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Internship Project Report

On

Agro Trade Network

Submitted to

RAJIV GANDHI UNIVERSITY OF KNOWLEDGE AND TECHNOLOGIES RK VALLEY

in partial fulfilment of the requirement for the award of the Degree of

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE & ENGINEERING

Submitted by

M.Charitha R180247 M.Chandhini R180009 P.Amulya Sree R180651

Under the Guidance of

Ms. V.Sravani, Assistant Professor



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES

(catering the Educational Needs of Gifted Rural Youth of AP)

R.K Valley, Vempalli(M), Kadapa(Dist) – 516330

2020 - 2024



RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES

(A.P.Government Act 18of2008)

RGUKT-RK Valley

Vempalli, Kadapa, Andhrapradesh-516330.

CERTIFICATE OF PROJECT COMPLETION

This is to certify that I have examined the thesis entitled "Agro Trade Network" submitted by

M.Charitha(R180247),M.Chandini(R180009),P.Amulya Sree(R180651) under our guidance and supervision for the partial fulfilment for the degree of Bachelor of Technology in computer Science and Engineering during the academic session September 2022 – April 2023 at RGUKT-RKVALLEY.

Project Guide

Ms V.Sravani
Asst.Prof. in Dept of CSE,
RGUKT-RK Valley.

Head of the Department

Mr. N.Satyanandaram, Lecturer in Dept of CSE, RGUKT-RK Valle**y**

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(A.P.Government Act 18 of 2008)

RGUKT-RK Valley

Vempalli, Kadapa, Andhrapradesh-516330.

DECLARATION

We,M.charitha(R180247),M.Chandini(R180009),P.Amul yaSree(R180651) hereby declare that the project report entitled "Agro Trade Network" done under guidance of Ms.V.Sravani is submitted in partial fulfillment for the degree of Bachelor of Technology in Computer Science and Engineering during the academic session September 2022 – April 2023 at RGUKT-RK Valley. I also declare that this project is a result of our own effort and has not been copied or imitated from any source. Citations from any websites are mentioned in the references. To the best of my knowledge, the results embodied in this dissertation work have not been submitted to any university or institute for the award of any degree or diploma.

M.Charitha(R180247) M.Chandini(R180009) P.Amulyasree(R180651)

Date:

Place: RK Valley

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Last but not least I express my gratitude to my parents for their constant source of encouragement and inspiration for me to keep my morals high.

With Sincere Regards,

M.Charitha(R180247)

M.Chandini(R180009)

P.Amulyasree(R180651)

ABSTRACT

The Agro Trade Network is an innovative farm-based website designed to revolutionize the agricultural supply chain by eliminating intermediaries between farmers and buyers. This platform aims to empower both parties by providing a direct channel for trade and communication. Additionally, the website incorporates advanced machine learning technology to offer accurate weather forecasts, enhancing the decision-making process for farmers and buyers alike.

The primary objective of the Agro Trade Network is to establish a transparent and efficient trading system. By bypassing middlemen, farmers can showcase their produce directly to potential buyers, enabling fair pricing and reducing the economic burden caused by intermediaries. Buyers, on the other hand, gain access to a diverse range of farm products, giving them more choices and the ability to negotiate directly with farmers.

The project's main objective The objective of incorporating weather prediction into an agriculture-focused e-commerce website is to enhance the user experience and provide valuable insights to both farmers and customers. An agro trade network e-commerce platform is to facilitate efficient and transparent agricultural trade by connecting farmers, suppliers, distributors, and buyers in a digital marketplace

The project is devloped in the domain of web devlopment and Machine Learning. By using the frontend technologies and in the backend php by using Lampp we developed e-commerce portal.by using MachineLearning we have done weather prediction

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CHAPTER 1 INTRODUCTION

The Agro Trade Network is an innovative farm-based website designed to revolutionize the agriculture supply chain by eliminating intermediaries between farmers and buyers. This platform aims to empower both parties by providing a direct channel for trade and communication . Additionally,the website incorporates advanced machine learning technology to offer accurate weather forecasts,enhancing the decision-making process for farmers and buyers alike.

1.1 Motivation:

→ The motivation behind incorporating weather detection into an agro-tech network lies in its potential to revolutionize and optimize agricultural practices, leading to increased productivity, sustainability, and profitability

1.2 Feature

- **Scalability:** The System is designed to be scalabe and can handle large amounts of data with ease.
- **Security:** The System is designed with security in mind and all data is stored securely and encrypted to ensure data integrity and confidentiality. We have used the password strength analyzer to eradicate the access for the hackers by putting some specifications for the password field.

- **Images:**We live in a visual world and images are the most powerful way to inspire and transmit messages. They make a strong statement and will have a bigger impact on your website. Also, people interact more in social networking sites that has plenty of images. So it's safe to say that users will stay longer and interact more in a website that has lovely images.
- Weather Prediction: As the farmers are facing more crop failures due to the unpredictable weather, to Eradicate this issue In our website the farmer can predict the weather so that he can have the better idea about weather he can act accordingly.
- **Farmers Registeration:** As the farmers will login into the website and register here. Once the farmer registered into the website he can add the products and mentioning the price of the crop.
- User Account: Once user creates an account and buys
 the product by experiencing ease process in the website
 and he can add the products into his cart then proceed
 with billing process and he can get the product.
- User-friendly interface: The System provides userfriendly interface that allows decision-makers to access real-time data and DSS(Decision Support System) products easily.

Overall, the key features of this project make it a comprehensive Online Tourism Website that can assist decision makers in maked informed decisions regarding Online Tourism website.

CHAPTER 2

REQUIREMENT ANALYSIS

This project involved analyzing the design of a few applications so as to make the application more users friendly. To do so, it was really important to keep the navigations from one screen to the other well-ordered and at the same time reducing the amount of typing the user needs to do. This also includes maintaining the flow of the application.

2.1 Requirement Specification

2.1.1 Functional Requirements

User Registration and Authentication

- Weather prediction
- Farmer registeration
- User Account
- Payment Processing
- Security and Data Protection
- Databases to store persons details

2.1.2 Hardware Requirements

- Computer servers for data processing and storage
- Processor: A multi-core processor with a clock speed of at least 2.5 Ghz.
- RAM: At least 16 GB of RAM is recommended for running the system in production. However, the actual RAM requirements will depend on the amount of data being processed and the number of concurrent users accessing the system.
- Operating System: The System can any operating system that supports Docker containers. However, Linux-based operating systems are recommended for running the system in production.

- Server: A dedicated server is recommended for running the system in production. The server should have sufficient resources to handle the load generated by the system.
- Storage: The system requires a minimum of 500GB of storage for storing data. However, the actual storage requirements will depend on the amount of data being processed and the duration for which the data needs to be stored.
- Backup and Recovery: The system should be backed up regularly to ensure data integrity and availability. A backup solution should be implemented to ensure that the system can be quickly restored in case of data loss or system failure.

2.2 Technologies Used 2.2.1 HTML

It is a markup language for formatting and displaying web documents and web pages. It gives basic structure to the webpage without any stylling. HTML elements tell the browser how to display the content. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as Javascript for styling and functionality.

2.2.2 CSS

It gives styling for the web pages created by HTML.It gives look adn feel to the website.

2.2.2.1 Types of CSS

- Inline CSS (Using styles as attributes in html elements)
- Internal CSS (Including a separate style tag in html document)
- External CSS (Using external file for styling)

2.2.3 PHP

PHP (Hypertext Preprocessor) is a popular server-side scripting language used for web development. It is widely used to create dynamic and interactive web pages. PHP code is embedded within HTML, allowing developers to mix server-side processing with the presentation layer seamlessly.

2.2.4 BOOTSTRAP

Bootstrap is a CSS framework which helps in developig web pages very faster and with little efforts. Helps to customize the CSS properties. Used for developing responsive and mobile-first websites. Components like navabar, carouse, utility, cards, dropdowns, buttons etc.

2.2.5 **SQL**

SQL (Structured Query Language) is a standard language used to manage and manipulate relational databases. It provides a set of commands for performing various operations on data, such as querying, updating, inserting, and deleting records in a database.

2.2.6 **LAMPP**

LAMPP is a popular open-source software package used for web development and running web servers on your local computer.LAMPP is designed to create a local web server environment, allowing developers to test and develop web applications on their computer before deploying them to a live server.

2.2.7 JQUERY

jQuery is a fast, small, and feature-rich JavaScript library. It simplifies various tasks in web development by providing a set of functions and methods that make it easier to interact with HTML documents, handle events, perform animations, manipulate the DOM (Document Object Model), make asynchronous HTTP requests (AJAX), and more.

2.2.8 Machine Learning:

Machine learning is a subset of artificial intelligence (AI) that involves the development of algorithms and models that enable computers to learn and make predictions or decisions without being explicitly programmed for each specific task. In other words, machine learning algorithms learn from data and improve their performance over time through experience.

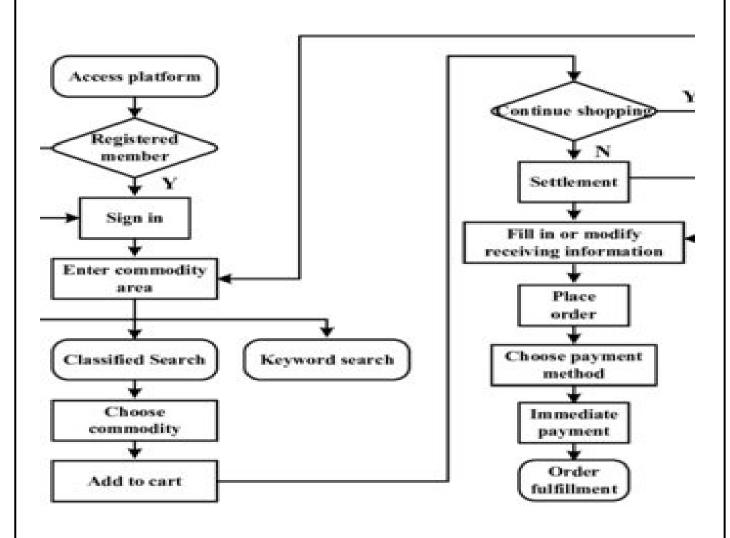
2.2.9 Cyber Security:

Cybersecurity, often referred to as information security, is the practice of protecting computer systems, networks, devices, and data from cyber threats, attacks, and unauthorized access. As our world becomes more digitally connected, cybersecurity has become a crucial field to ensure the confidentiality, integrity, and availability of information and systems.

CHAPTER 3 SOFTWARE ARCHITECTURE

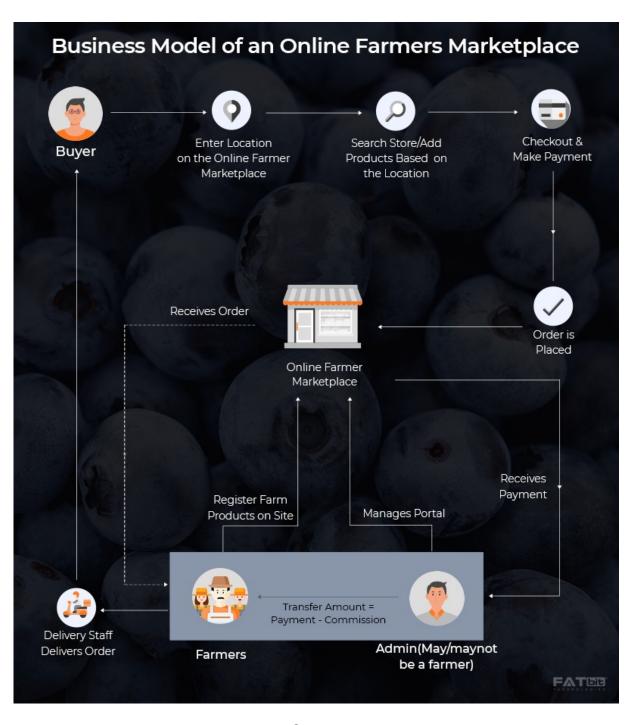
The software architecture of an Agro Trade Network is designed to revolutionize the agriculture supply chain by eliminating intermediaries between farmers and buyers. This platform aims to empower both parties by providing a direct channel for trade and communication . Additionally,the website incorporates advanced machine learning technology to offer accurate weather forecasts,enhancing the decision-making process for farmers and buyers alike.

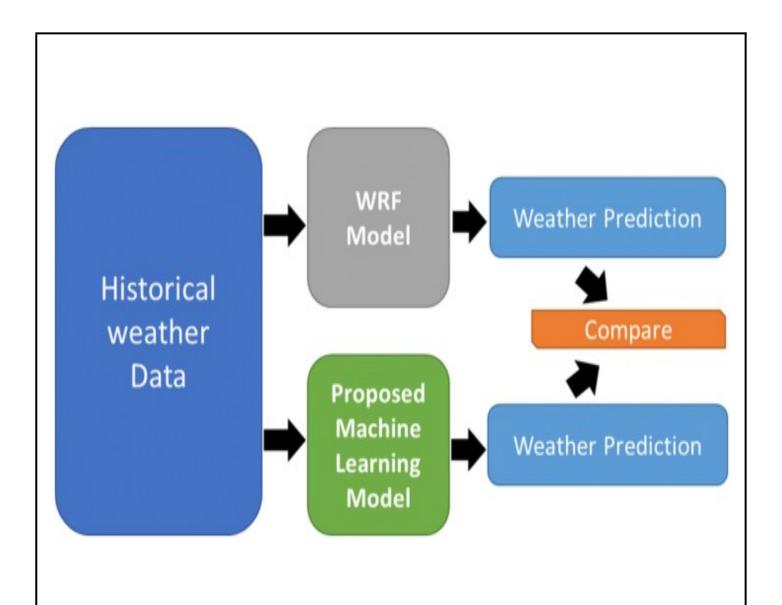
3.1 Work Flow



3.2 ARCHITRCTURE

The architecture should be designed based on specific project requirements and scalability considerations to handle the expected user load and future growth.





CHAPTER 4

SOFTWARE ENVIRONMENT

The software environment for an Agro Trade Network refers to the technologies, frameworks, and infrastructure used to develop, deploy, and maintain the system. Here's an overview of the typical software environment for building and running an online tourism management system.

4.1 Programming Languages:

- Web development languages like HTML, CSS, Jquery are used for frontend development.
- Server-side scripting languages such as PHP are used for backend devolopment.
- SQL is employed to interact with the database for data retrieval and manipulation.
- Python programming language to write Machine Learning algoriths for weather prediction

4.2 Frontend Technologies:

• Frontend frameworks like Jquery is used to create interactive and responsive user interfaces.

4.3 Backend Technologies:

- Backend frameworks like PHP is used to build the application server.
- Middleware components may be utilized for authentication,logging,error handling, and security.

4.4 Cloud Services:

- Cloud platforms like AWS (Amazon Web Services), Azure, or Google Cloud may be used for scalable and cost-effective hosting.
- Cloud-based database services can simplify database management.

4.5 Content Management System(Optional)

• A CMS may be integrated to allow administrators to easily manage website content.

4.6 Version Control:

 Version control systems like Git are used for collaborative development and code management.

4.7 Devolpment Tools:

• Integrated Development Environments (IDEs), code editors, and debugging tools are used to streamline development.

The specific software environment for an Agro Trade Network system may vary depending on the development team's preferences, project requirements, and existing infrastructure. Regular updates, security patches, and code reviews are essential to maintaining the software environment and ensuring the system's smooth operation.

CHAPTER 5 IMPLEMENTATION

The implementation of an Agro Trade Network involves translating the software architecture and design into a functional system that meets the specified requirements.

5.1 Sample Screenshots

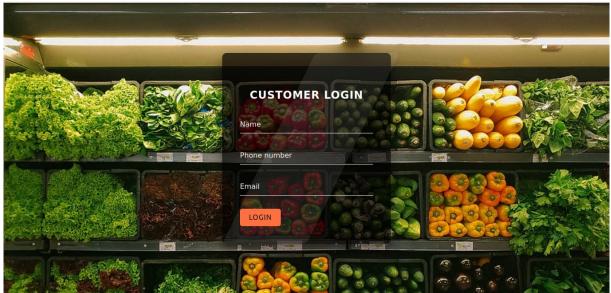
Home Page:



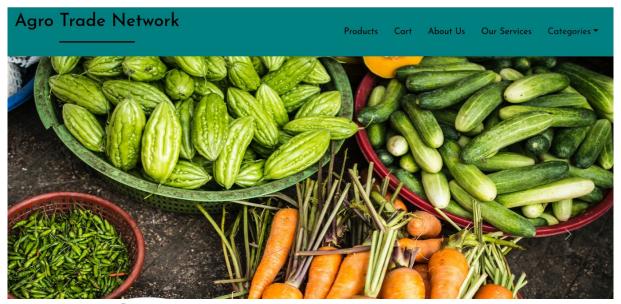
5.2 Farmer Registeration Page



5.3 Buyers login Page

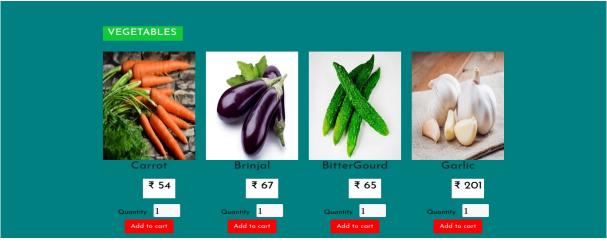


5.4 Buyers Home Page

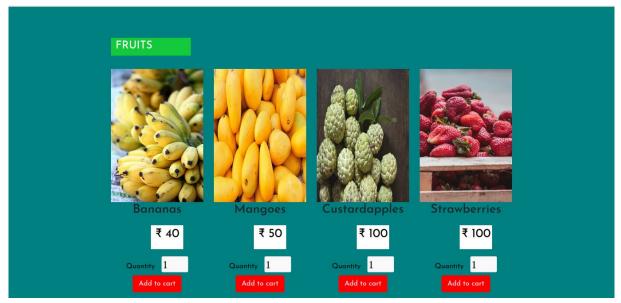


5.5 Buyers sub sections

Vegetables:



Fruits:



Seeds:



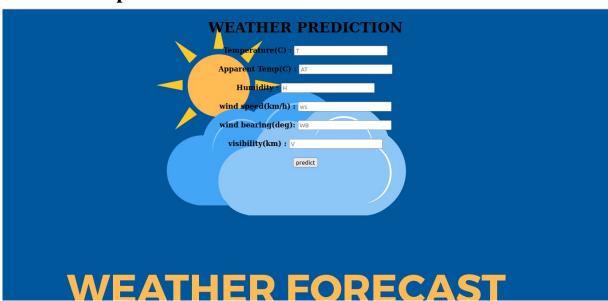
5.6 Buyers Cart:



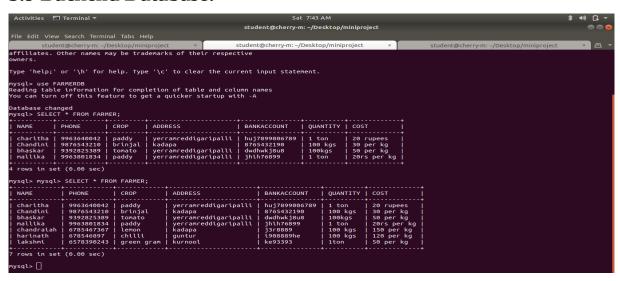
5.7 Buyers Order Summary:

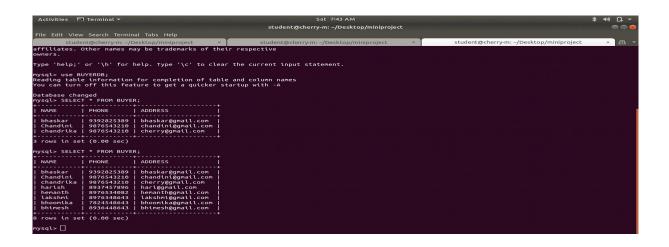


5.8 Weather prediction:



5.9 Backend Database:





```
5.1.1 CODE for HOME PAGE
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="utf-8">
 <title>Agriculture Website</title>
  <meta name="viewport" content="width=device-width, initial-</pre>
scale=1, shrink-to-fit=no">
 k rel="stylesheet" href="https://stackpath.bootstrapcdn.com/
bootstrap/4.4.1/css/bootstrap.min.css">
</head>
<style>
body{
background-color:green;
.hero-section {
 min-height: 100vh;
 background: url("agriculture.avif");
 background-repeat: no-repeat;
 background-size: cover;
 background-position: center;
 position: relative;
 z-index: 2;
 animation: slide 1s ease-in-out;
.hero-text {
 color: black;
 height: 90vh;
 display: flex;
 flex-direction: column;
 justify-content: center;
 align-items: center;
```

```
text-align: center;
font-size:25px;
@keyframes slide {
 from {
  transform: translateX(-100%);
 to {
  transform: translateX(0%);
}
.hero-text::before {
 content: "";
 position: absolute;
 width: 100%;
 height: 100%;
 z-index: -1;
 top: 0;
 opacity: 0.6;
.hero-text a {
 color: red;
 background: var(--bg-color);
 font-weight: 1000;
 font-size: 40px;
 padding: 0.8rem 1rem;
 margin: 0.8rem auto;
 display: block;
 text-decoration: none;
 transition: opacity 250ms linear;
.hero-text a:hover {
 opacity: 0.8;
}
                                  18
```

```
.hero-text h5 {
 font-size: var(--head);
.hero-text p {
 font-size: 2rem;
}
.navbar ul li {
 display: inline-block;
 margin-left: 3rem;
font-size: var(--text);
}
.navbar ul li a {
 text-decoration: none;
 color: white;
 border-bottom: 2px solid transparent;
</style>
<body>
<section class="hero-section">
 <nav class="navbar navbar-expand-lg navbar-light bg-success">
  <a class="navbar-brand" href="#">
<img src="logo.jpg" width="60" height="60">
</a>>
        <button class="navbar-toggler" type="button"
                                                            data-
toggle="collapse" data-target="#navbarSupportedContent"
                aria-controls="navbarSupportedContent"
                                                            aria-
expanded="false" aria-label="Toggle navigation">
   <span class="navbar-toggler-icon"></span>
  </button>
                            class="collapse
                   <div
                                                navbar-collapse"
id="navbarSupportedContent">
```

```
<a class="nav-link" href="index.html">LOGIN</a>
  <a class="nav-link" href="business.html">BUSINESS</a>
  <a
                             class="nav-link"
href="http://127.0.0.1:5000/">WEATHER PREDICTION</a>
  </div>
</nav>
<div class="hero-text">
  <h1>Agro Trade Network </h1>
```

The Agro Trade Network is an innovative farm-based website designed to revolutionize the agricultural supply chain by eliminating intermediaries between farmers and buyers. This platform aims to empower both parties by providing a direct channel for trade and communication. Additionally, the website incorporates advanced machine learning technology to offer accurate weather forecasts, enhancing the decision-making process for farmers and buyers alike

```
</div>
<footer class="text-center bg-warning">
<div class="container">
<div class="text-center">
&copy; Agro Trade Network
</div>
<div class="bottom-footer text-left">
<div class="col-md-12">
</div
```

```
</div>
   </div>
  </div>
 </footer>
</section>
 <script src="https://code.jquery.com/jquery-3.2.1.slim.min.js">
script>
                                                          <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/p
opper.min.js"></script>
 <script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/</pre>
bootstrap.min.js"></script>
</body>
</html>
5.1.2 CODE for farmerregistration
file:farmerregistration.html
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8"/>
<meta name="viewport" content="width=device-width, initial-</pre>
scale=1.0" />
<meta http-equiv="X-UA-Compatible" content="ie=edge" />
<link rel="stylesheet" href="login1.css"/>
<title>REGISTRATION FORM</title>
</head>
<style>
body{
background-image:
url('buyer.jpg');
}
```

```
.button {
 margin-right: 15px;
 background: #ff652f;
 border: none;
 outline: none;
 font-size: 1rem;
 text-transform: uppercase;
 letter-spacing: 1px;
 padding: 10px 20px;
 border-radius: 5px;
 cursor: pointer;
}
</style>
<body>
<div class="login-wrapper">
<form action="buyer.php" class="form" method="POST">
<h2> CUSTOMER LOGIN</h2>
<div class="input-group">
<input type="text" name="loginUser" id="loginUser" required />
<label for="loginUser">Name</label>
</div>
<div class="input-group">
                     name="loginnumber" id="loginnumber"
<input
        type="tel"
required/>
<label for="loginnumber">Phone number</label></div>
<div class="input-group">
<input type="text" name="address" id="address" required/>
<label for="address">Email</label></div>
<button class='button'>Login</button>
</form>
</div>
</body>
</html>
```

5.1.3 CODE to store farmerregistration details file:farmerregistration.php

```
<?php
include "database.php";
$name=mysqli_real_escape_string($connection,
$_POST['loginUser']);
$phone=mysqli_real_escape_string($connection,
$_POST['loginnumber']);
$crop=mysqli_real_escape_string($connection,
$_POST['cropname']);
$address=mysqli_real_escape_string($connection,
$_POST['address']);
$bankaccount=mysqli_real_escape_string($connection,
$_POST['password']);
$quantity=mysqli_real_escape_string($connection,
$_POST['quantity']);
$cost=mysqli_real_escape_string($connection,$_POST['cost']);
if($connection)
{
    echo "connection established";
$query="CREATE TABLE FARMER (NAME VARCHAR(30)
NOT NULL, PHONE VARCHAR(15) NOT NULL, CROP
VARCHAR(30) NOT NULL, ADDRESS VARCHAR(30) NOT
NULL, BANKACCOUNT
                               VARCHAR(30)
                                                     NOT
NULL, QUANTITY
                   VARCHAR(30)
                                      NOT
                                              NULL, COST
VARCHAR(30) NOT NULL);";
if(mysqli_query($connection,$query))
{
    echo "table created";
}
else
{
    echo "error: ".mysqli_error($connection);
}
```

```
$query1="INSERT
                               INTO
                                                  FARMER
VALUES('$name','$phone','$crop','$address','$bankaccount','$qu
antity', '$cost');";
if(mysqli_query($connection,$query1))
{
    echo "record inserted"."<br>";
}
else
    echo "error: ".mysqli_error($connection);
$query2="SELECT * FROM FARMER;";
$check=mysqli_query($connection,$query2);
if(mysqli_num_rows($check))
{
    while($row=mysqli_fetch_assoc($check))
               $row['NAME']." ".$row['PHONE']."
         echo
$row['CROP']."
                          ".$row['ADDRESS']."
                              ".$row['QUANTITY']."
$row['BANKACCOUNT']."
$row['COST']." "."<br>";
header("Location:home.html");
```

CHAPTER 6 CONCLUSION & FUTURE SCOPE

6.1 Conclusion:

In conclusion, the Agro Trade Network stands as a transformative solution in the realm of agriculture by leveraging modern technology to bridge the gap between farmers and buyers. By eliminating intermediaries, the platform empowers farmers to directly showcase their produce and establish fair trade relationships. The integration of machine learning for accurate weather forecasting adds an additional layer of value, aiding farmers in making informed decisions for optimal crop management. Through its innovative approach, the Agro Trade Network holds the potential to reshape agricultural trading practices, fostering efficiency, transparency, and sustainability in the industry.

6.2 Future Scope:

The future scope of a "Weather Prediction Agro Trade Network"project could

be quite promising, as it combines two critical factors for successful agricultural

operations: accurate weather predictions and efficient trade activities.

Here are some potential avenues for the project's future development and expansion:

AI and Machine Learning Enhancements: The project could continue to improve

its predictive analytics capabilities by incorporating more sophisticated AI and

machine learning algorithms. This would enhance the accuracy of weather forecasts

and provide deeper insights into how weather patterns impact agricultural markets.

Precision Agriculture: As the project matures, it could focus on precision agriculture

techniques, where farmers use data-driven insights to optimize their use of resources

such as water, fertilizers, and pesticides. The integration of weather predictions would

play a crucial role in making precise decisions.

Climate Change Adaptation: Given the increasing impact of climate change on weather

patterns, the project could evolve to address climate adaptation strategies for the

agricultural industry. This might involve helping farmers transition to more resilient

crops, altering planting seasons, and mitigating climate-related risks.

CHAPTER 7

REFERENCES

here is a list of reference links that we have used for our project:

- 1. Google (General research and information):
 - https://www.google.com
- 2. Kaggle (Datasets, machine learning resources):
 - https://www.kaggle.com
- 3. Geeks for Geeks (Programming tutorials and resources):
 - · https://www.geeksforgeeks.org
- 4. Javatpoint (Programming tutorials and resources):
 - https://www.javatpoint.com
- 5. YouTube (Video tutorials and explanations):
 - https://www.youtube.com