The

Project Report

on

**Online Farmer Education System**

By

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**Subject: Advance Technology**

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# 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

# 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.

1. **Reliability:**

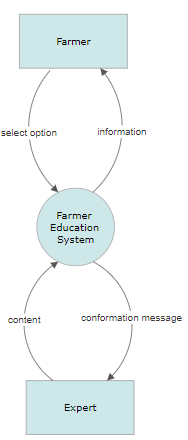
* The system should not update the data in any database for any failed processes.
* The system is able to update and delete information which is provided by system user very easily.

1. **Performance:**

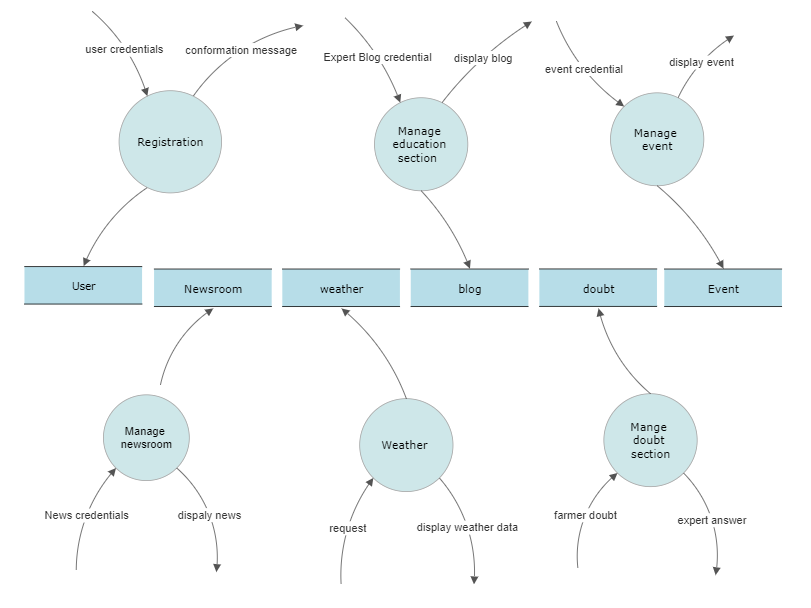
* The system must complete updating the databases options successfully every time the user requests such a process.
* All the functions of the system must be available to the user every time the system is turned on.

# 3. Design

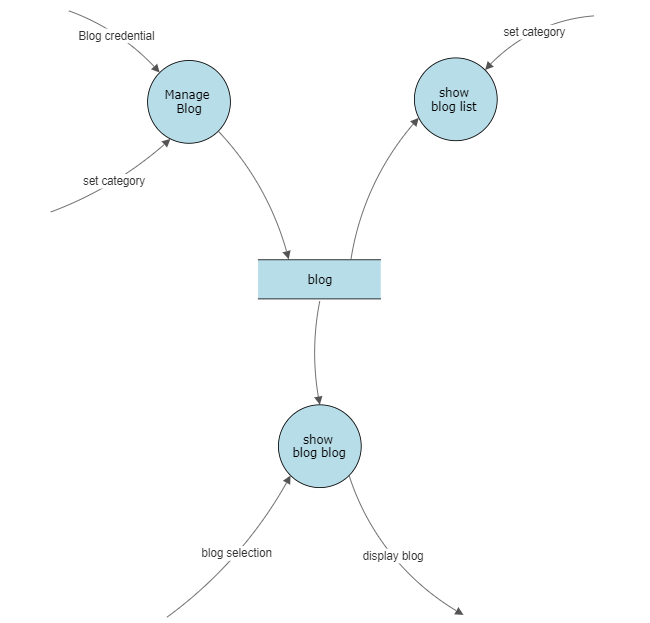
**3.1 Data Flow Diagram**



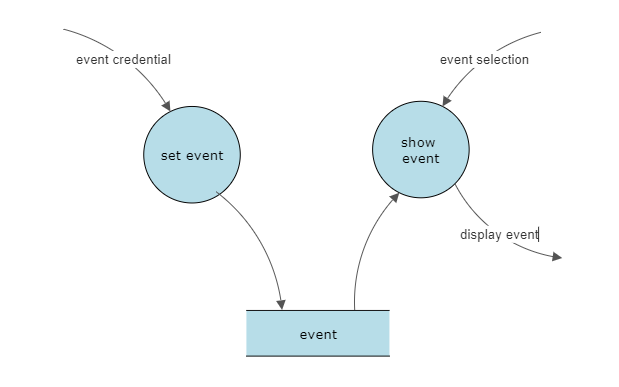
**Level 0 : Context Diagram**



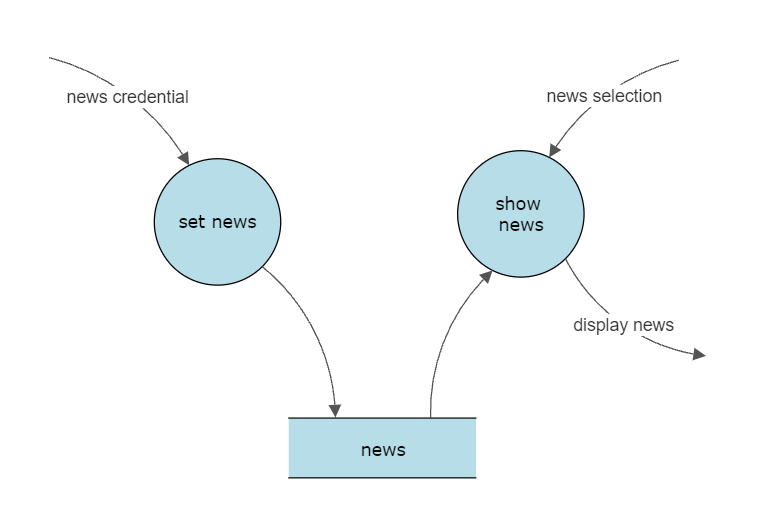
**Level 1 : DFD**



Manage Education section



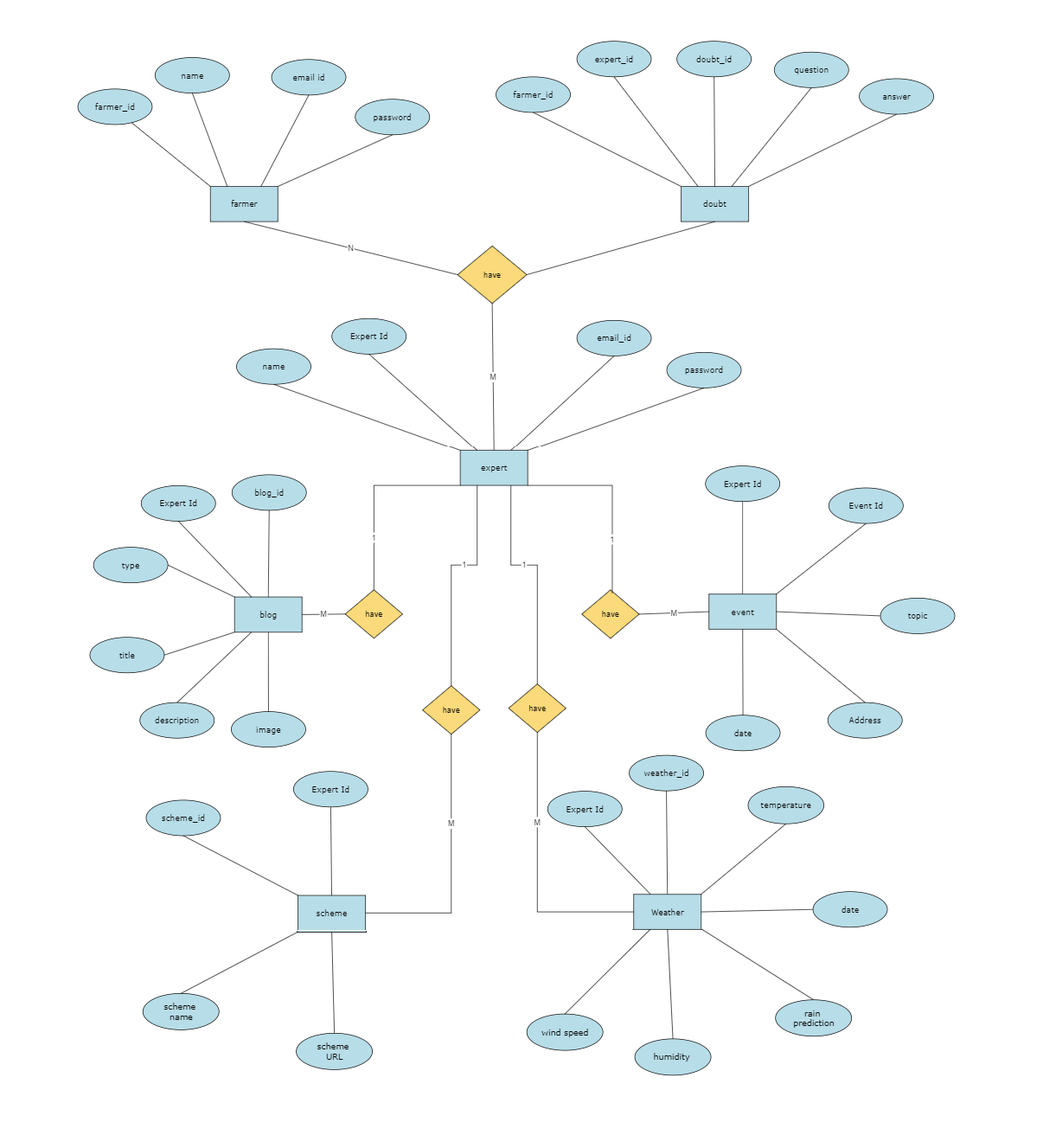
Manage Event



Manage Newsroom

**Level 2 : DFD**

* 1. **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 |  |
|  |  |  |  |  |  |  |  |

# 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.

1. **Seller Module:**

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

1. **NewsRoom Module:**

This module handles functionalities like handing event and government scheme etc

1. **Weather Module:**

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

1. **Doubt Module:**

This module handles functionalities used to solve farmer doubt.

**Functional Prototype:-**

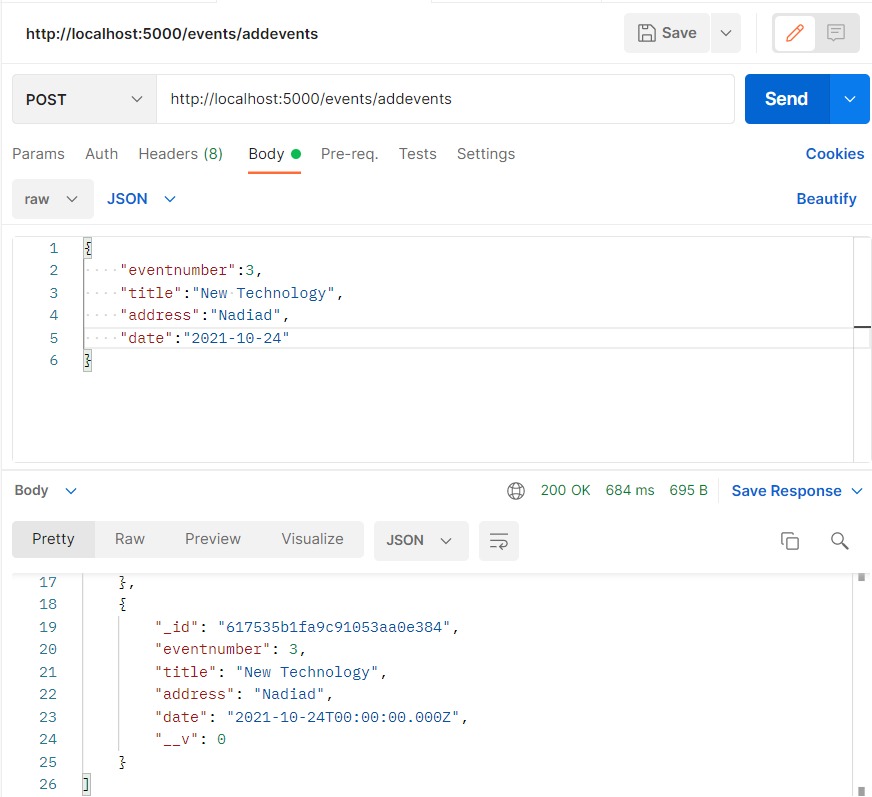
1. User Module
2. Education Module
3. NewsRoom Module
4. Event Module
5. Weather Module
6. Doubt Module

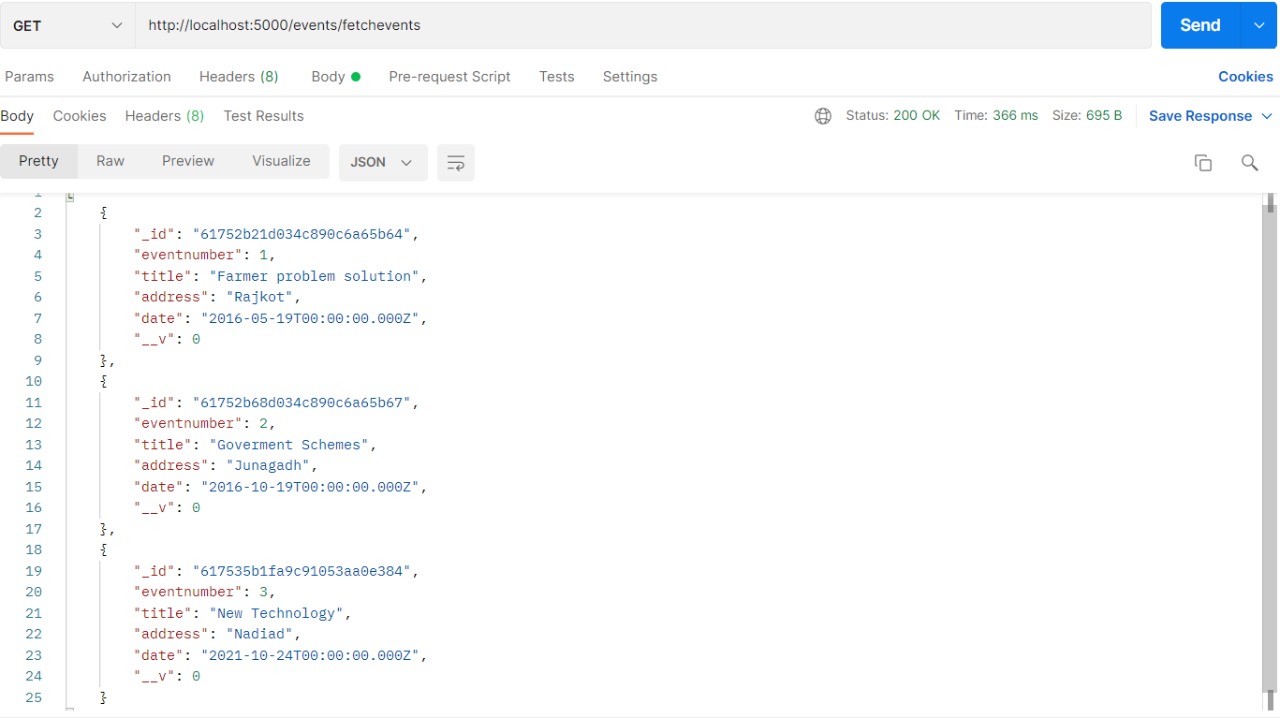
**5. Testing**

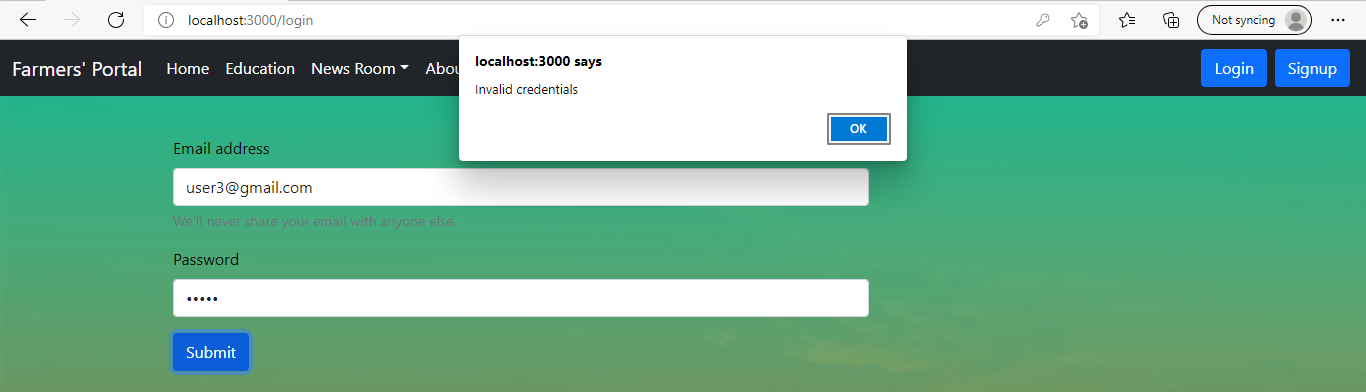
Manual testing was performed in order to find and fix the bugs in development process.

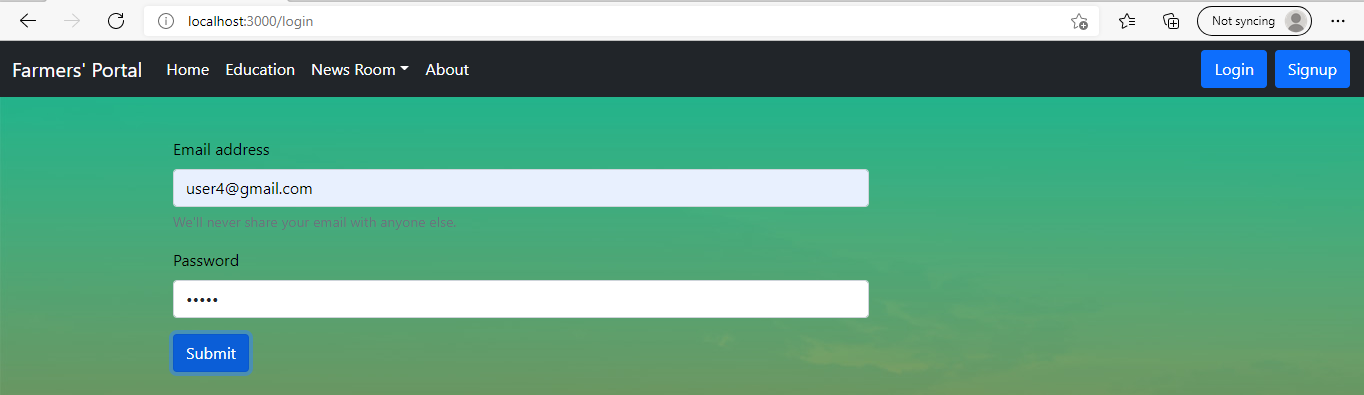
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **sr.no** | **Test Scenario** | **Expected Result** | **Actual Result** | **Status** |
| 1 | SignUp with Empty Field | System Should not save data on Database | System Gives error message in console | **Success** |
| 2 | SignUp with Incorrect Field | 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** |

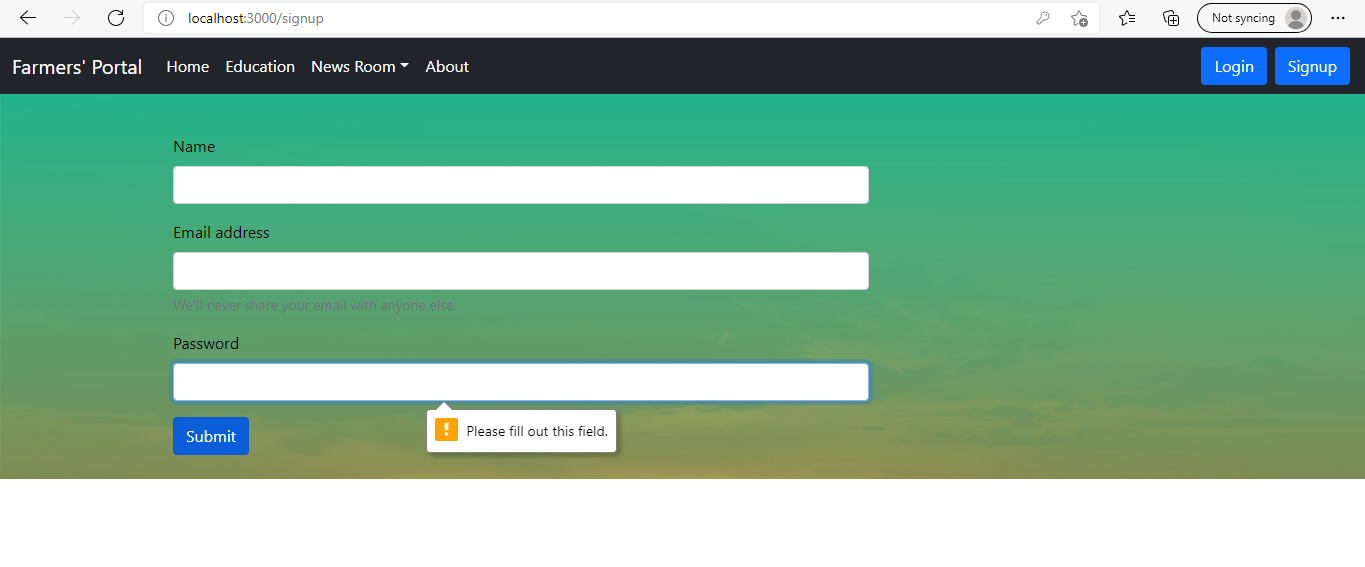
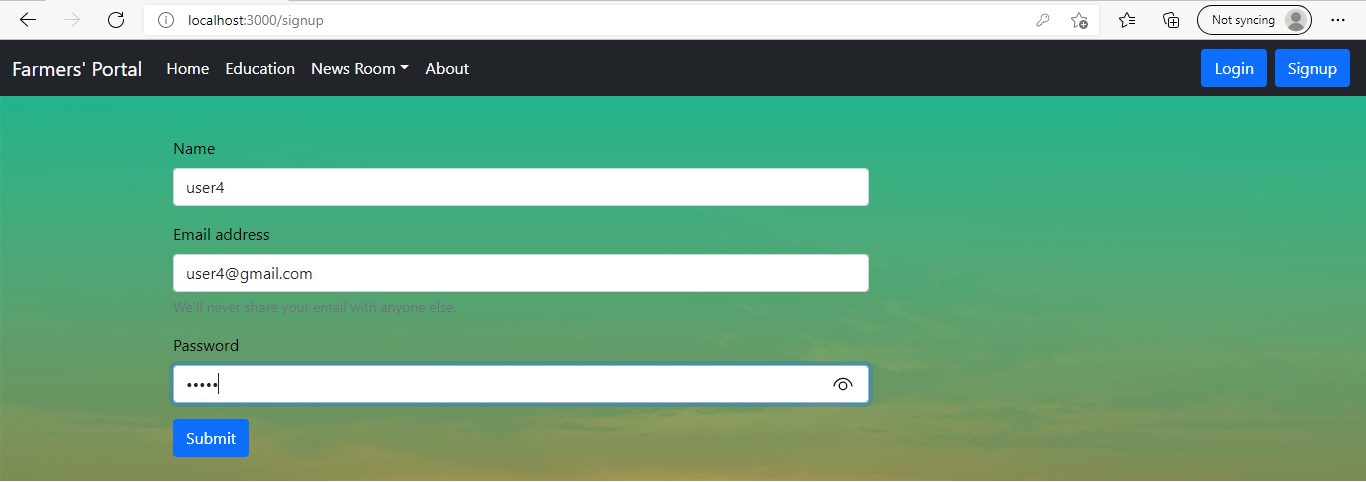
**Testing Screen-shots :**



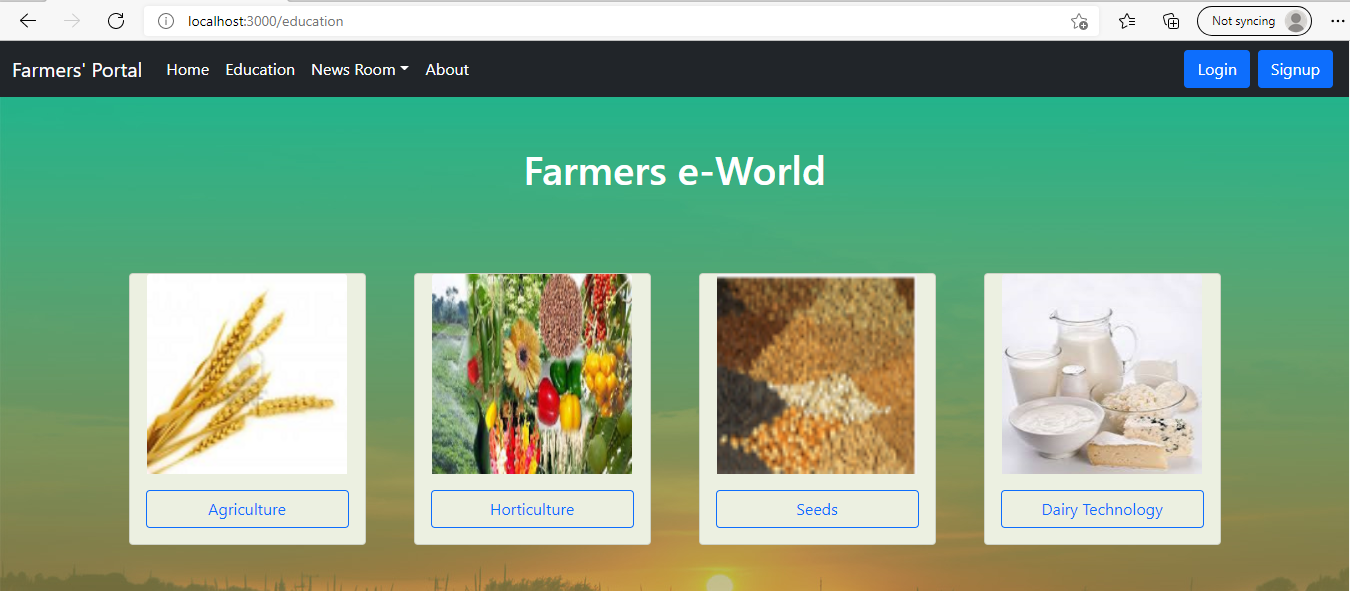


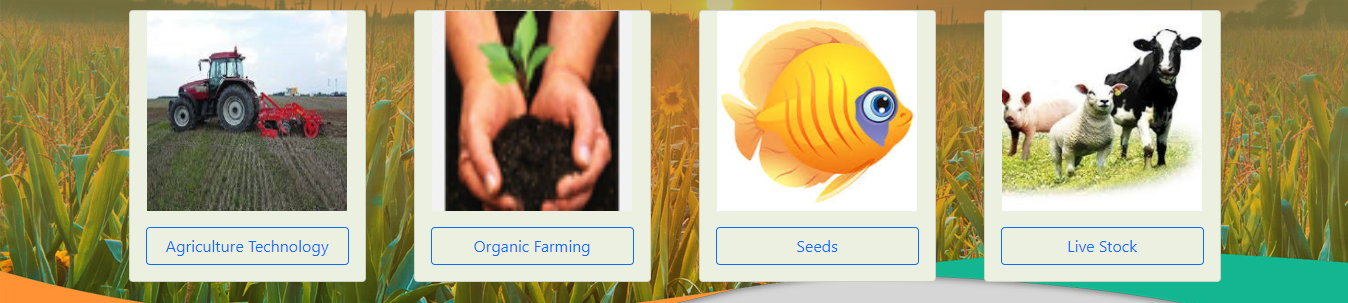


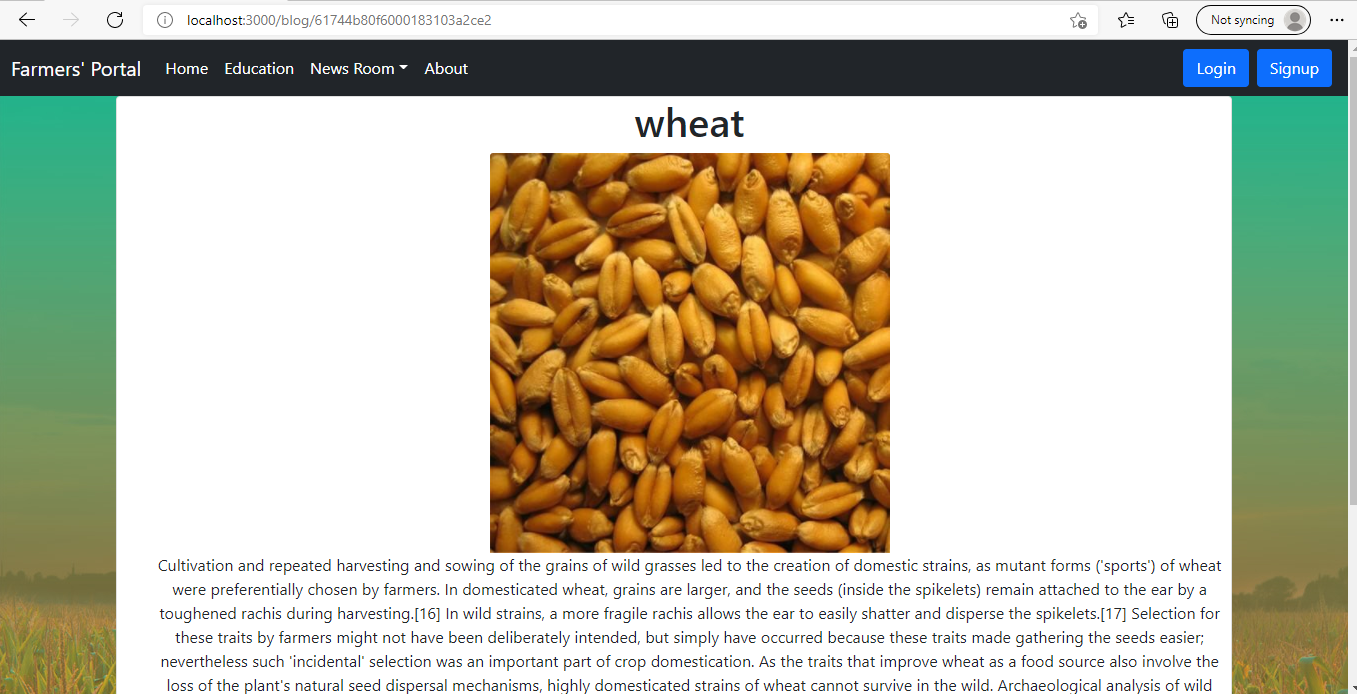


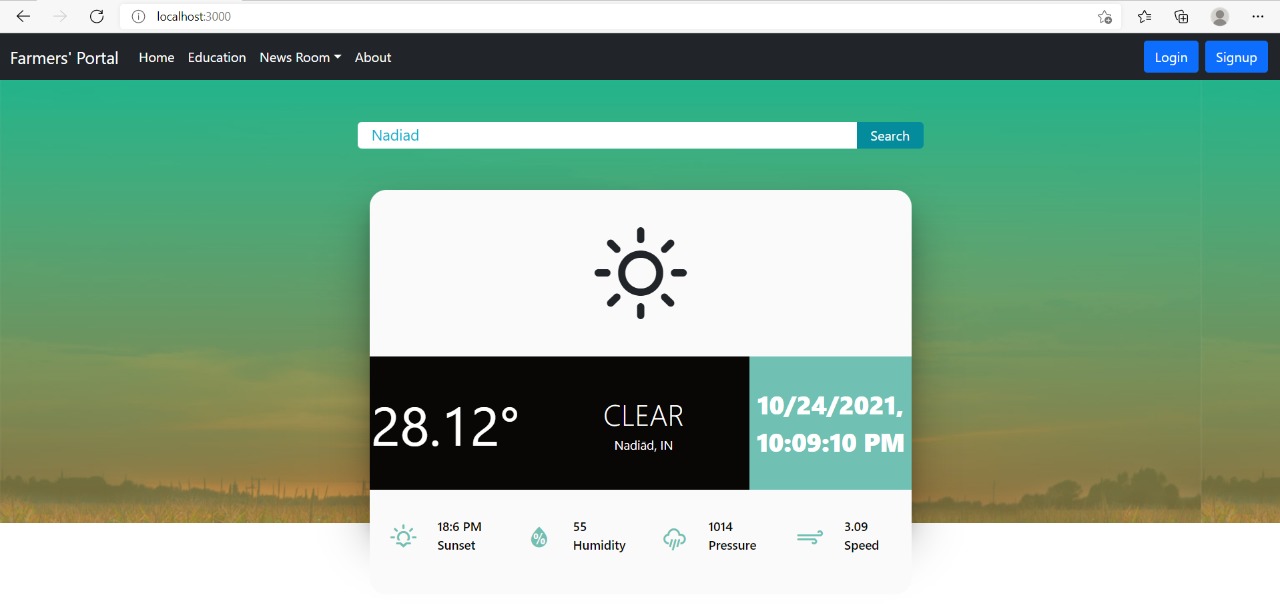


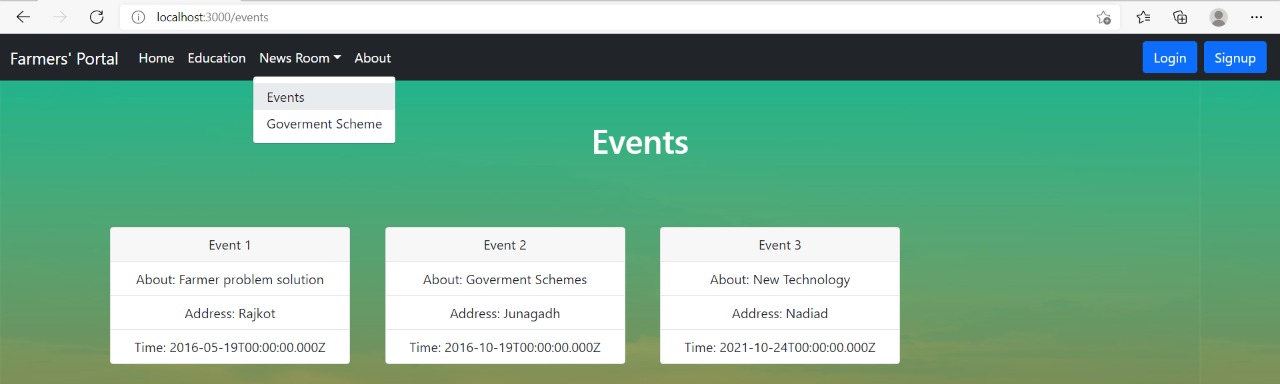
5. Screen-shots

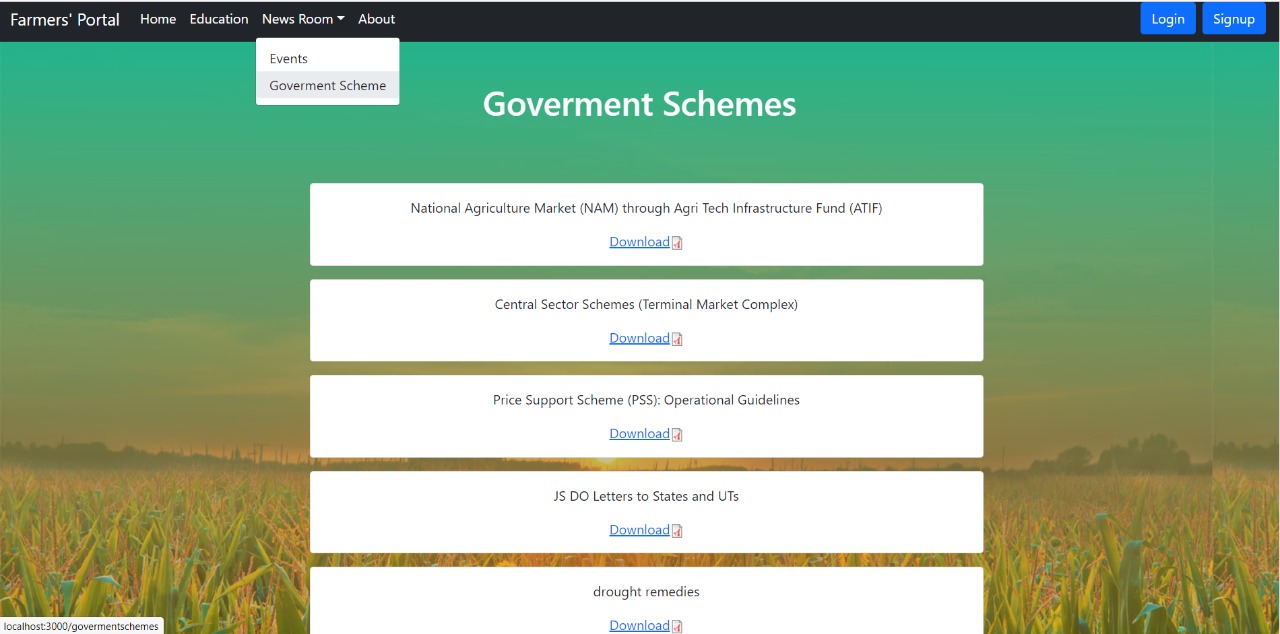












**6. Conclusion**

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.

1. **Limitations & Further Enhancement :**

In out 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.

1. **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**