AGRICULTURE MANAGEMENT SYSTEM

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TADEPALLIGUDEM-534101, INDIA

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DECLARATION

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Date:_____

ARAVEETI DHAARANI

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Date:_____

CERTIFICATE

It is certified that the work contained in the thesis titled "**AGRICULTURE MANAGEMENT SYSTEM**" by "ALAVALAPADU RAM CHARAN, bearing Roll No: 421102" and "ARAVEETI DHAARANI, bearing Roll No: 421108" has been carried out under my supervision and that this work has not been submitted elsewhere for a degree.

Signature
Y.Gireesh
Computer Science and Engineering
N.I.T. Andhra Pradesh
May, 2023

Acknowledgement

We would like to thank to all those who are involved in this endeavor for their kind cooperation for its successful completion.At the outset, we wish to express our sincere gratitude to all those people who have helped us to complete this project in an efficient manner.

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Abstract

The agriculture industry is an essential part of the global economy and plays a crucial role in ensuring food security for billions of people. However, managing an agricultural business can be challenging due to the complexity of operations, the need for accurate data, and the unpredictable nature of weather and other factors. To address these challenges, this mini project proposes an agriculture management system that helps farmers and other agricultural businesses manage their operations more efficiently.

The system will provide a user-friendly interface to allow farmers to input data related to their farm activities and generate reports that can be used for decision-making. Additionally, it will provide features to generate alerts for adverse weather conditions and pest infestations . The system will also support researchers in the agricultural field to conduct data analysis and modeling to enhance agricultural productivity and sustainability.

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1 Introduction

An agriculture management system is a software application that helps farmers in various aspects of their operations. This mini project aims to develop a simple but effective agriculture management system that allows users to store and manage information related to crops, farms, equipment, employees, and more.

With the help of this system, farmers can easily keep track of their crops' growth, identify potential problems, and take appropriate measures to mitigate them. The system can also assist in managing the utilization of farm equipment and the scheduling of tasks for employees. Furthermore, the system can provide insights into the farm's financial performance by tracking expenses and revenues. This agriculture management system can be a valuable tool for farmers, particularly those who are operating small to medium-sized farms, to streamline their operations and increase productivity.

In addition, this agriculture management system can help farmers make informed decisions about their farming practices. By collecting and analyzing data on crop yields, weather patterns, and soil quality, the system can provide farmers with valuable insights into how they can optimize their farming processes for better results. The system can also facilitate communication between farmers and other stakeholders, such as suppliers and buyers, by providing a platform for exchanging information and negotiating deals.

Overall, this agriculture management system has the potential to revolutionize the way farmers manage their operations. By leveraging the power of technology, farmers can increase efficiency, reduce costs, and improve the quality of their products. As the global population continues to grow, the demand for food will only increase, and it is crucial that farmers adopt innovative solutions to meet this demand sustainably. This agriculture management system is a step in the right direction towards achieving this goal.

2 Flaws

1. Limited data analysis: Some agriculture management systems may not provide sufficient analysis of data to enable farmers to make informed decisions. Our project could aim to provide more advanced analytics to help farmers better understand their data and make more informed decisions.

2.Lack of government scheme recommendations: Some agriculture management systems may not provide sufficient information about government subsidies and schemes that are available to farmers. Our project could aim to provide comprehensive information about these programs, and also make recommendations based on the specific crops being grown.

3.Limited support for organic farming: Some agriculture management systems may not differentiate between organic and non-organic farming, which could be a major limitation for farmers who are focused on organic production. Our project could aim to provide analysis of both organic and non-organic farming which also promotes usage of organic methods and makes healthier environment.

4.Poor user experience: Some agriculture management systems may have a steep learning curve or be difficult to use, which could discourage farmers from adopting them. Our project could aim to provide a user-friendly interface and intuitive workflows to make it easy for farmers to manage their operations.

5.Lack of integration with other systems: Many agriculture management systems may not integrate with other systems that farmers use, such as weather monitoring systems, financial management software, or crop monitoring sensors. Our project could aim to provide seamless integration with these other systems to provide a comprehensive view of the farming operation and enable farmers to make more informed decisions based on real-time data.

3 Agriculture News API

The API we have used is NewsAPI, which is a simple HTTP REST API for searching and retrieving live articles from all over the web. It provides access to news articles from various sources in a structured JSON format. In this project, the API key is provided and used to fetch articles related to agriculture published in the past 24 hours. The fetched articles are displayed on the web page with their respective images, titles, descriptions, and a link to read more about them.

The Main Advantages of using this API:
Large database of news sources: The News API provides access to a large database of news sources, including major news outlets such as CNN, BBC, and The New York Times. This allows the web application to provide a wide range of news articles to its users.

Real-time updates: The News API provides real-time updates on breaking news stories, allowing the web application to display the latest news articles to its users as soon as they become available.

Customizable search queries: The News API allows developers to customize search queries based on specific keywords, sources, and time periods. This makes it easy to retrieve news articles that are relevant to the web application's specific niche or topic.

Easy integration: The News API provides easy integration with web applications through a simple HTTP API, which makes it easy for developers to retrieve and display news articles on their website or application.

Cost-effective: The News API offers a range of pricing plans, including a free tier that provides up to 500 requests per day. This makes it a cost-effective option for small-scale web applications or projects.

4 Agriculture Schemes

One of the Main Aspect we have added to this project are Agriculture schemes, which can be very important for farmers as they provide them with various types of support, such as financial assistance, technical knowledge, subsidies, and incentives, to improve their agricultural practices, productivity, and income. These schemes can help farmers access better-quality inputs, tools, and equipment, as well as help them adopt modern technologies and practices that can improve the quality and quantity of their produce.

Moreover, agriculture schemes also help farmers reduce their production costs by providing them with subsidies and other forms of assistance, which can help them earn higher profits. This can motivate farmers to invest more in their agricultural activities and also enable them to take more risks, such as experimenting with new crops or techniques, that can lead to higher yields and profits.

Agriculture schemes are important for farmers because they provide a wide range of benefits that can help them improve their farming practices and ultimately increase their profits. Some of the key benefits of agriculture schemes for farmers include:

1.Financial support: Many agriculture schemes provide financial assistance to farmers, which can help them cover the costs of inputs such as seeds, fertilizers, and equipment. This can be especially helpful for small farmers who may not have access to the necessary capital to invest in their farms.

2.Technical assistance: Agriculture schemes often provide farmers with technical assistance in the form of training, education, and extension services. This can help farmers learn about new technologies and best practices, which can lead to increased productivity and efficiency.

3.Market linkages: Agriculture schemes can help farmers connect with markets and buyers, which can help them secure better prices for their products. This can be especially important for small farmers who may have limited access to markets.

4.Risk management: Agriculture schemes can help farmers manage risks associated with farming, such as natural disasters, pests, and diseases. This can help farmers protect their crops and ensure a stable income.

Overall, agriculture schemes can play a critical role in improving the livelihoods of farmers and promoting sustainable agriculture practices.

5 Statistics

Pictorial representation of statistical data can be very useful for farmers as it can help them to easily understand complex data and make informed decisions. Pictorial representation of statistical data can provide farmers with quick insights into their operations by highlighting key performance indicators in an easily digestible format. This can help farmers to identify areas where they need to make improvements and take action more quickly.

They plays a crucial role in understanding the world around us, and various types of graphical representations such as bar graphs, pie charts, and linear graphs make it easier for us to comprehend and interpret complex data. In the context of agriculture, these visual tools are particularly important for farmers who need to make informed decisions based on various factors such as weather patterns, crop yields, market prices, and more. By using graphs and charts to represent this data, farmers can easily identify trends and patterns that can help them make better decisions about crop management, fertilization, irrigation, and other critical aspects of their business. For example, a bar graph representing crop yields over time can help farmers understand the impact of different fertilization techniques or weather patterns on their crops, while a pie chart representing market prices can help them decide which crops to plant based on demand and profitability. Overall, graphical representations of data and statistics are essential tools for farmers and other professionals who need to analyze and make decisions based on complex information.

6 Technology Used

HTML (Hypertext Markup Language): HTML is the standard markup language used to create web pages. It provides the structure of the content on a web page.

CSS (Cascading Style Sheets): CSS is used to add style and formatting to web pages. It enables the separation of content and presentation, allowing developers to change the look and feel of a web page without affecting its structure.

Server-side scripting languages such as PHP is used to create dynamic web pages that are generated on the server side. They interact with databases and generate HTML pages that are sent to the client.

MySQL Database is used to store and manage data used in web applications . Web servers such as Apache are used to host web applications and serve web pages to clients.

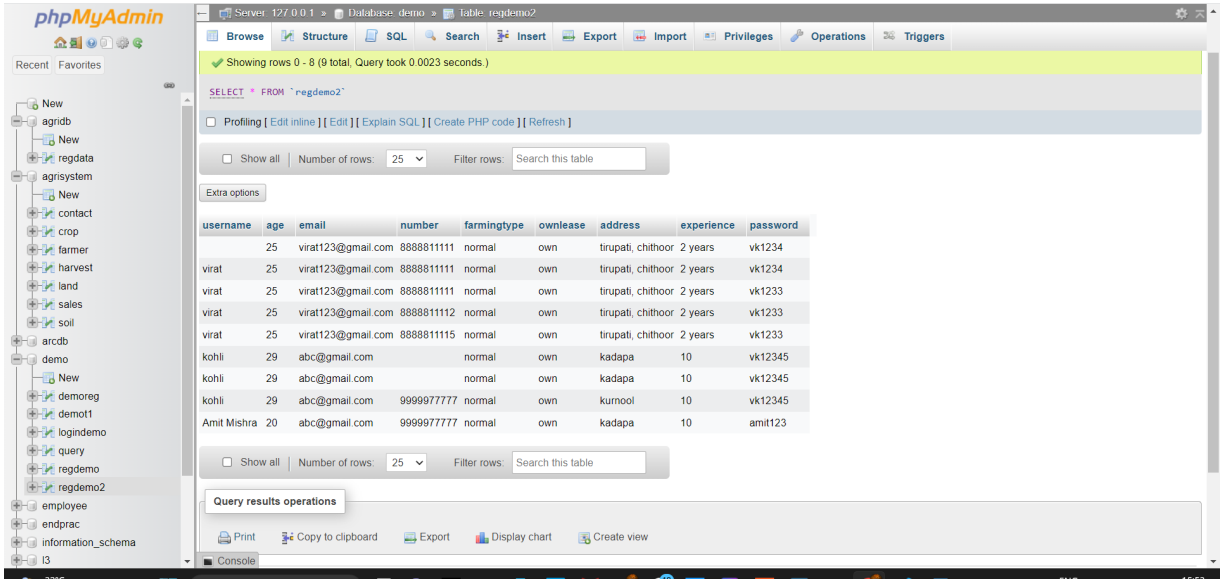
Web Hosting provider like InfinityFree that provides hosting services by allocating subdomains.

7 Overview of Project and Results

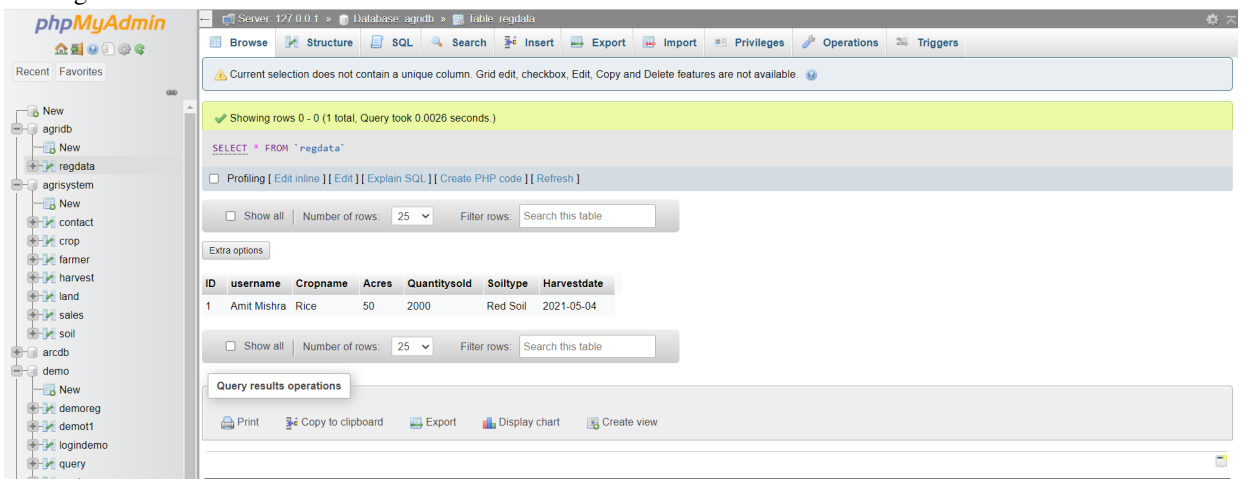
The agriculture management system web application project aims to develop a web-based software application that helps farmers manage various aspects of their operations. The web application will allow farmers to store and manage information related to crops, farms, equipment, employees, and more, and provide advanced analytics to help farmers make informed decisions about their farming practices. The system will also provide comprehensive information about government subsidies and schemes that are available to farmers.

7.1 Databases

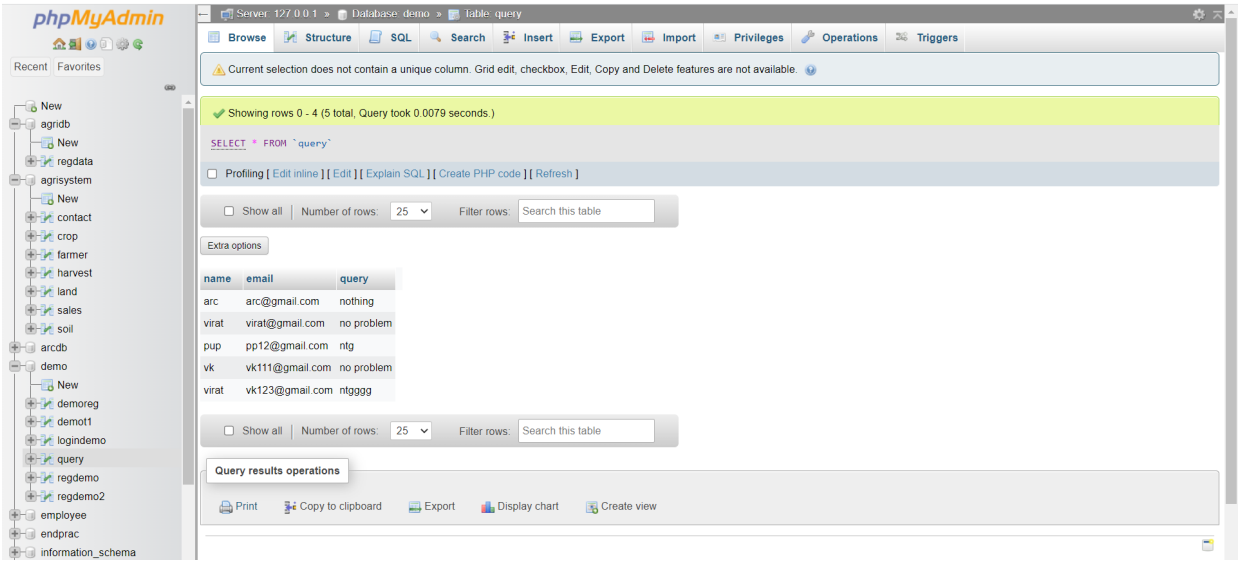
Registered Database:



Login Database for Authentication:



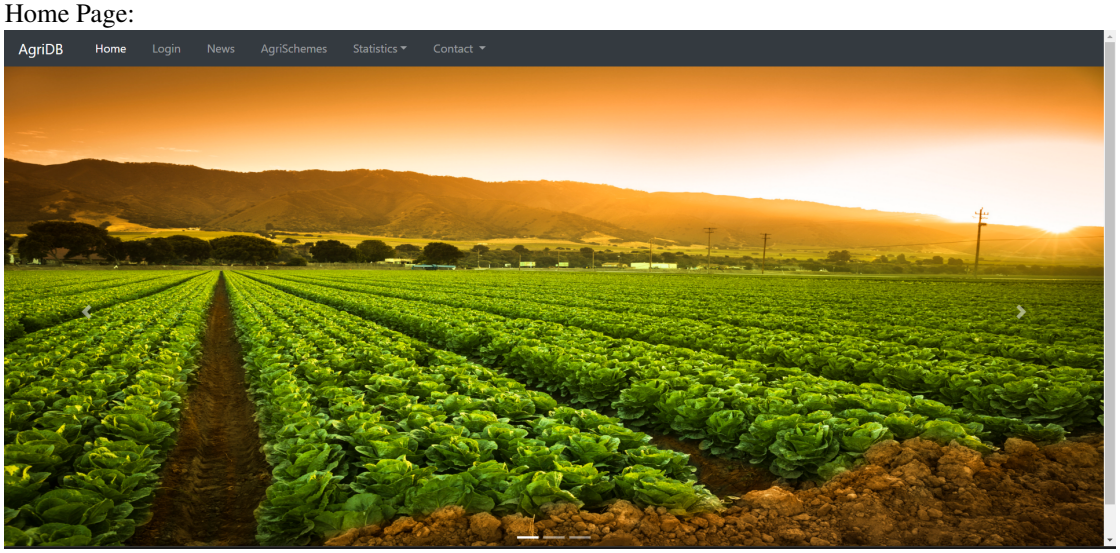
Queries Database:



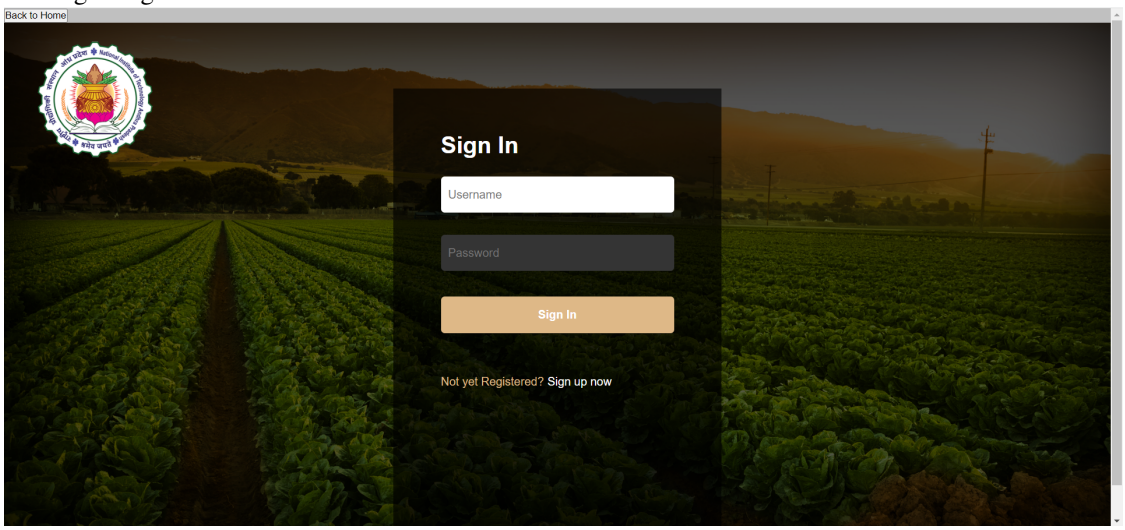
7.2 Results

7.2.1 Front End Pages

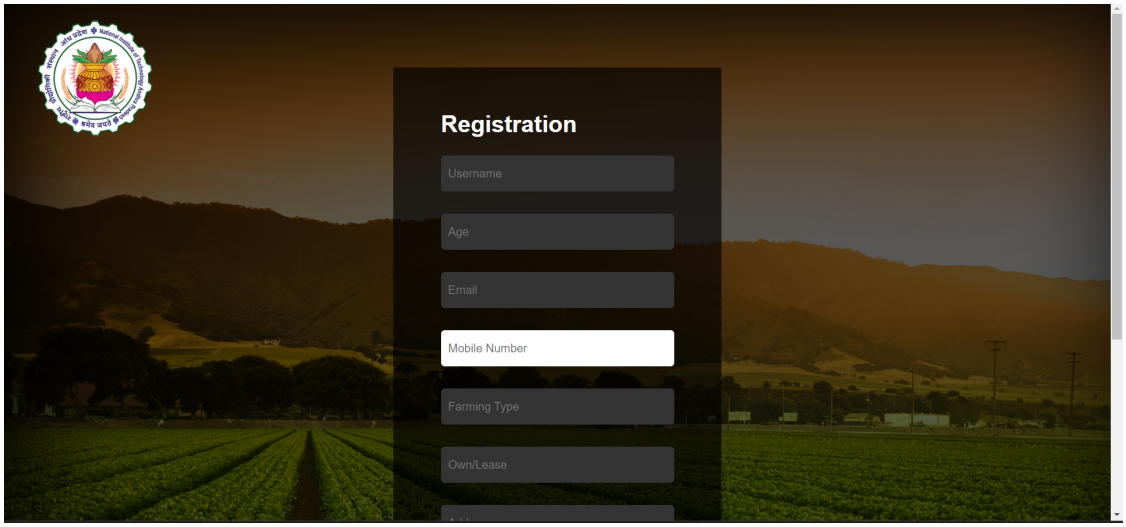
Home Page:



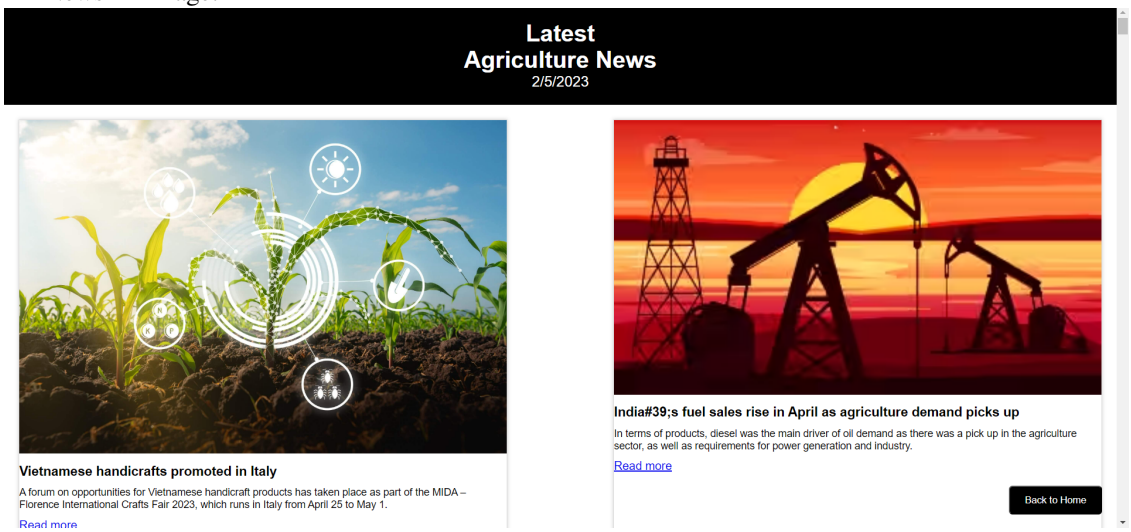
Login Page:



Registration Page:



News API Page:

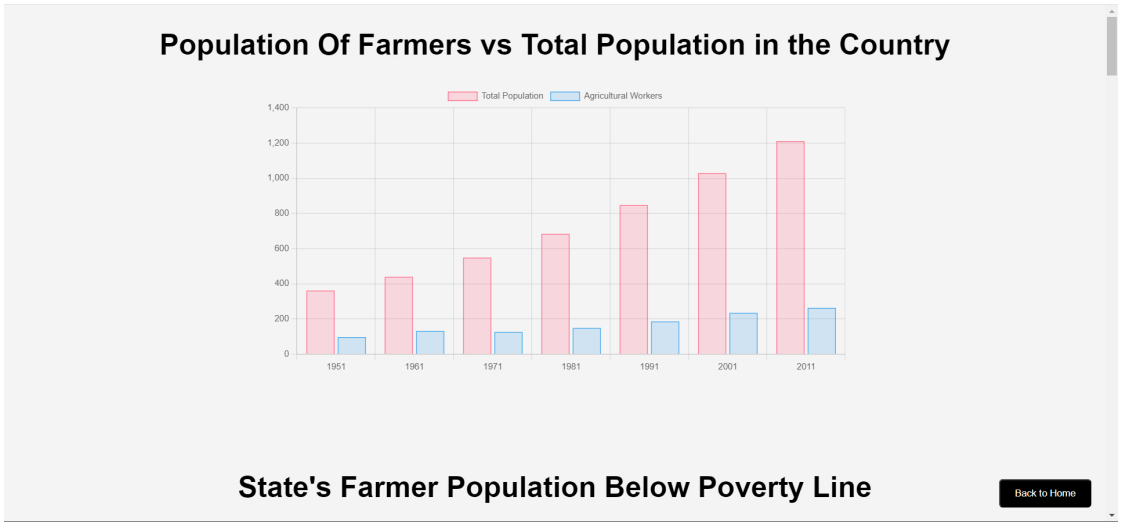


Government Schemes Page:

Government Agriculture Schemes

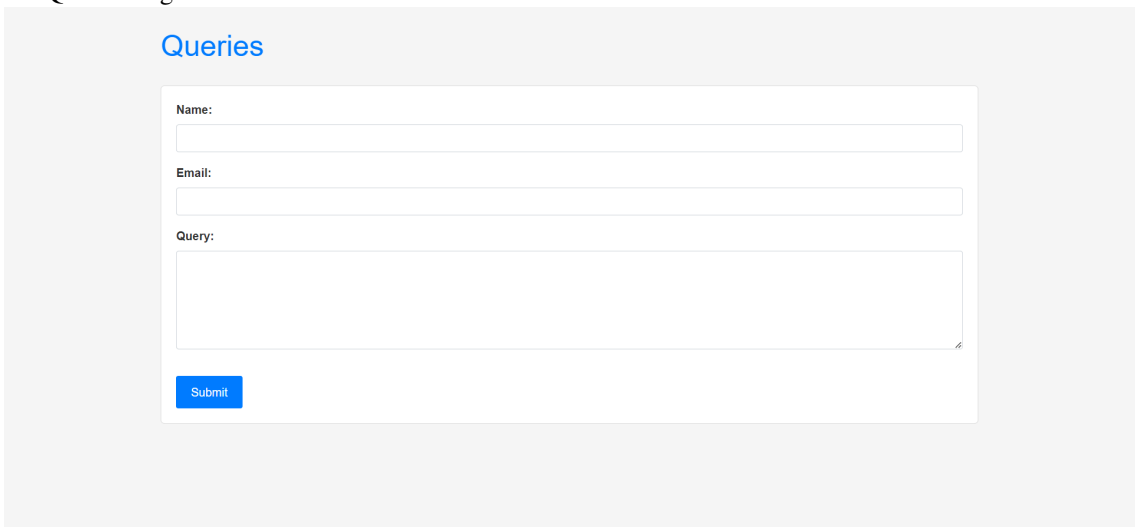
Sr. No	Title	Publish Date	Details
1	Agriculture Infrastructure Fund	13-02-2014	Download (402.53KB) Link
2	ATMA	03-10-2018	Download (1.17 MB) Link
3	AGMARKNET	14-03-2014	Download (1.03 MB) Link
4	Horticulture	05-04-2014	Download (691.68 KB) Link
5	Online Pesticide Registration	23-09-2009	Download (1.25 MB)
6	Plant Quarantine Clearance	05-01-2011	Download (8.89 MB) Link
7	DBT in Agriculture	12-05-2014	Download (749.24 KB) Link

Statistics Page:



Weather Statistics Page:

Queries Page:



8 Future Scope and Conclusion

8.1 Future Scope

The Agriculture Management System project aims to create a tool that facilitates better data management and informed decision-making in the agriculture sector. The system will allow users to store and manage information related to crops, farms, equipment, employees, and more. The goal is to improve efficiency, accuracy, and decision-making by providing users with real-time data and insights.The proposed system will be easy to use and accessible to all the farmers.

8.2 Conclusion

In conclusion,the Agriculture Management System project aims to provide a comprehensive and user-friendly solution for farmers to manage their agricultural operations. By utilizing technologies such as HTML, CSS, PHP, MySQL, and web hosting providers like InfinityFree, this project can offer real-time data analysis, government scheme recommendations, support for organic farming, and integration with other systems.

The project overcomes the limitations of traditional agriculture management systems, such as limited data analysis, lack of government scheme recommendations, poor user experience, and lack of integration with other systems. It provides farmers with valuable insights into their farming operations and helps them make informed decisions about crop management, resource allocation, and financial planning.

Additionally, the project integrates the Agriculture News API to keep farmers up-to-date with the latest news and trends in the industry. By providing this information, farmers can make proactive decisions about their operations, stay informed about market trends, and adapt to changes in the industry.

Overall, the agriculture management system project can significantly improve the productivity and profitability of farmers by providing them with advanced analytics, comprehensive government scheme recommendations, and real-time data integration.