

The
Project Report
on
Online Farmer Education System

By
Domadiya Fenil A. (CE-036) (19CEUEG037)
Gajera Jenil V. (CE-039)(19CEUET013)

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Under the guidance of,

Prof. Prashant M. Jadav
Assistant Professor
Dept. of Comp. Engg.

Prof. Siddharth P. Shah
Assistant Professor
Dept. of Comp. Engg.



Dharmsinh Desai University, Nadiad
Faculty of Technology
Department of Computer Engineering



Department of Computer Engineering

Dharmsinh Desai University

Certificate

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subject of Advanced Technologies and recorded in this journal is
the bonafide work of**

Domadiya Fenil A. (CE-036) (19CEUEG037)

Gajera Jenil V. (CE-039)(19CEUET013)

Prof. Prashant M. Jadav

Assistant Professor

Dept. of Comp. Engg.

Prof. Siddharth P. Shah

Assistant Professor

Dept. of Comp. Engg.

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1. Introduction

1.1 Brief Introduction

“Online farmer education system” is useful for farmers. Farmers can take various information about various crops, new technologies, weather and they can post the doubt and can get solutions. Experts can write blogs on different topics and also can take informative sessions.

1.2 Tools/Technologies Used

Technologies:

- Mongo DB
- Express Js
- React Js
- Node Js
- Bootstrap
- HTML
- CSS
- JavaScript

Tools:

- Git
- Visual Studio Code

Platform:

- Local development server

2. Software Requirement Specifications

2.1 System Functional Requirements

R1: Manage User's Account:

Description: If a person is using this app first time, then he will have to register himself at first using Sign-Up functionality. And then he will be able to Sign-in this app.

R.1.1: Click on the “Sign-Up” Option:

Input: User details including name of the user, password, address, mobile number, email-id etc.

Output: Confirmation of registration status.

R.1.2: Click on the “Sign-in” Option:

Input: User credentials (“Username” and “Password”).

Output: User will be redirected to the appropriate page of the application, if credentials are valid.

R.1.3: Click on the “logout” Option:

Input: Click on Option.

Output: Redirect to Login Page.

R2: Manage Newsroom:

Description: Expert can post blog on various topic such as new technology, Natural Event, government Schemes etc. Expert can write, edit, delete, post and set that blog to home page.

R.2.1: Set category:

Input: Choose appropriate category

Output: Confirmation message.

R.2.2: Write blog:

Description: Expert can write blog.

Input: Topic name, description, image

Output: Blog written successfully.

R.2.3: Update Blog Details:

Description: Expert can update blog as they want

Input: details which Expert wants to update.

Output: Blog updated successfully.

R.2.4: Delete Blog:

Input: Click on the delete button.

Output: Blog deleted successfully.

R.2.5: Add to Home Page:

Input: Click on the Add to Home page button.

Output: Blog added successfully.

R.2.6: Remove to Home Page:

Input: Click on the Remove to Home page button.

Output: Blog deleted successfully.

R3: Read News in Newsroom:

Description: Farmer can Read Blog on various topic such as new technology, Natural Event, government Schemes etc.

R.3.1: Set category:

Input: Choose appropriate category

Output: Confirmation message.

R.3.2: Read blog:

Description: User can write blog.

Input: select read button

Output: Blog content

R4: Manage education section:

Description: Expert can post blog on various topic such as Agriculture, Horticulture, Forestry, seed, Live Stock, fisheries etc. Expert can write, edit, delete, post and set that blog to home page.

R.4.1: Set category:

Input: Choose appropriate category

Output: Confirmation message.

R.4.2: Write blog:

Description: User can write blog.

Input: Topic name, description, image

Output: Blog written successfully.

R.4.3: Update Blog Details:

Description: Expert can update blog as they want

Input: details which Expert wants to update.

Output: Blog updated successfully.

R.4.4: Delete Blog:

Input: Click on the delete button.

Output: Blog deleted successfully.

R.4.5: Add to Home Page:

Input: Click on the Add to Home page button.

Output: Blog added successfully.

R.4.6: Remove to Home Page:

Input: Click on the Remove to Home page button.

Output: Blog deleted successfully.

R5: Read Blog posted on Education:

Description: Farmer can Read Blog on various topic such as Agriculture, Horticulture, Forestry, seed, Live Stock, fisheries etc.

R.5.1: Set category:

Input: Choose appropriate category

Output: Confirmation message.

R.5.2: Read blog:

Description: User can write blog.

Input: select read button

Output: Blog content

R6: Manage event:

Description: Farmer can get information about event

R.6.1: Set Title:

Input: Choose appropriate Title

Output: Confirmation message

R.6.2: Set address:

Input: Choose appropriate address

Output: Confirmation message.

R.6.3: Set Date:

Input: Choose appropriate date

Output: Confirmation message.

R.6.4: Read Event:

Description: User can write Event.

Input: select read button

Output: Blog content

R7: Manage doubt section:

Description: Farmer can post doubt and Expert can give answer.

R.7.1: Post doubt:

Input: Text message

Output: Message successfully sent.

R.7.2: Give Answer:

Input: Select doubt, write and post answer

Output: Message successfully sent.

R8: Manage Weather Section:

Description: weather information updated by Weather API. Farmer can read that information. Expert can set as alert if required.

R.8.1: Select weather:

Input: Choose weather button

Output: Confirmation message.

R.8.2: Set as alert:

Description: Expert can set alert in home page.

Input: Select alert option

Output: Confirmation message.

R9: Manage event:

Description: Expert can take session on various places. That information posted on event and workshops pages.

R.9.1: Select event:

Input: Choose event and workshops button

Output: Confirmation message.

R.9.2: Post event and workshop:

Description: Expert has to write field and post that event.

Input: Write address, topic, date and select post button.

Output: Confirmation message.

2.2 Other Nonfunctional Requirements

1. Usability:

- The system must be easy to use by users such that they do not need to read an extensive amount of manuals.
- The options of the system must be easily navigable by the users with buttons that are easy to understand.

2. Reliability:

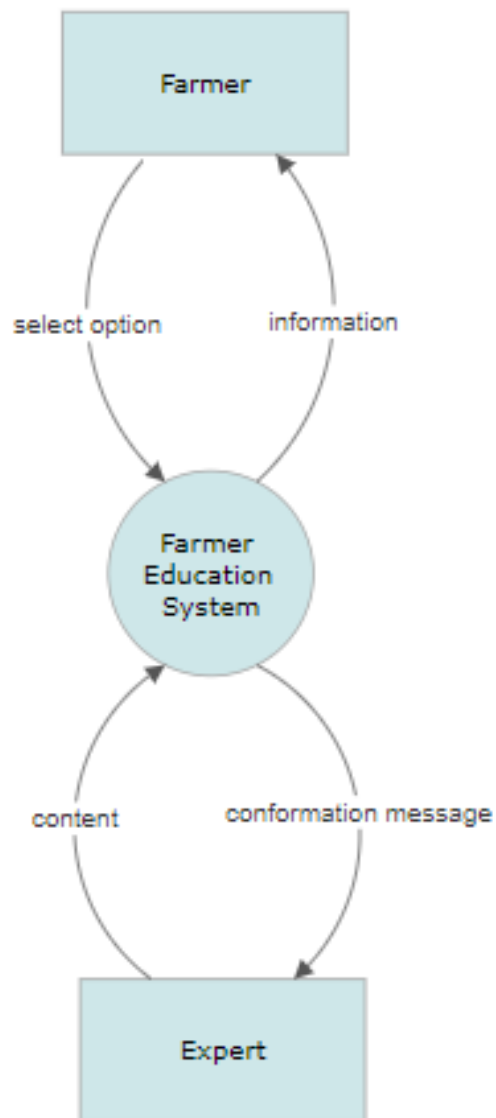
- The system should not update the data in any database for any failed processes.
- The system is able to update and delete information which is provided by system user very easily.

3. Performance:

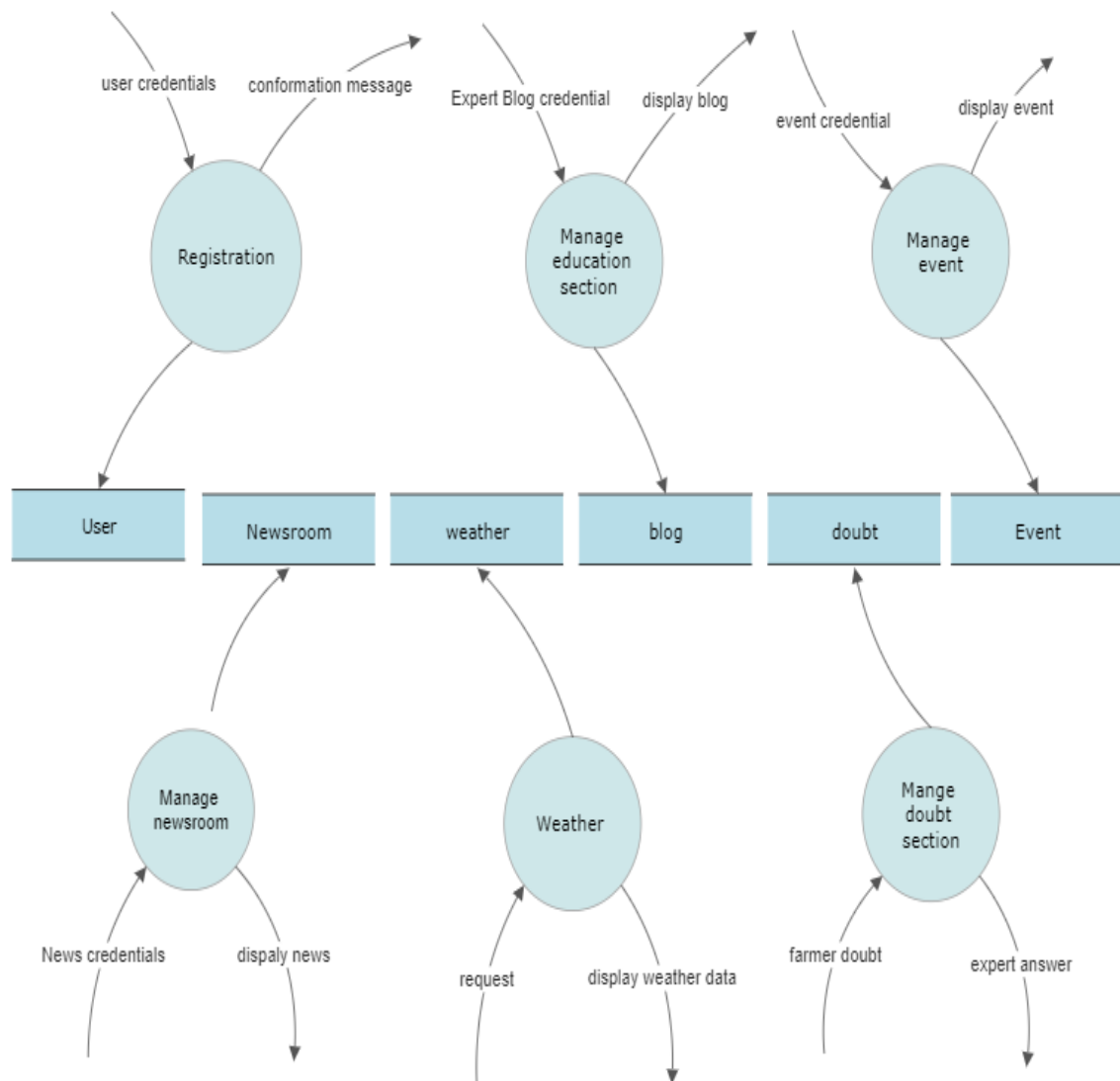
- The system must complete updating the databases options successfully every time the user requests such a process.
- All the functions of the system must be available to the user every time the system is turned on.

3. Design

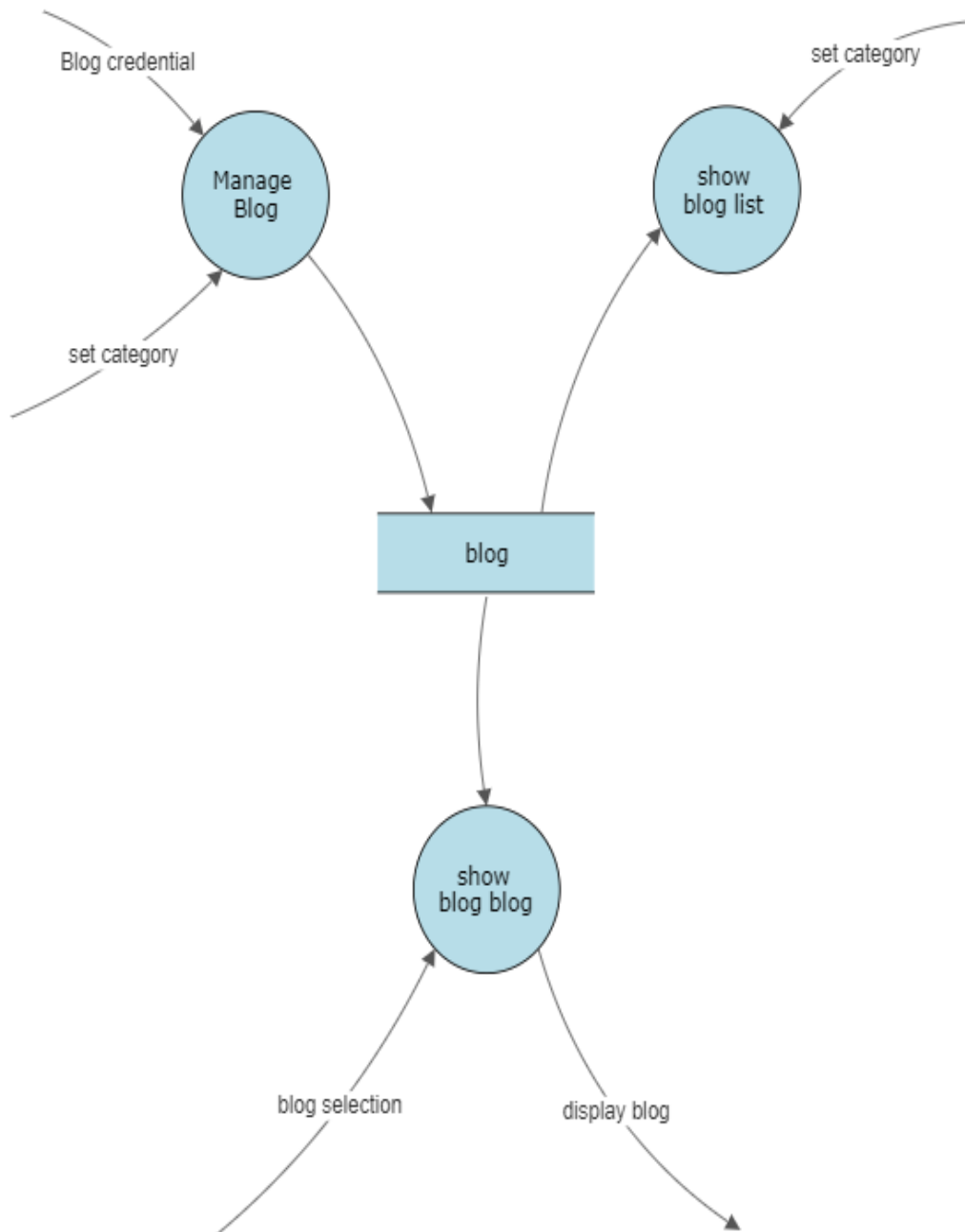
3.1 Data Flow Diagram



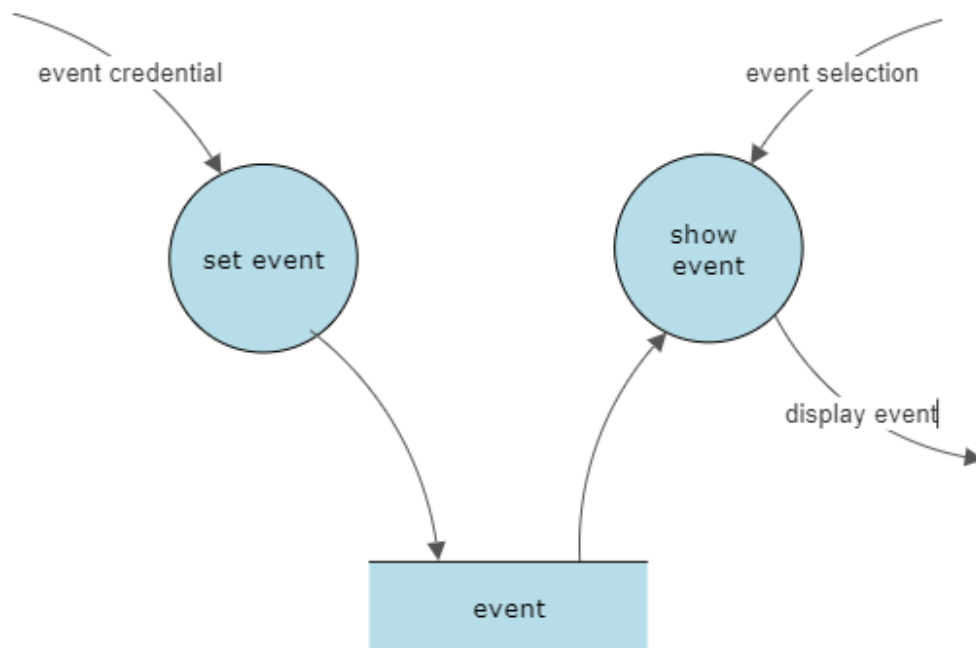
Level 0 : Context Diagram



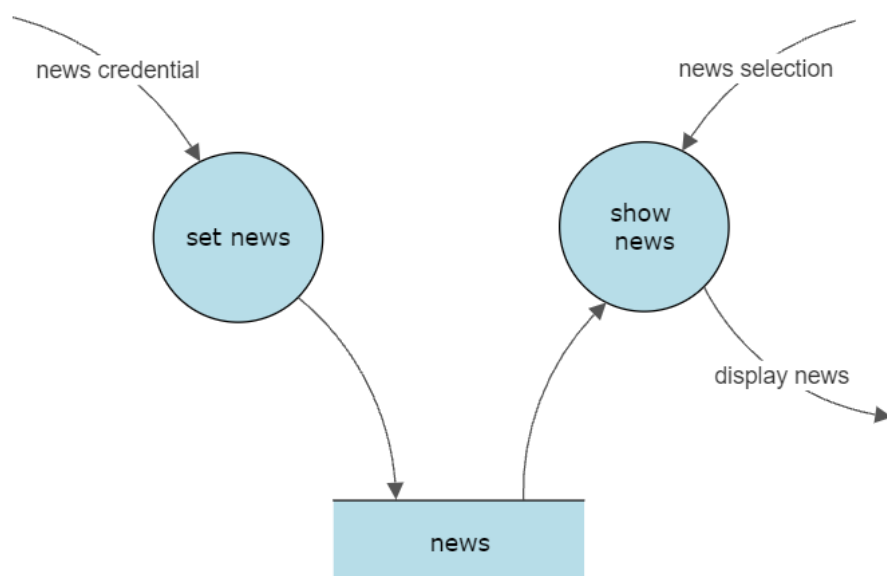
Level 1 : DFD



Manage Education section



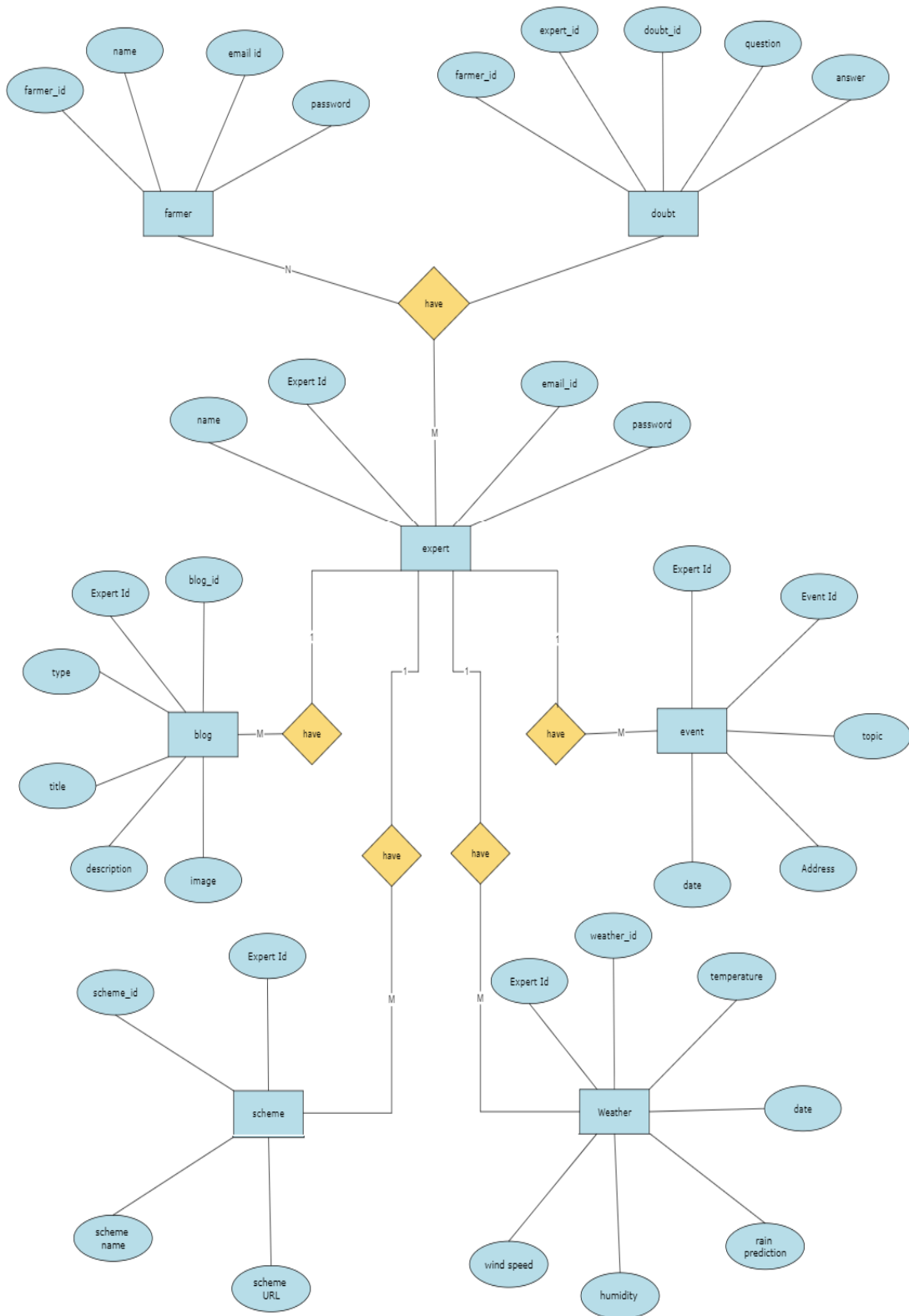
Manage Event



Manage Newsroom

Level 2 : DFD

3.2 E-R Diagram



3.3 Data Dictionary

Sr.No	Field Name	Data Type	Key	Unique	Required	Width	Description
1	Id	ObjetId	Primary	Yes	Yes	12 Bytes	Auto Increment
2	Name	Varchar		No	Yes	50	
3	Email	Email		Yes	Yes	50	Used as Username
4	Password	Varchar		No	Yes	20	

Blog							
Sr.No	Field Name	Data Type	Key	Unique	Required	Width	Description
1	Id	ObjetId	Primary	Yes	Yes	12 Bytes	Auto Increment
2	Title	Varchar		No	Yes	50	
3	Type	Varchar		No	Yes	50	
4	Description	Varchar		No	Yes	500	
5	ImageURL	Varchar		No	Yes	500	

Event							
Sr.No	Field Name	Data Type	Key	Unique	Required	Width	Description
1	Id	ObjetId	Primary	Yes	Yes	12 Bytes	Auto Increment
2	Event number	Number		No	Yes	50	
3	Title	Varchar		No	Yes	50	
4	Date	Date		No	Yes	Date	
5	address	Varchar		No	Yes	500	

Government Scheme							
Sr.No	Field Name	Data Type	Key	Unique	Required	Width	Description
1	Id	ObjetId	Primary	Yes	Yes	12 Bytes	Auto Increment
2	Title	Varchar		No	Yes	50	
3	pdfURL	Varchar		No	Yes	500	

Weather							
Sr.No	Field Name	Data Type	Key	Unique	Required	Width	Description
1	Id	ObjetId	Primary	Yes	Yes	12 Bytes	Auto Increment
2	City	Varchar		No	Yes	50	
3	temperature	Number		No	Yes	50	
4	Humidity	Number		No	Yes	500	

4. Implementation Details

4.1 Modules

The system consists of 4 basic modules namely

1. User Module
2. Education Module
3. NewsRoom Module
4. Event Module
5. Weather Module
6. Doubt Module

Each module consists of several methods to implement the required functionality. Implementation is done using Node Js and Express Js. Database used in these modules is MongoDB.

1. User Module:

This module handles total product sold by user and profile-modification functionalities.

2. Seller Module:

This module handles functionalities like add item to the system, update item and delete item from the system.

3. NewsRoom Module:

This module handles functionalities like handing event and government scheme etc

4. Weather Module:

This module handles functionalities like next 10 day weather prediction, current weather information.

5. Doubt Module:

This module handles functionalities used to solve farmer doubt.

Functional Prototype:-

1. User Module
2. Education Module
3. NewsRoom Module
4. Event Module
5. Weather Module
6. Doubt Module

5. Testing

Manual testing was performed in order to find and fix the bugs in development process.

sr.no	Test Scenario	Expected Result	Actual Result	Status
1	SignUp with Empty Field	System Should not save data on Database	System Gives error message in console	Success
2	SignUp with Incorrect Field	User should not able to Login	System Gives Alert box with please Enter Valid Details	Success
3	SignIn with Correct Field	User should be able to Login	User Logged in & appropriate Page Containing Video List is Displayed	Success
4	Add Blog , Government Scheme , event ,education blog CRUD operation Without Login	Uses should not able to open that Page.	User Couldn't Open page & Redirect to SignIn Page	Success
5	Farmer able to get information about Government Scheme , event ,education blog, weather detail without login	Uses should able to this information	Uses should able to this information	Success
6	Farmer not able to ask doubt without login	Farmer can't able to ask doubt without login.	Farmer can't able to ask doubt without login	Success

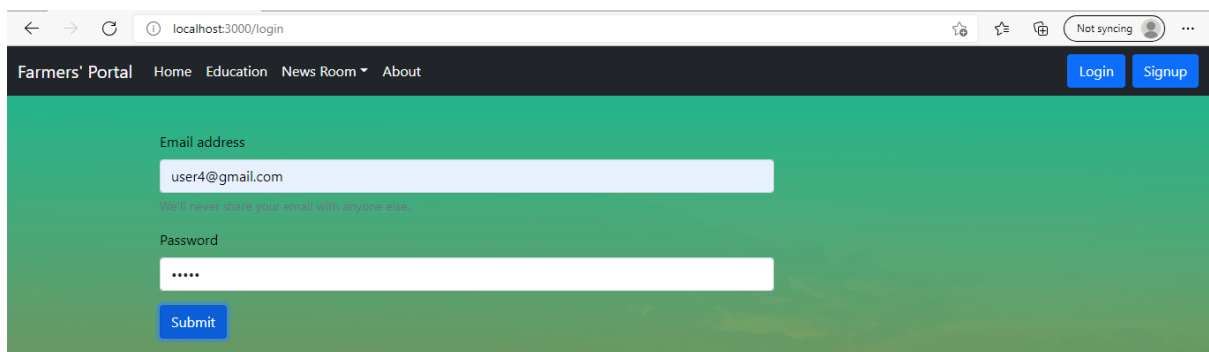
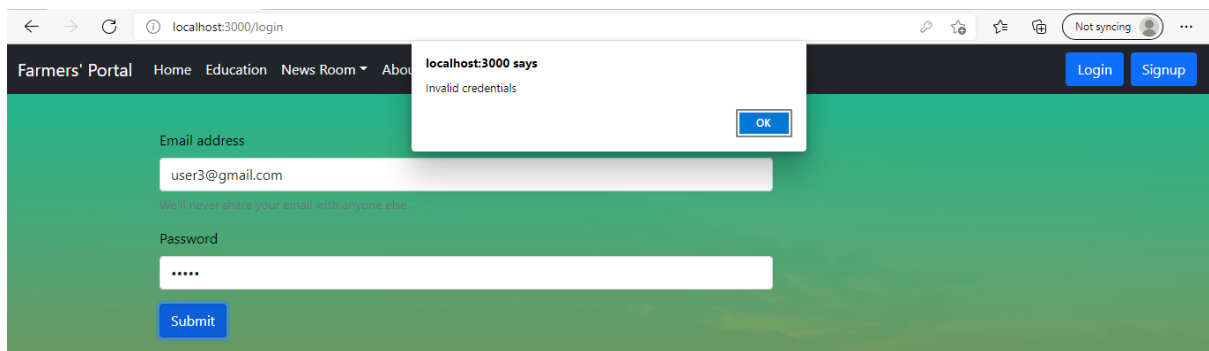
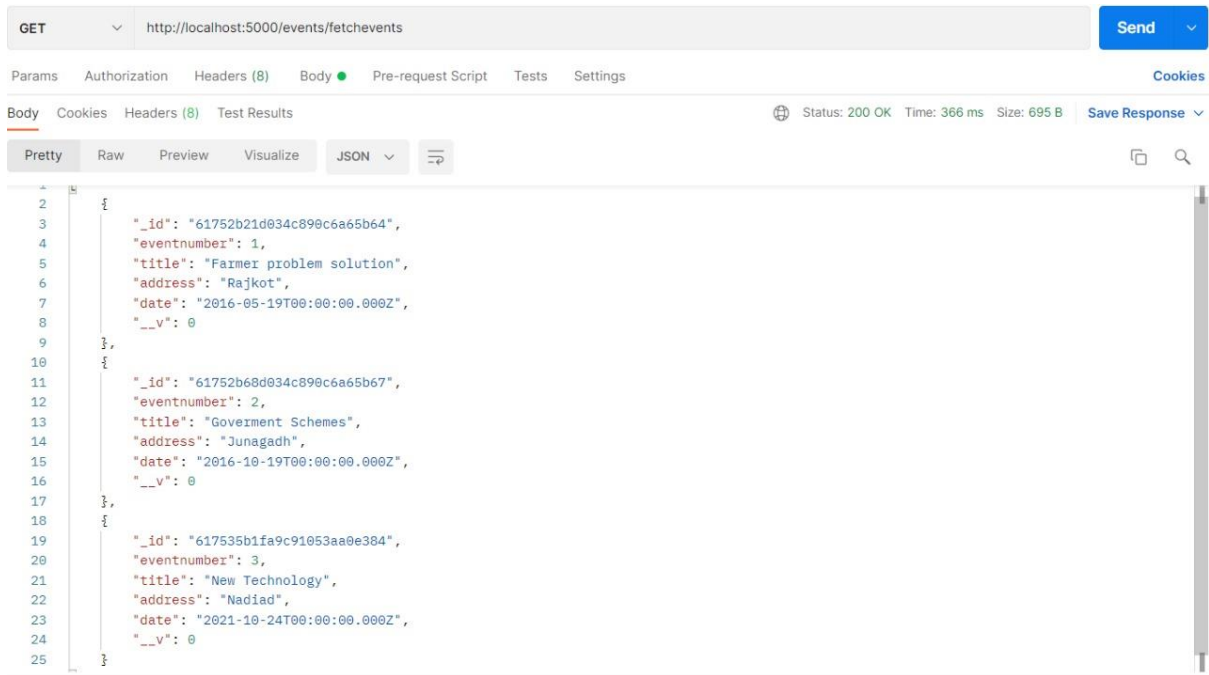
Testing Screen-shots :

The screenshot displays a REST client interface with the following components:

- URL Bar:** `http://localhost:5000/events/addevents`
- Method:** `POST`
- Send Button:** A blue button labeled "Send".
- Body Tab:** The "Body" tab is selected, showing a JSON payload in raw format:

```
1 {
2   "eventnumber": 3,
3   "title": "New Technology",
4   "address": "Nadiad",
5   "date": "2021-10-24"
6 }
```
- Response Section:** Shows a successful response with status `200 OK`, `684 ms` latency, and `695 B` size. The response body is displayed in "Pretty" JSON format:

```
17 {,
18   {
19     "_id": "617535b1fa9c91053aa0e384",
20     "eventnumber": 3,
21     "title": "New Technology",
22     "address": "Nadiad",
23     "date": "2021-10-24T00:00:00.000Z",
24     "__v": 0
25   }
26 }
```



← → ↻ ⓘ localhost:3000/signup ⌵ ⌵ ⌵ ⌵ Not syncing ⓘ ⋮

Farmers' Portal Home Education News Room ▾ About Login Signup

Name
user4

Email address
user4@gmail.com
We'll never share your email with anyone else.

Password
..... ⓘ

Submit

← → ↻ ⓘ localhost:3000/signup ⌵ ⌵ ⌵ ⌵ Not syncing ⓘ ⋮

Farmers' Portal Home Education News Room ▾ About Login Signup

Name

Email address

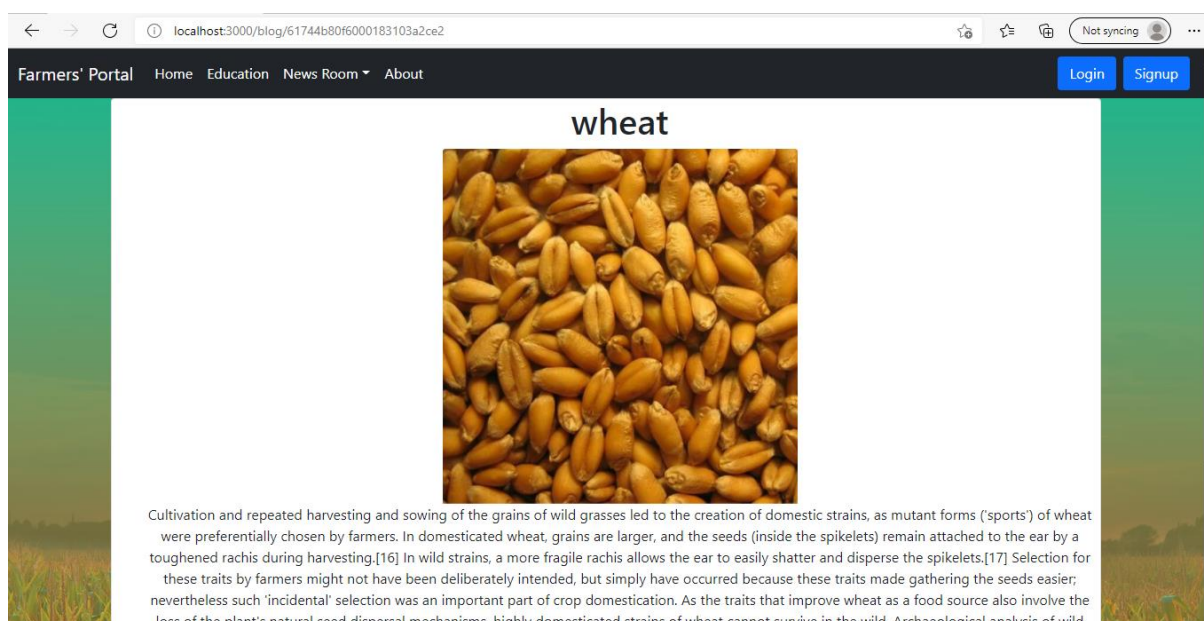
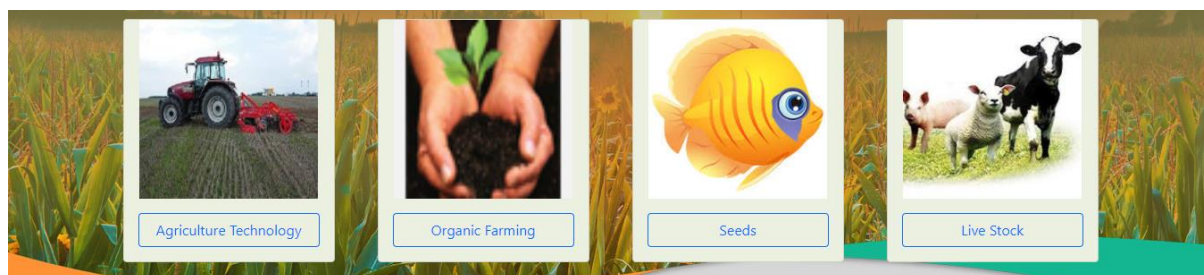
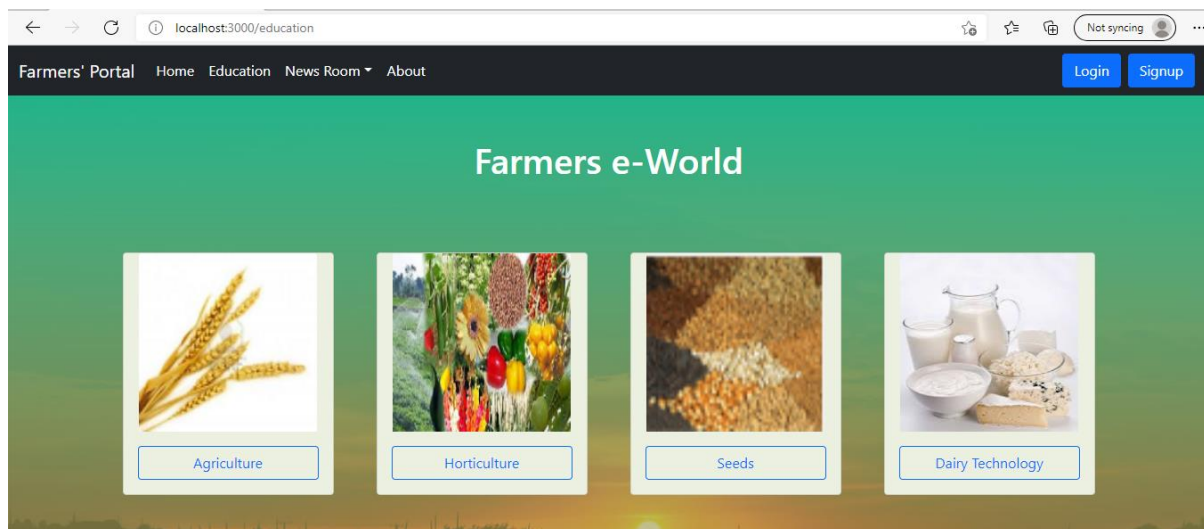
We'll never share your email with anyone else.

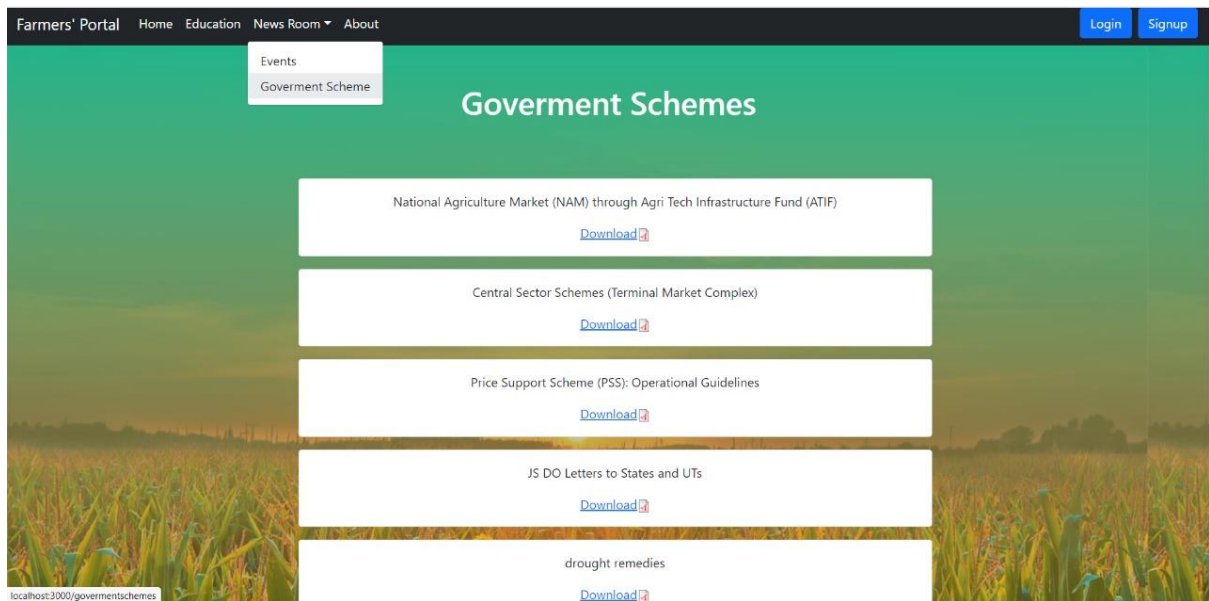
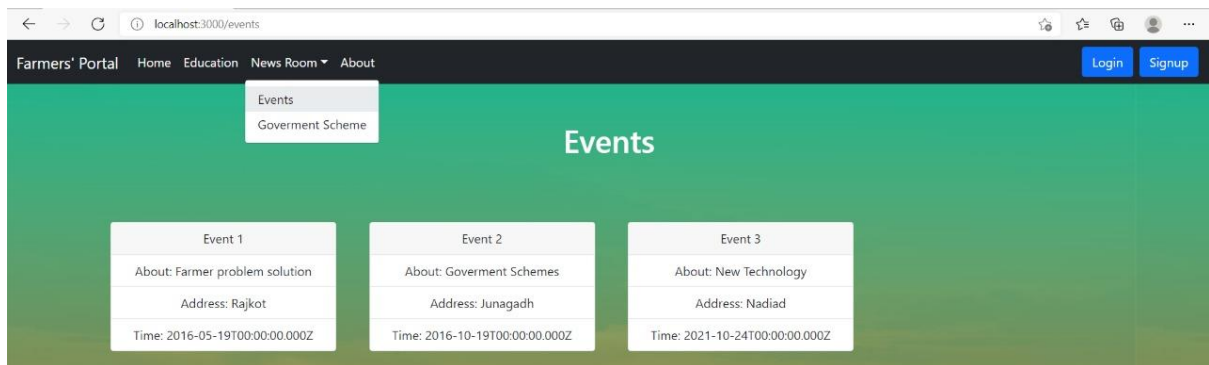
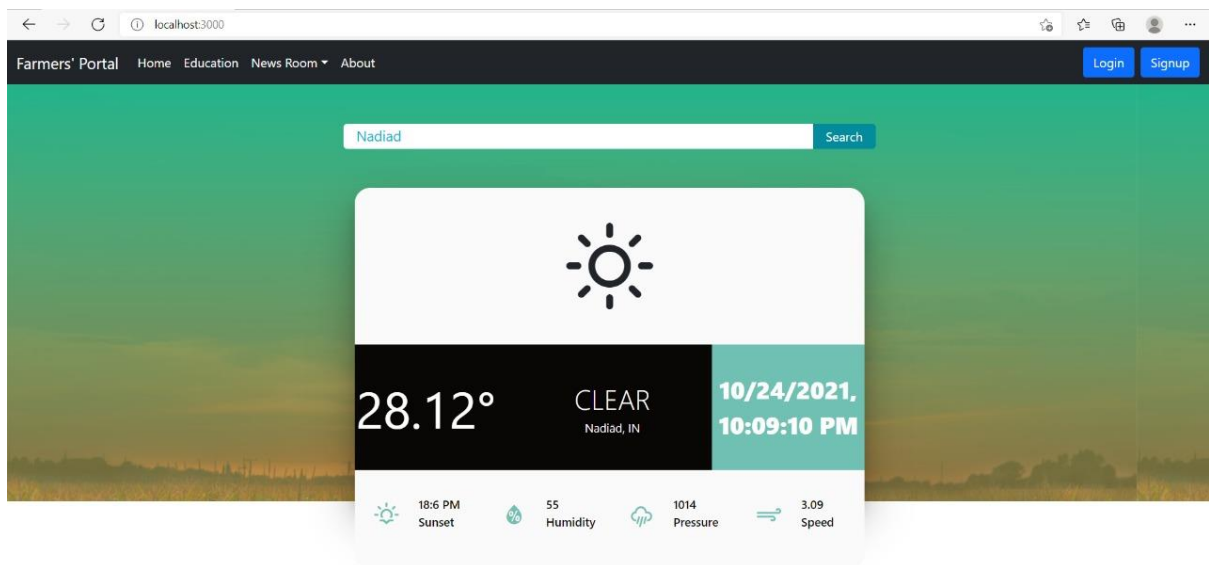
Password

Submit

ⓘ Please fill out this field.

5. Screen-shots





6. Conclusion

The func

tionalities are implemented in system after understanding all the

system modules according to the requirements. Functionalities that are

successfully implemented in the system are:

- User Registration Containing all the Necessary Validation on Field
- Login
- User Authentication
- Logout
- User can All of the Content Uploaded by Fellow Experts
- Expert can post his/her Own Content.
- Farmer can view all Expert Content.
- Farmer can ask doubt
- Expert can give answer

After the implementation and coding of system, comprehensive
testing

was Performed on the system to determine the errors and possible flaws in the system.

7.Limitations & Further Enhancement :

In our application we have only one admin which can be further extend. Currently doubt section is private, but We can make Doubt section as public and Farmer also can give answer. In educational blog farmer can ask question in blog itself. We can give live telecast in event.

8. Reference / Bibliography :

Following links & websites were Referred during the Development of this Project:-

- **Mozilla Developer Network**
- **React Framework**
- **MongoDb**
- **Node**
- **Npm**
- **Github**
- **Stackoverflow**
- **Bootstrap**
- **w3schools**
- **Weather API**
- **ExpressJs**