VISHNU (Autonomous)
Institute of Technology

Mid-Course Progress Report for Full Stack Web Developer Course

INDUSTRY COACH : Prashanth K

PROJECT TITLE : Farmer Management

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PROJECT REPORT:

Project Idea : Farmer Management

Overview:

In the agricultural sector, middlemen have always been between the customer and the farmer. This entire process is often lengthy and inefficient, leading to product damage, surplus, and even inflation in prices. Global trends are influencing food security, poverty, and the sustainability of agricultural systems.

Farm Fresh Fare offers a platform for aspiring farmers to connect with experienced farm patrons willing to teach farming at a minimal cost. Farmers, who often leave the profession due to financial struggles, can now earn income by teaching those passionate about farming. This creates a sustainable system where farming knowledge is passed down, ensuring we can overcome future food scarcity.

Features:

- A simple, intuitive user interface that allows farmers to list products and customers to search for and purchase them.
- Customers can create and manage profiles, view their orders, and track deliveries.
- Farmers can manage product listings, view orders, and update their profiles.
- Customers and learners can interact with farm patrons, both virtually and in person.
- Daily weather updates to help farmers plan accordingly.
- Integration with maps, allowing customers to visit nearby farms.
- Secure platform with encryption for sensitive data such as payment information.

Used Technologies :

- **Node.js and Express.js:** These technologies form the core of your web application, managing tasks like handling HTTP requests, directing traffic, and displaying web pages.
- **Firebase Authentication:** You use Firebase for customer authentication, allowing users to sign up and login with their email and password.
- **Firestore database:** Firestore is used as a NoSQL database to store customer data and registered details.
- **Body-parse library :** It is used to hide the user details in the HTTP requests . It can also used as security library .By this the data will be safe.

APIs:

- **Video SDK –** For enabling virtual interactions and video calls between Farmers and customers.
- **Open Weather API –** To provide farmers with real-time weather updates for planning.
- **Google Maps API –** For location services , allowing customers to find nearby farms and navigate easily.

Security :

- **Encryption –** For securing sensitive information such as payment details and personal data .

STRUCTURE OF THE PROJECT :

It consists of various routes and publics signup, login, home, about, contact us, etc. for handling the customer registration and events management.

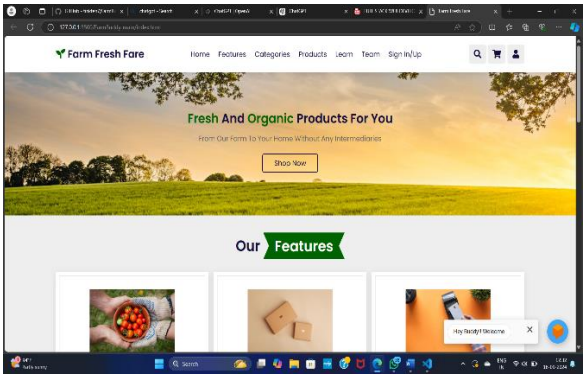
Customer Access:

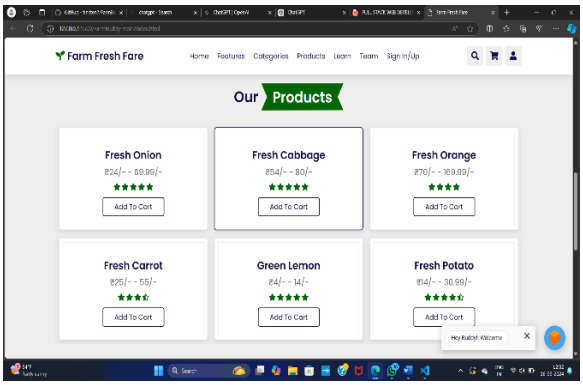
- Users can sign in using their email and password.
- Passwords are securely verified using the hashed password from the database.

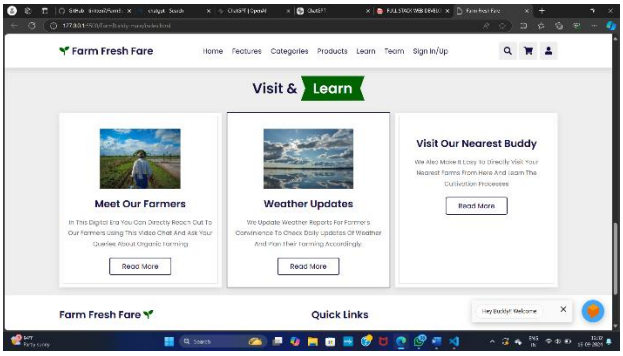
- User can have the access to the website.

Images of the webpage:

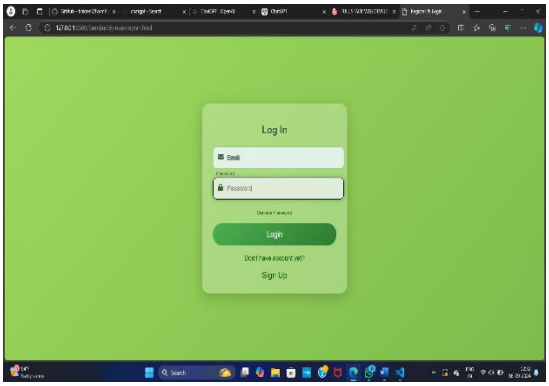
1.Home Pages:

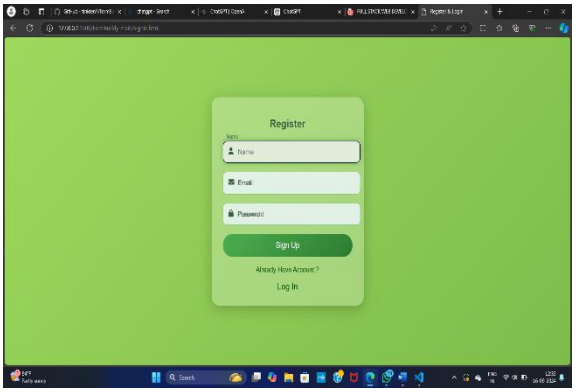






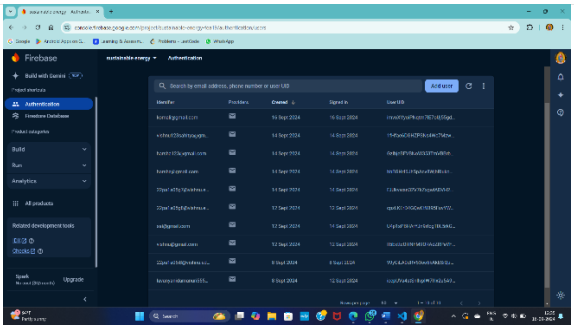
2.Login and Signup pages:

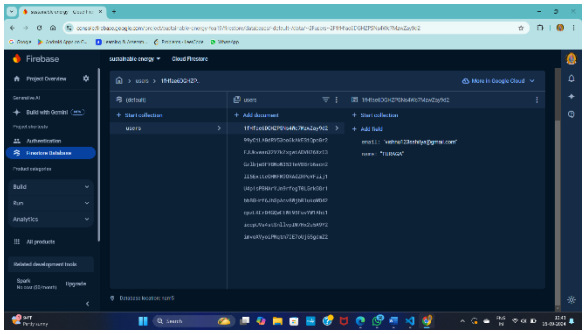




3.Database:

- In this I have used the google firestore database.
- We created the two types of collections.
- One is Submit collection.
- In submit collection we used to store the data of users signup details.
- In todo collection we used to store the data of event registration details.





Ideas to Improve the Project:

1. **Security –** Store passwords securely using hashing .Implement multi-factor authentication and strict Firebase access rules.
2. **Validation –** Add client-side and server-side input validation .Improve error handling with clear messages for invalid inputs.
3. **Documentation –** Provide clear user guides and developer documentation for the platform and Apis .
4. **User Experience –** Add password reset options and better frontend validation for a smoother experience . Enchance the user interface for a more intuitive and user-friendly design.
5. **Frontend Enchancement –** Use responsive design to ensure a mobile-friendly interface . Incorporate a farming theme with natural colours and elements.
6. **Testing –** Implement unit and integration testing to ensure stable functionality.

7. **Scaling –** Optimize firebase for scalability and prepare the backend for handling larger traffic loads.

Future Improvements:

- **Additional Payment Options -** Integrate more payment gateways for greater flexibility.
- **Data Analytics –** Provide farmers with insights on product demand and customer preferences.
- **Technological Apis –** Incorporate advanced farming-related APIs for weather forecasting, soil health monitoring, and smart farming techniques.

Contribution From each team member :

References :

Source Code :

https://github.com/lavanyanidamanuri555/farming-.git

Youtube link :

https://youtu.be/HuoAM7DBgf8?si=ag5f70-8x5IAPRAx