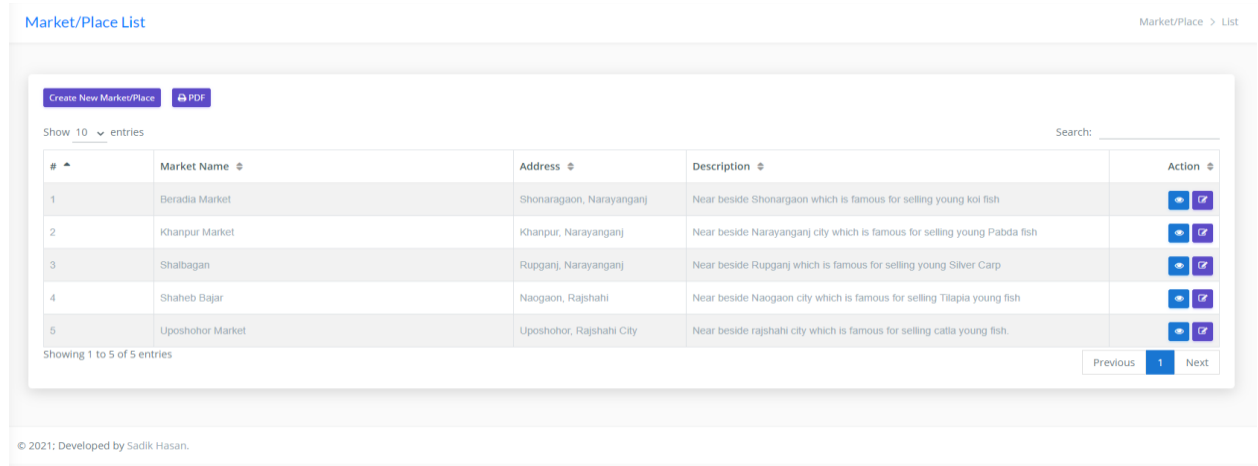


Figure – 3.25 Market/Place List

A pond owner can download the marketplace list by going to the PDF option. Shown through fig no 3.26

Place List			
#	Market/Place Name	Address	Description
1	Uposohor Market	Uposohor, Rajshahi City	Near beside rajshahi city which is famous for selling catla young fish.
2	Shaheb Bajar	Naogaon, Rajshahi	Near beside Naogaon city which is famous for selling Tilapia young fish
3	Shalbagan	Rugganj, Narayanganj	Near beside Rugganj which is famous for selling young Silver Carp
4	Khanpur Market	Khanpur, Narayanganj	Near beside Narayanganj city which is famous for selling young Pabda fish
5	Beradia Market	Shonaragaon, Narayanganj	Near beside Shonaragaon which is famous for selling young koi fish

Figure – 3.26 Market/Place List PDF

3.5 Vendor's

Vendors are known as a supplier, is an individual or company that sells goods or services to someone else in the economic production chain.

Vendors are a part of the supply chain: the network of all the individuals, organizations, resources, activities, and technology involved in the creation and sale of product, from the delivery of source materials from the supplier to the manufacturer, through to its eventual delivery to the end-user.

3.5.1 Create Vendor

Here the owner of the pond can add the vendors of his choice. Created here used for vendor's Name. Email, Phone and Address. After completing these, clicking on the submit option will create a vendor. Shown through fig no 3.27

The screenshot shows a web form titled "Create Vendor". The form has four input fields with red asterisks indicating they are required: "Name" (filled with "Md. Shuruj Ali"), "Email" (filled with "shuruj.ali15@gmail.com"), "Phone" (filled with "01558456709"), and "Address" (filled with "Ullapara, Sirajgonj"). Below the fields are two buttons: a blue "Submit" button and a red "Back" button. The page header includes "Create Vendor" on the left and "Vendor > List > Create" on the right. A footer at the bottom left reads "© 2021; Developed by Sadik Hasan."

Figure – 3.27 Create Vendor

3.5.2 Vendor List

Here is a list of vendors who have been previously created as vendors by the pond owner on the Create Vendor page. Pond owner can cancel any vendors from this list if he wishes. Shown through fig no 3.28

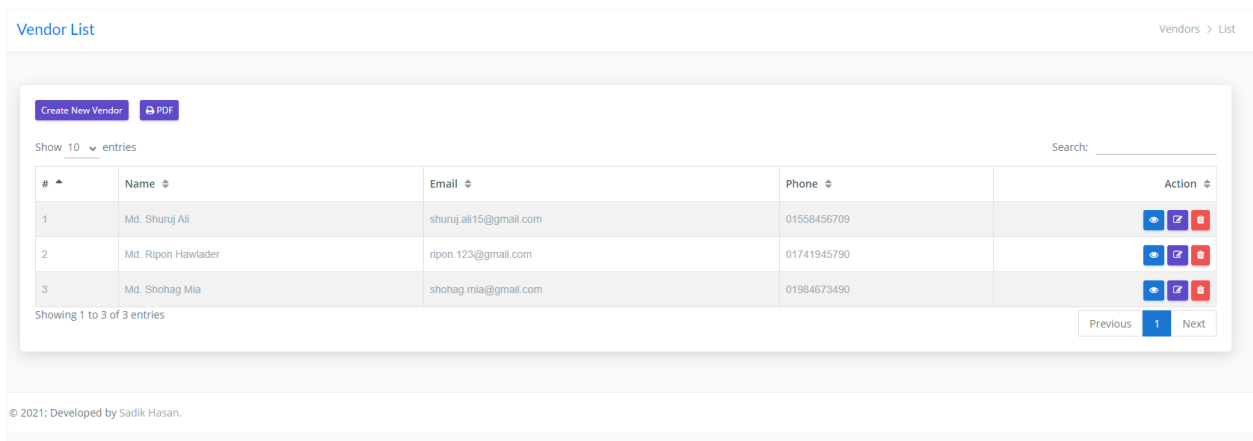


Figure – 3.28 Vendor List

A pond owner can download the vendor list by going to the PDF option. Shown through fig no 3.29

Vendors List				
#	Name	Email	Phone	Address
1	Md. Shohag Mia	shohag.mia@gmail.com	01984673490	Chashara, narayanganj
2	Md. Ripon Hawlader	ripon.123@gmail.com	01741945790	Majira, Shahjahanpur, Bogra
3	Md. Shuruj Ali	shuruj.ali15@gmail.com	01558456709	Koroitola, Rupganj, Narayanganj

Figure – 3.29 Vendor List PDF

3.6 User's

Only the owner of this organization has been granted access when creating this web application.

This Fisheries Management web application is an application that can be given access only he can use the application or login the web page. This is a proprietary web application since only the owner can use this application and only those who will be given login access will be able to use this application.

3.6.1 Create User

Here the owner of the pond or the admin of this Fisheries Management web application only can give access to another person and that could be as an admin or an employee. We use here to create user page Name, Email, Password, Confirm Password, and Role, the role has been used for selection that is whom I'm giving access is the admin or employee. As shown in fig 3.30

The screenshot shows a 'Create User' form with the following fields and values:

- Name: Salim Reza
- Email: sadmi.bd@gmail.com
- Password: [masked]
- Confirm Password: [masked]
- Role: Employee
- Terms & Conditions: I agree to the terms

Buttons: Submit, Back

Figure – 3.30 Create User

3.6.2 User List

On this page, we can see the details of everyone including the admin who is being given access. We will be able to easily find the users through the search option here. If we want to edit or delete any type of user, we can go to the action option and edit or delete. As shown in fig 3.31

The screenshot shows a 'User List' page with a table of users. The table has the following data:

#	Name	Email	Role	Action
1	Sadik Hasan	sadm.bd@gmail.com	Admin	[Edit] [Delete]
2	Mr Employee	employee@gmail.com	Employee	[Edit] [Delete]
3	Mr Admin	admin@gmail.com	Admin	[Edit] [Delete]

Additional features: 'Create New User' button, 'Show 10 entries', 'Search:' field, 'Showing 1 to 3 of 3 entries', 'Previous 1 Next' pagination.

Figure – 3.31 User List

CHAPTER 4

CONCLUSION AND FUTURE SCOPE

4.1 Discussion and Conclusion

The contribution of fish farming is very important in the food security and economic development of Bangladesh. Traditionally, Bengalis are associated with fisheries, which is also reflected in ancient proverbs as Bengali in fish and rice. Finally, our application ready to utilize. We expense a lot of time on this project work. This application is specially made for fish farmers. Fisheries Management is secure web-based application. Fisheries Management provide extra features for fish farmers. I have put a lot of benefits in this web application such as naming the different fish, naming the pond, naming the soil, naming the fertilizer etc. Here a fisherman will be able to record all the accounting, materials and many other things for his fish farming. This application if mine is very useful application for fish farming. I think this application will be very useful for every organization.

4.2 Future work and Further Development

Since I made it learning purpose project, I will be able to implement it in the future.

In this system, we will add more features and facilities. To make it more user friendly there have many future scopes. The further Extensions are given below:

- Improve User Interface (UI)
- Bring more futures
- Statement of account
- Fish farming
- Fish collection and sale
- Expense

REFERENCE

- [1] From frontendmasters, Available at << <https://frontendmasters.com/books/front-end-handbook/2019/> >>, last accessed on 20 January 2020 at 12.40 am.
- [2] From HTML5, Available at << <https://www.w3schools.com/html/> >>, last accessed on 28 February 2020 at 11.15 am.
- [3] From CSS3, Available at << <https://www.w3schools.com/css/> >>, last accessed on 25 February 2020 at 12.54 am.
- [4] From Bootstrap, Available at << <https://getbootstrap.com/> >>, last accessed on 26 March 2020 at 10.40 am.
- [5] From Bootstrap, Available at << https://www.w3schools.com/bootstrap4/bootstrap_get_started.asp >>, last accessed on 27 March 2020 at 01.30 pm.
- [6] From JavaScript, Available at << <https://www.w3schools.com/js/DEFAULT.asp> >>, last accessed on 29 March 2020 at 003.30 pm.
- [7] From jQuery, Available at << <https://www.w3schools.com/jquery/> >>, last accessed on 27 March 2020 at 01.30 pm.
- [7] From MySQL, Available at << <https://www.sattacademy.com/sql/index.php> >>, last accessed on 27 April 2020 at 9.45 am.
- [7] From PHP Laravel, Available at << <https://www.sattacademy.com/php/index.phppp> >>, last accessed on 01 May 2020 at 04:00 pm.
- [8] From git, Available at << <https://git-scm.com/> >>, last accessed on 8 May 2020 at 11.55 am.
- [9] From document, Available at << <https://www.careerjet.com.bd/fisheries-jobs.html> >>, last accessed on 15 May 2020 at 6.35 pm.
- [10] From document, Available at << <http://www.fao.org/3/y3427e/y3427e03.htm> >>, last accessed on 22 May 2020 at 7.40 am.
- [10] From document, Available at << <http://www.fao.org/3/y3427e/y3427e03.htm> >>, last accessed on 22 November 2020 at 7.40 am.

[10] From info, Available at << <https://www.wikihow.com/> >>, last accessed on 22 November 2020 at 4.40 pm.

[11] From guide, Available at << https://www.youtube.com/watch?v=0rgwa0d_u3k&ab_channel=Dr.AbbasVattoli >>, last accessed on 5 November 2020 at 5.40 pm.

[12] From Algorithm, Available at << <https://www.geeksforgeeks.org/> >>, last accessed on 12 November 2020 at 8.40 pm.

DEVELOPMENT OF FISHERIES MANAGEMENT SYSTEM

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