

## **1. INTRODUCTION:**

The net portal for farmer's to increase sugarcane manufacturing utility is advanced to provide the facts about the sugarcane manufacturing and occasions to the farmers and college students. Era has grown so swiftly so in preference to journeying a couple of fields, that's time eating, farmers can visit online portal for their queries.

Farmer's opt to see on-line portal wherein they could get many answers for their queries. They could visit the net portal 24/7.essentially, there are modules one is the admin module and other for the farmer.

The admin has the get entry to exchange or update something inside the utility like adding, deleting or enhancing of the activities and queries of farmers whereas the farmer has to sign in to the software and simplest then may be granted access to view and get answers from the utility.

### **1.1 Objective:**

To maximize the sugarcane production per unit of land, water and fertilizer use through various cane department programmers.

Development of improved cane varieties as per need of sugarcane growers and sugar mills and to development various technologies for sugarcane cultivation.

To provide information about the latest advanced sugarcane cultivation techniques and imparting Training to sugarcane farmers, staff/officers of sugar mills and cane department.

Providing agriculture inputs, loans and grants to sugarcane farmers, according to their need.

To organize sugarcane crop competitions in order to maximize sugarcane yields per unit area and to assess maximum cane yields in sugar mill areas.

To carry out and promote trade of sugar and it's by products.

To represent to Government and other authorities on sugar policy

To undertake market studies related to sugar and it's by products

## **2. LITERATURE SURVEY:**

### **2.1 Existing System:**

Within the current machine, farmers have to visit multiple agriculture workplace or fields to know the information about sugarcane manufacturing. it's miles hard to move and gather the facts from every other farmer or agriculture officer, on occasion they'll now not get the perfect solution as they wanted and its take long term. It can waste their entire day and some farmers can't journey because shipping unavailability.

In conventional forming approach, one agriculture officer or farmer can't show or provide all of the records about sugarcane production. All farmers can't get the solution at time they have to wait in queue.

### **Disadvantages of Existing system:**

- Low Yield of Sugarcane
- Short crushing season
- Fluctuating Production Trends
- Low rate of recovery
- High cost of Production
- Small and uneconomic size of mills

**2.2 Proposed System:**

In the proposed gadget, this sugarcane grasp framework is a web and versatile utility that covers Cultivation Practices, Sustainable Sugarcane Initiative, Irrigation control, and Nutrient management for Sugarcane, Crop safety for Sugarcane, Farm Implements for Sugarcane, put up Harvest era for Sugarcane, advertising and marketing for Sugarcane, institutions and Schemes for Sugarcane and associated hyperlinks for Sugarcane.

**Advantages of the proposed system:**

- Instant Energy Booster.
- Diuretic in Nature.
- Fights Cavities & Bad Breath.
- Improves Digestion.
- Cures Febrile Disorder.
- Skin Care.
- Bolster Immunity.
- Heals Wound.
- Stronger Bone.

## **2.3 Feasibility Study:**

A feasibility study is an analysis used to measure the ability expectation to complete a project successfully, including all relevant factors that affect it, such as operational, technical, and economical. A feasibility study is used to determine the positive and negative outcomes of the project.

The system has been tested for feasibility in the following points.

### **2.3.1 Economical feasibility:**

Economic analysis technique is used for evaluating the effectiveness of the proposed utility in terms of value and availability. Even though the value of enforcing the software.

### **2.3.2 Technical feasibility:**

The technologies used in the implementation of this application are easily available in the market. Ionic framework along with CSS and HTML are used to design the front-end part. For the database storage it used Cake PHP framework and the MySQL database. All the mentioned technologies are of great use and are widely being used in the industries.

### **2.3.3 Operational feasibility:**

It relates to human organization and political aspects. The developed system interface is user friendly and Squires no special knowledge to operate it.

**3 SOFTWARE REQUIREMENT SPECIFICATION:****3.1 Introduction:**

This document describes the software requirements, hardware requirements, purpose, and the nature of the software which are developing.

**3.1.1 Purpose:**

The purpose of this project is to provide event management system and one-to-one communication between farmer and admin.

**3.1.2 Scope:**

- Farmer should be able to register/ login into the system.
- Using mobile app farmer should be able ask the question to the in the text format.
- Admin should be able to login in web application and assign chat session to staff.
- Staff should be able to login and reply to questions asked by farmer in text format.
- Farmer/Staff should be able to end the chat session.
- Admin should be able to add/update/delete the events
- Staff/Students should get details of future/past event details
- Farmer has to be able to get the data about sugarcane farming/enterprise by using professors.
- Admin have to be capable of add/replace/delete the occasions
- Body of workers/students have to get information of destiny/past event info Meant Audiences

### **3.2 System Specification:**

#### **3.2.1 Hardware Requirements:**

- Processor : Pentium 4 or Above
- RAM : 512 MB or Above
- Storage Capacity : 10 GB free space in hard disk

#### **3.2.1 Software Requirements:**

- Operating System : Windows XP/Windows 10/Windows 8
- Web Server : WAMP Server
- IDE : Microsoft Visual Code
- Web Browser : Google Chrome, Internet Explorer Firefox, etc.
- Database : My SQL
- Designing Tools : HTML, CSS, Bootstraps, JQuery
- Server-Side Programming language : Angular JS, Ionic Framework, Node.js.
- Back End : CakePHP Framework, MySQL.

### **3.3 Requirement Specification:**

#### **3.3.1 Functional Requirements:**

This area of the record represents various capacities gave by the application. So as to utilize this application, the User ought to have a cell phone which runs on Android Mobile Operating System, with a functioning web association. Likewise the web server of the information source ought to be ready for action as information is recovered from it once the client utilizes this capacity.

#### **Authentication**

- Registration
- Login
- Verification
- Update Profile

#### **Admin**

- Categories
  - Add category
  - List categories
- Articles
  - Add articles
  - Update article
  - List articles
  - Display article
- Events
  - Add events details with following details

- Title
- Description
- Events dates
  - From
  - To
- Edit event details
- List event details
- Delete event details

**Staff**

- Registration/Login/Logout
- View event details

**Students**

- View event details
- Receive event notifications



**3.3.2 Nonfunctional Requirements:**

Non-Functional Requirements is a very essential part of the application development process as it determines the constraints set to achieve the goal.

**Below are the nonfunctional requirements of the system.**

- **Performance**: The response shall be very quick and no delay should occur. It should all so be user friendly; the response is quick using a live chat module.
- **Safety**: The information/data sent through servers should be maintained of both farmers and customers.
- **Reliability**: Every-time the user requests it should produce correct output. All the sensitive info should be kept safe and secure.
- **Usability**: The application is very simple friendly and interactive and is easily understandable by both farmer as well as customer.
- **Security**: The application also consist the Login and Signup feature which enables only registered user can access the application and get the required information about the available products.
- **Availability**: If the internet services goes offline during transmission even then the user can view the details required for them because once the application is installed on phone makes it easy for user.

### **3.4 Tools and Technologies used:**

#### **3.4.1 Tool:**

##### **Microsoft Visual Studio:**

- Visual Studio, an Integrated Development Environment (IDE) was created by Microsoft to create GUI, web applications, web administrations, cloud and so on., utilizing this IDE we can compose code in C, C#, python, JavaScript and so on there are 3 adaptations accessible: Community, Professional and Enterprise. Network form is allowed to download and get to.

General Features include:

- Code Editor
- Debugger
- Designer

##### **FileZilla:**

- FileZilla is a free programming used to move documents over web. It is a FTP customer and utilized by website admins from all over world. This product gives security answers for scramble and ensure information while interfacing with the server.

General highlights include:

- Ease of utilization and easy to understand interface.
- Multi-language support.
- Supports move of enormous records and move speed limit.
- Keep-alive choice, remote document search and altering and system setup

### 3.4.2 Technologies:

- **Angular JS:**

Angular is an open source Model-View-Controller system which is like the JavaScript structure. Angular JS is presumably one of the most famous cutting edge web structures accessible today. This framework is used for developing generally Single Page applications. This structure has been created by a gathering of engineers from Google itself.

In view of the sheer help of Google and thoughts from a wide network gathering, the system is constantly stayed up with the latest. Additionally, it generally fuses the most recent advancement slants in the market.

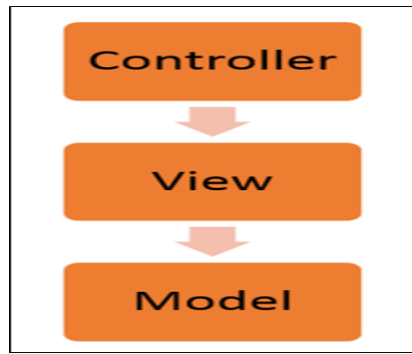
#### **Highlights of Angular JS:**

Rakish has the accompanying key highlights which makes it one of the remarkable structures inside the market.

- **MVC** – The structure is based on the renowned idea of MVC (Model-View-Controller). This is an arrangement configuration used in all front line web applications. This example depends on parting the business rationale layer, the information layer, and introduction layer into isolated segments. The division into various segments is done with the goal that everyone could be overseen all the more without any problem.
- **Data Model Binding** – You don't need to create extraordinary code to attach data to the HTML controls. This should be possible by Angular by simply including a couple of scraps of code.
- **Writing less code** – When doing DOM control a great deal of JavaScript was required to be composed to plan any application. Be that as it may, with Angular, you will be astounded with the lesser measure of code you have to compose for DOM control.
- **Unit testing prepared** – The originators at Google made Angular just as developed a testing framework called "Karma" which helps in organizing unit tests for Angular JS applications.

- **Angular JS Architecture:**

Angular.js follows the MVC design, the graph of the MVC structure as demonstrated as follows. Angular JS Architecture Diagram.



- The Controller addresses the layer that has the business justification. Customer events trigger the limits which are taken care of inside your controller. The customer events are a bit of the controller.
- Views are used to address the acquaintance layer which is given with the end customers
- Models are used to address your data. The data in your model can be as direct as essentially having rough insistences. For example, in case you are keeping up an understudy application, your data model could essentially have an understudy id and a name. Or then again it can moreover be many-sided by having a sorted out data model. If you are keeping up a vehicle ownership application, you can have structures to portray the vehicle itself to the extent its engine limit, seating limit, etc.

- **Ionic Framework:**

Ionic Framework is an open-source, cross-platform HTML5 development framework for building hybrid mobile applications that utilizes mobile platform's Web View.

**Benefits of Ionic Framework:**

- Easy to adopt-It is easy to learn and develop applications using ionic framework if the developer knows CSS, HTML and JavaScript.

- Cross-platform development- The ionic framework supports UWP (Universal Windows Platforms) for developing apps in Windows 10 and also supports android 4.1 and above and iOS 7 and above.
- User Interfaces- The themes and components are highly customizable in ionic and allows components to the platforms to adapt themselves.

- **Node.js:**

- Node.js is an open-source, cross-stage JavaScript runtime condition.
- It runs on a solitary procedure without making another string for each solicitation.
- Node.js forestalls JavaScript code from obstructing by giving a lot of no concurrent I/O natives in its standard library. Its libraries are composed utilizing the non-blocking ideal models which make special case to the blocking conduct.
- While performing I/O activities like perusing from the system, getting to a database or the record framework, rather than squandering CPU cycles it continues the tasks when reaction returns.

- **CakePHP Framework:**

CakePHP is similarly an open-source structure for PHP which is proposed to make developing, deploying and keeping up applications with no issue. It relies upon configuration like-MVC, which guarantees typical separation of business reason from data and presentation layers.

**Highlights include:**

- Open-source stage it is an open-source headway program that has no license and rehashing charges.
- Easily extendable-It licenses reusable bit of code that can be reused for more than one foresees.
- Security-It gives worked in security and confirmation which guarantees the security of the application more than some different frameworks.
- MVC plan the model assistants in data building, find in data rendering and controller to logically respond to events to convey functionary that is all in all right to the structure.

**3.4.3 Database:****MySQL:**

MySQL is an open-source database by and large used for the progression of online applications. It is reliable and easy to use. MySQL is the database management system for developing web applications. It means a structured query language. It is a widely used database in web applications.

MySQL is defined as an open-sourced database management system. It writes the queries. It is distributed, developed by Oracles Corporation. It supports all operating systems. It is used as a backend for a database to accumulate the data. MySQL runs on virtually all platforms, including Linux, UNIX, and Windows. Although it can be used in a wide range of applications. MySQL is most often associated with web applications.

**XAMPP Server:**

XAMPP is an open source web server arrangement software developed by Apache. This software package contains distribution for Apache server, Maria DB, PHP and Perl. XAMPP is used to test your website before uploading to the web server. We can test MYSQL, PHP and Perl project using XAMPP on your local computer.

The utilize of XAMPP is to test the clients or your site some time recently uploading it to the farther web server. This XAMPP server computer program gives you a reasonable environment for testing MYSQL, PHP, Apache, and Perl ventures on the neighborhood computer.

### **3.4.4 Designing Tools:**

#### **HTML:**

HTML is a benchmark markup language that creates different web pages. The code in HTML is in the pattern of tags. It uses tags fenced-in brackets like <html>. HTML tags commonly written in duo like <h1> and </h1>. Here first is wont to open the tag, and the second one is to close the tag.

To read the HTML files, we use browsers, called web pages. Browsers are not displaying the HTML tags. It executes the HTML files. HTML does an essential role in web development. It represents the websites semantically and illustrates the structure.

#### **What is HTML?**

- HTML is Hypertext Markup Language.
- HTML renders the web pages.
- It includes a group of different tags.
- Tags are used to create pages in web development.

#### **CSS:**

CSS stands for Cascading Style Sheets, it is used to format the web page layout. Css helps web developer to create similar look for all the pages of the website. Instead of defining the style for every table or text within the web page you can create one css file and by applying it for the table or text it will show the effectfor all wherever applied.

For example developer wants to have text with size 15pt to 20pt in entire website instead of putting size everywhere developer will create css file with required design and apply to it, this will show effect wherever necessary. CSS is responsible for the look and feel of the webpage. Using css we can put color to the text, change font style, handle spacing between the paragraph, table designing, background design, make variation in display etc. CSS was created to work in conjunction with markup languages like HTML.

**JavaScript:**

JavaScript was at first developed by Brendan Eich of Netscape under the name Mocha, which was later renamed to LiveScript, to finally being called JavaScript. It is an interpreted programming language. JavaScript is essentially used as a client side programming language implemented as part of a web browser to allow developers an improved way to implement user interface and dynamic features in web pages, although there are implementations of JavaScript on the server side the popularity of the language is due to the client side implementations alone. JavaScript can also be found outside web applications, JavaScript was designed with a similar syntax as C, although it takes names and conventions from the Java programming language. However, despite the name Java and JavaScript are not related and have different semantics and purposes.

- JavaScript is a lightweight, interpreted programming language.
- Designed for creating network-centric applications.
- Complementary to and integrated with Java and HTML.

**Bootstrap:**

Bootstrap is a free and open-source front conclusion improvement system for the creation of websites and web apps. The Bootstrap system is built on HTML, CSS, and JavaScript (JS) to encourage the advancement of responsive, mobile-first locales, and apps. Bootstrap incorporates client interface components, formats, and JS instruments, at the side the system for implementation. Bootstrap is the foremost prevalent HTML, CSS, and JavaScript framework for developing a responsive and mobile-friendly website. It is free to download and use. It may be a front-end system utilized for simpler and quicker web development. It incorporates HTML and CSS based design templates for typography, shapes, buttons, tables, route, modals, picture carousels, and numerous others. It can moreover utilize JavaScript plug-ins. It encourages you to form responsive designs.



## 4. DESIGN DOCUMENTS:

### 4.1 ER-Diagram:

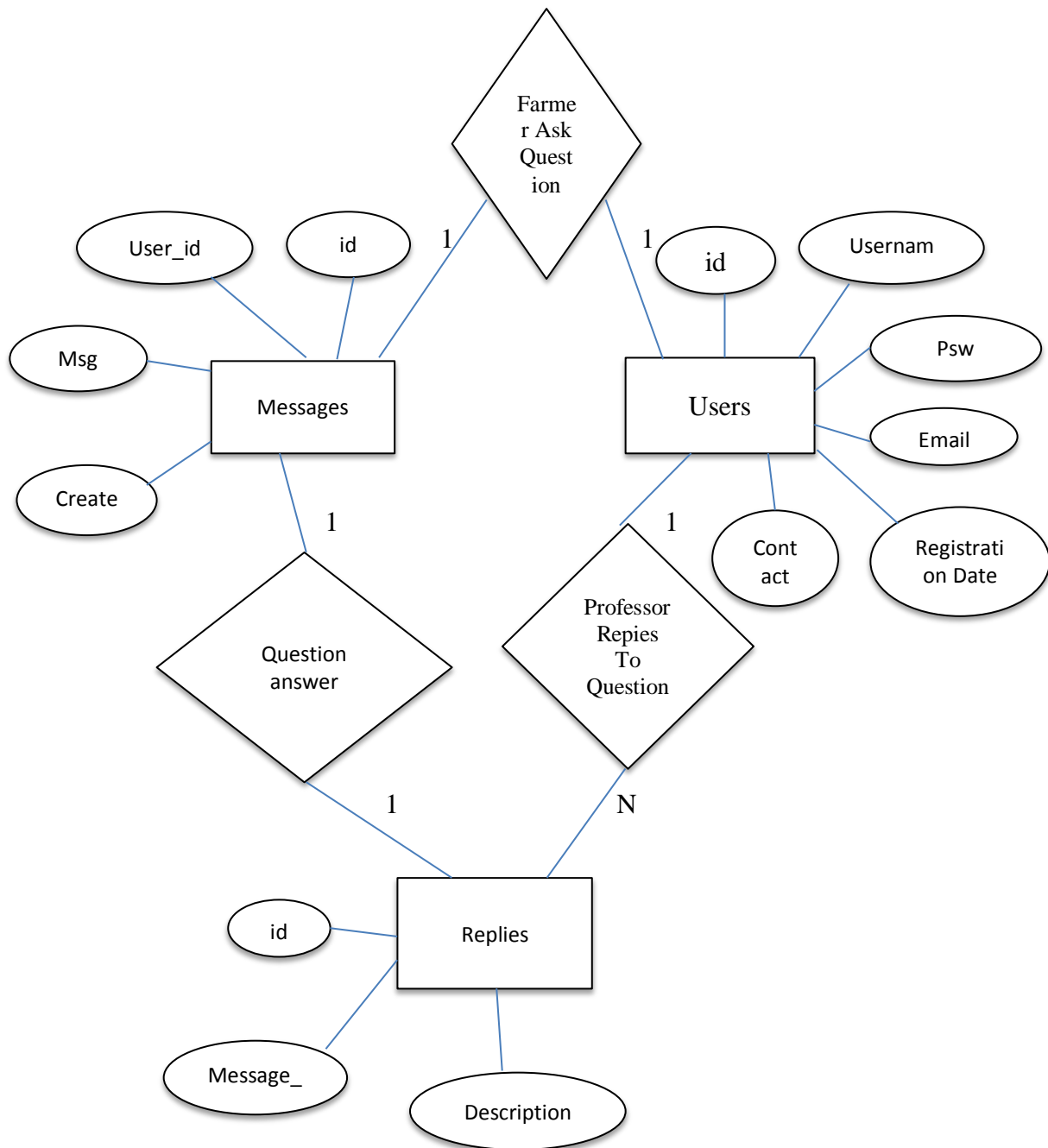


Fig: ER-Diagram

## **4.2 Data-flow-diagram:**

The Data Flow Diagram routes the flow of information for the system, by using the symbols like rectangle, circle, and arrows, short text labels to show the data flow routes between each destination. The data flow diagrams are functionally divided into Zero level, First level, and Second level data flow diagrams.

### **4.2.1 Farmer data flow diagram**

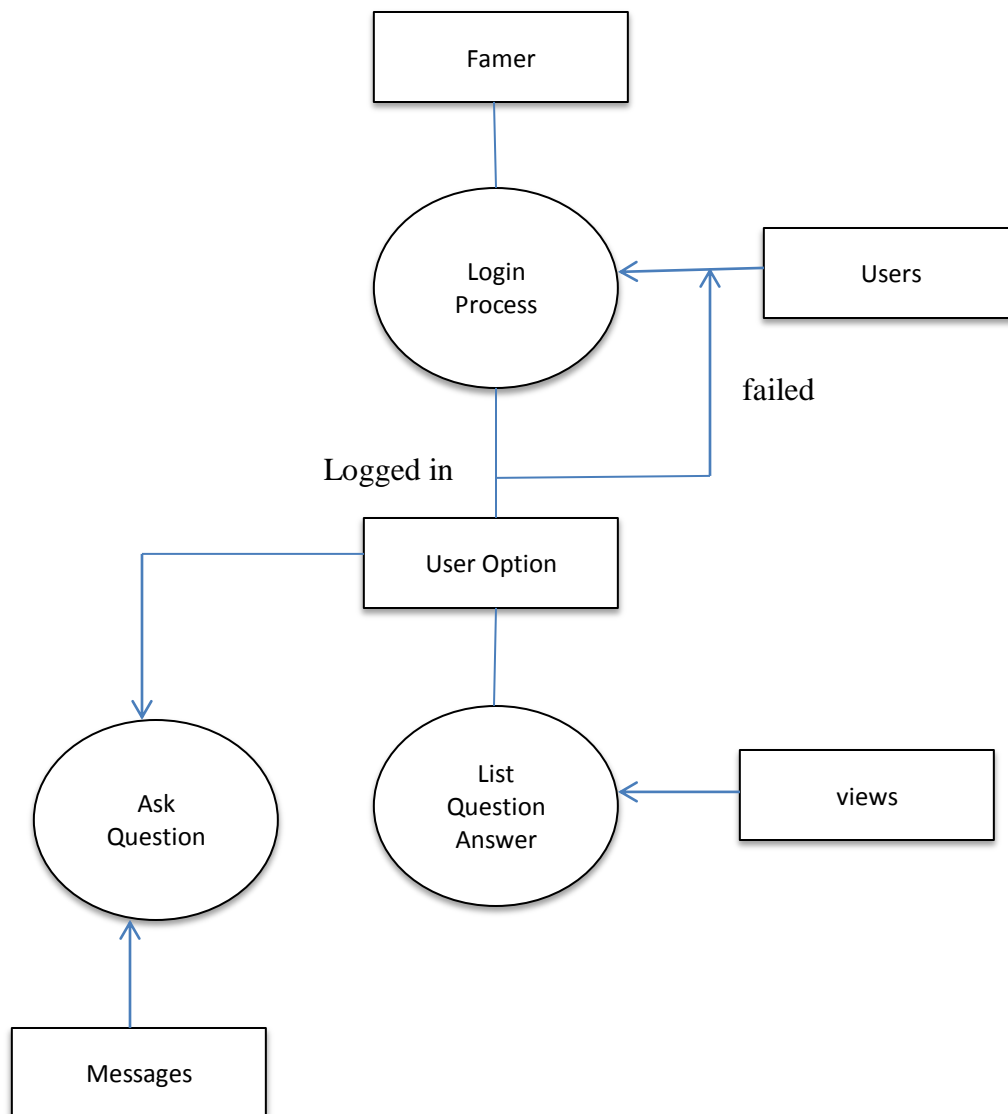


Fig1: Farmer data flow diagram

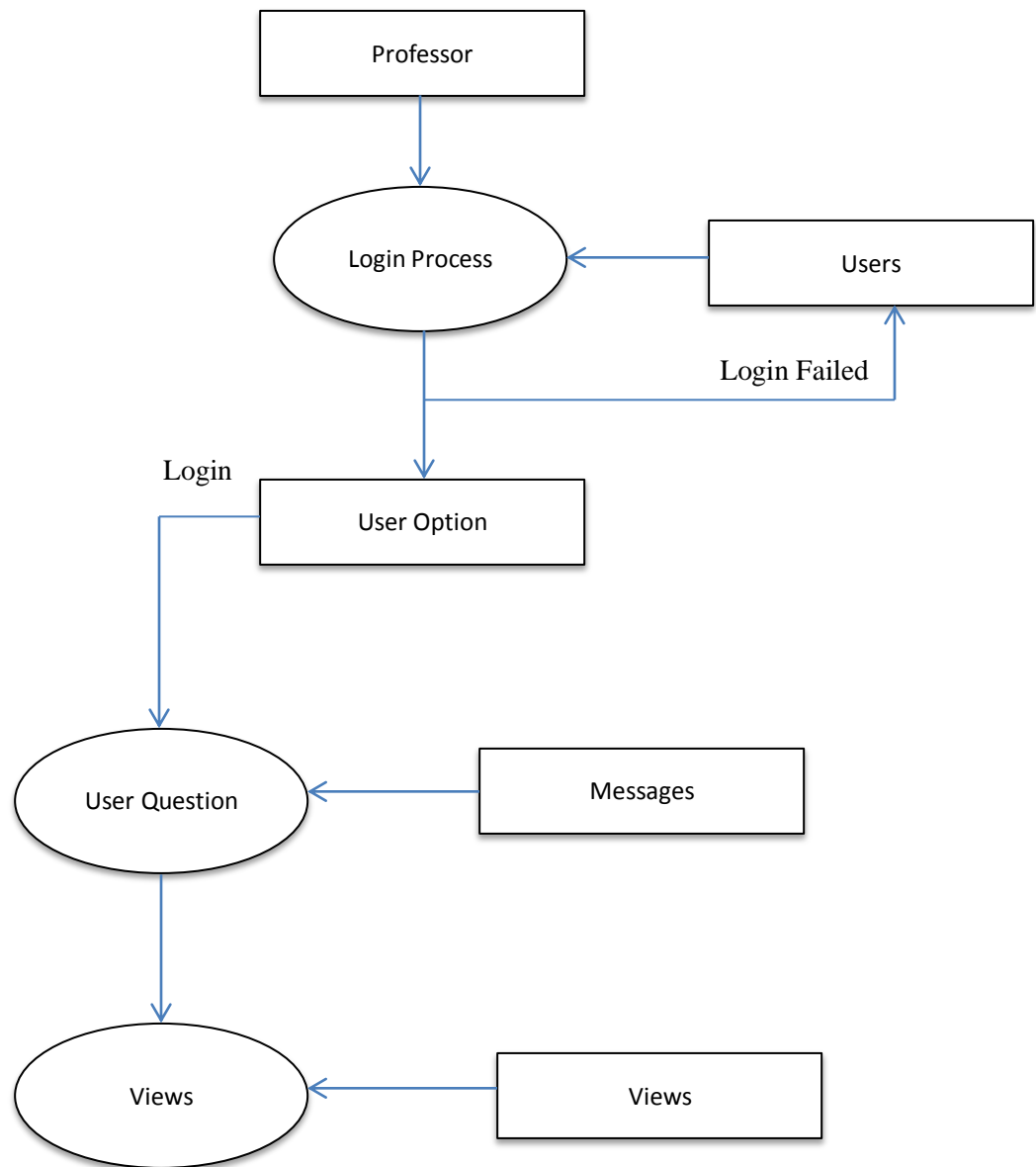
**4.2.2 Professor data flow diagram:**

Fig2: Professor data flow diagram

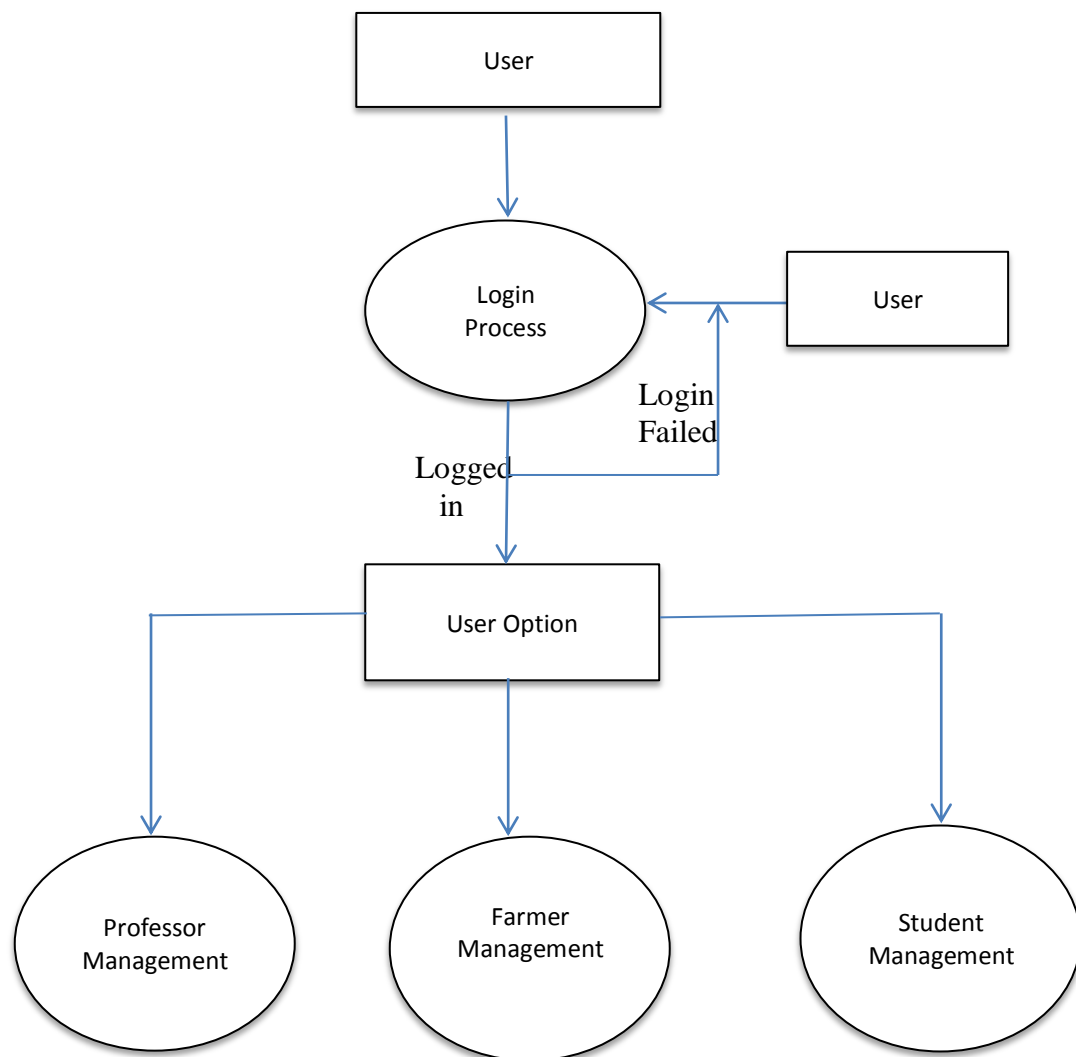
**4.2.3 System data flow diagram:**

Fig3: System data flow diagram

### 4.3 Data Dictionary:

After carefully understanding the requirements of the client, the entire data storage requirements are divided into the below tables.

**TABLE I : b Category:**

Business Category (t\_Category) table contains the list of businesses available for the customers to categories the businesses.

Fields	Type	Description
t_id	int(100)	Primary key
t_name	varchar(100)	
t_desc	varchar(255)	
Start_date	varchar(100)	

**TABLE II: b\_details:**

Business Details (t\_details) table contains the detailed information of registered and verified business.

Fields	Type	Description
a_id	int(100)	Primary key
t_id	int(100)	Foreign key
a_name	varchar(100)	
a_desc	varchar(225)	
a_mobile	varchar(100)	
a_email	varchar(100)	
a_website	varchar(100)	
a_address	varchar(100)	
st_date	varchar(100)	

**TABLE III: Contact\_us:**

Contact us (contact\_us) table contains the information of the customer details requests for the enquire about the business or the services.

Fields	Type	Description
cs_id	int(100)	Primary key
t_id	int(100)	Foreign key
cs_name	varchar(100)	
cs_desc	varchar(100)	
cs_photos	varchar(100)	
created_dt	varchar(100)	

**TABLE IV: Login\_info**

Login Information (Login\_info) table contains the data of the users login activity for security purpose.

Fields	Type	Description
Id	int(10)	Primary key
Name	varchar(100)	
Timestamp	varchar(100)	
ip_address	varchar(100)	
mac_address	varchar(100)	
Status	varchar(50)	

**TABLE IV : b\_photos**

Business Photos (b\_photos) table contains the photos of the product or service description photos and cover photo for the business page.

Fields	Type	Description
bp_id	int(100)	Primary key
b_id	int(100)	Foreign key
Bp_photolink	varchar(100)	
Bp_slider1	varchar(100)	
Bp_slider2	varchar(100)	
Bp_slider3	varchar(100)	
created_dt	varchar(100)	

**TABLE V : Student:**

Student List (s\_List) table contains This is the list of students who were registered.

Fields	Type	Description
s_id	int(100)	Primary key
s_name	varchar(100)	
s_mnum	varchar(100)	
s_sem	int(10)	
s_action	varchar(100)	

**TABLE VI: List of articles:**

List of articles (l\_articles) contains This is the list of articles uploaded by Professors.

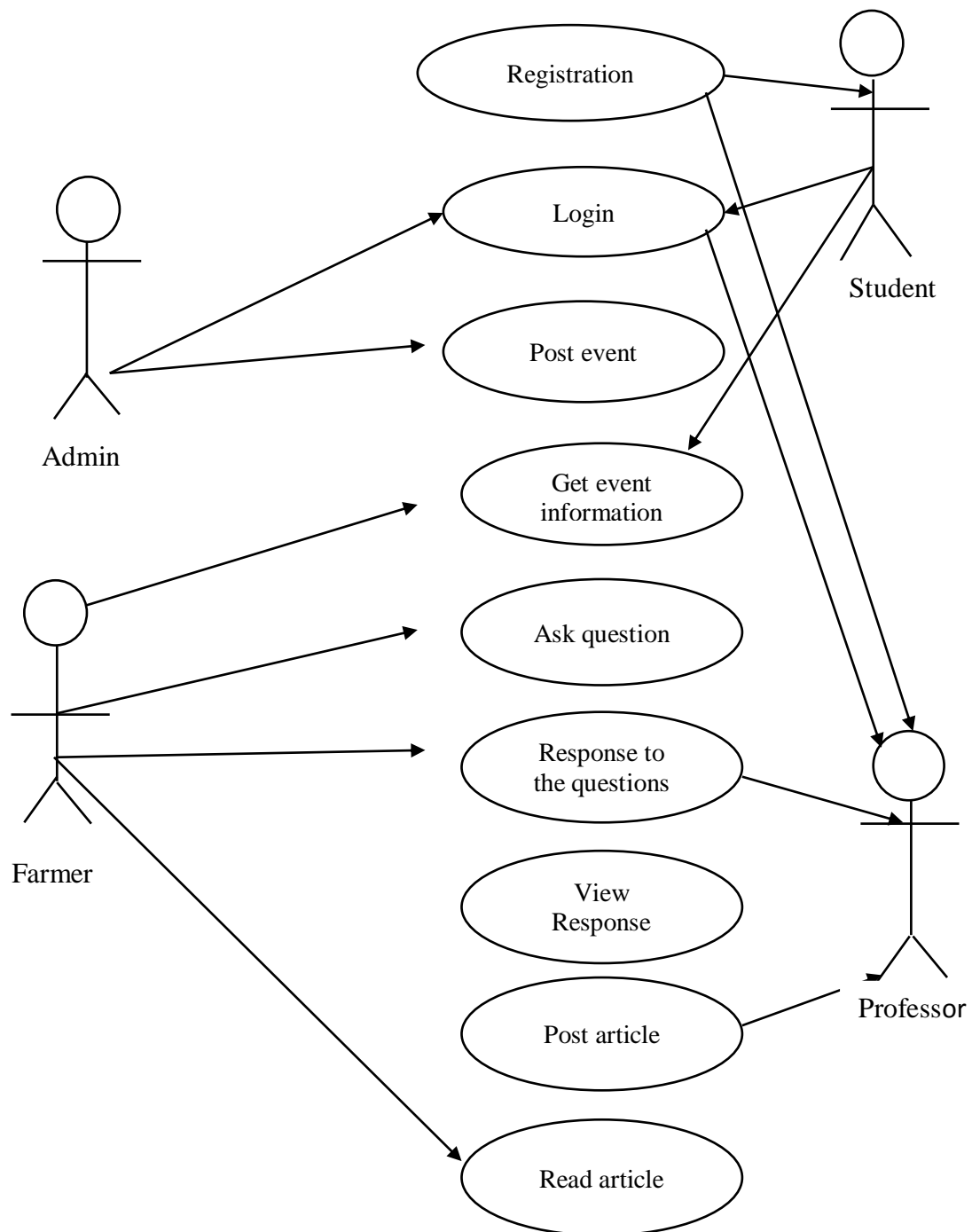
Fields	Type	Description
la_id	int(100)	Primary key
la_dpt	varchar(100)	
la_title	varchar(100)	
la_user	varchar(100)	
la_paper	varchar(100)	
la_created	varchar(10)	
la_action	varchar(100)	

**TABLE VI : faq**

Frequently Asked Question (faq) table contains the answers for the questions asked by the user and user can ask question.

Fields	Type	Description
Id	int(100)	Primary key
faq_question	varchar(300)	
faq_answer	varchar(1500)	
created_dt	varchar(20)	
last_updated	varchar(20)	
Status	varchar(10)	



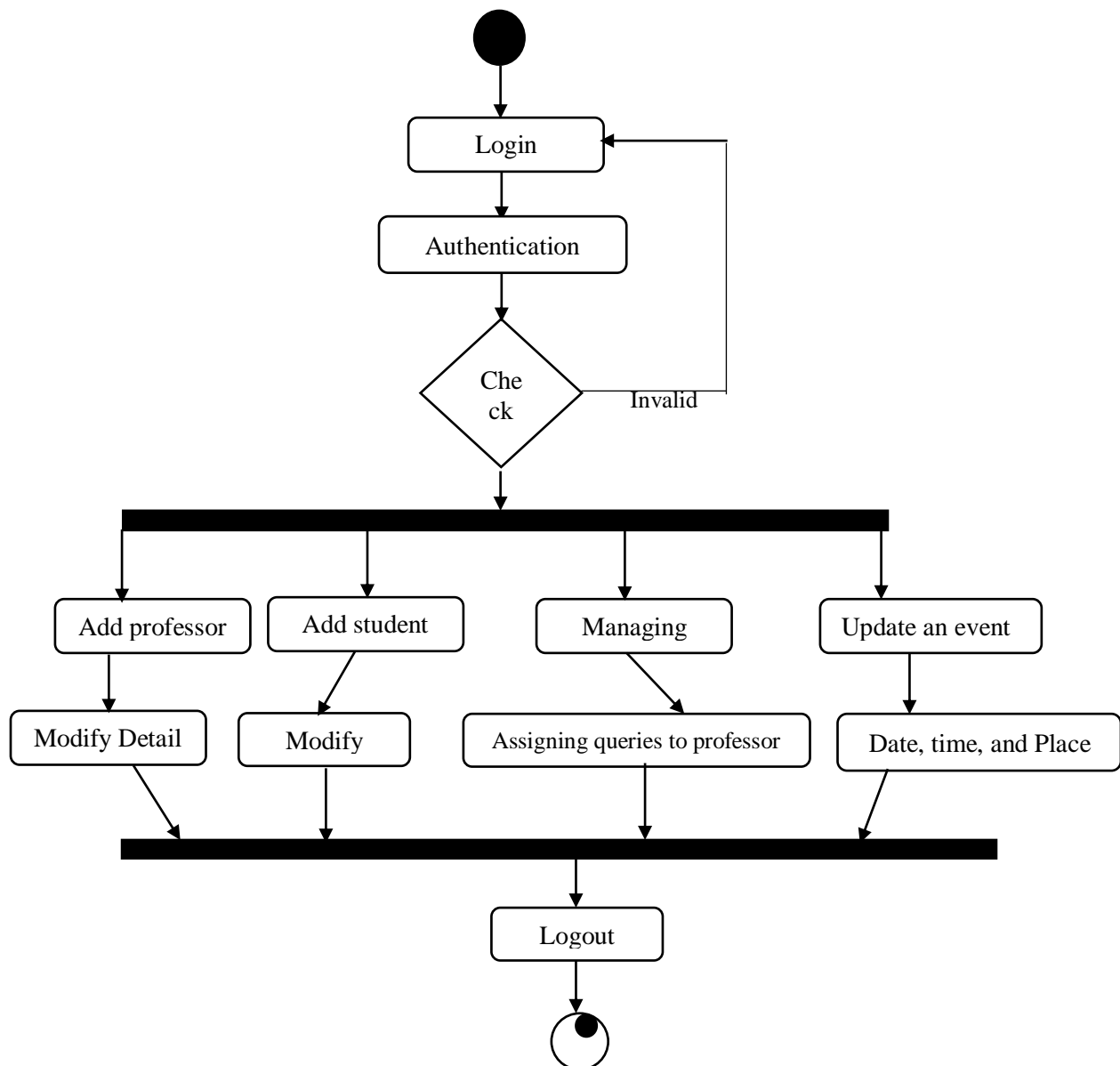
**4.4 Use Case Diagram:**

#### 4.5 Activity diagram:

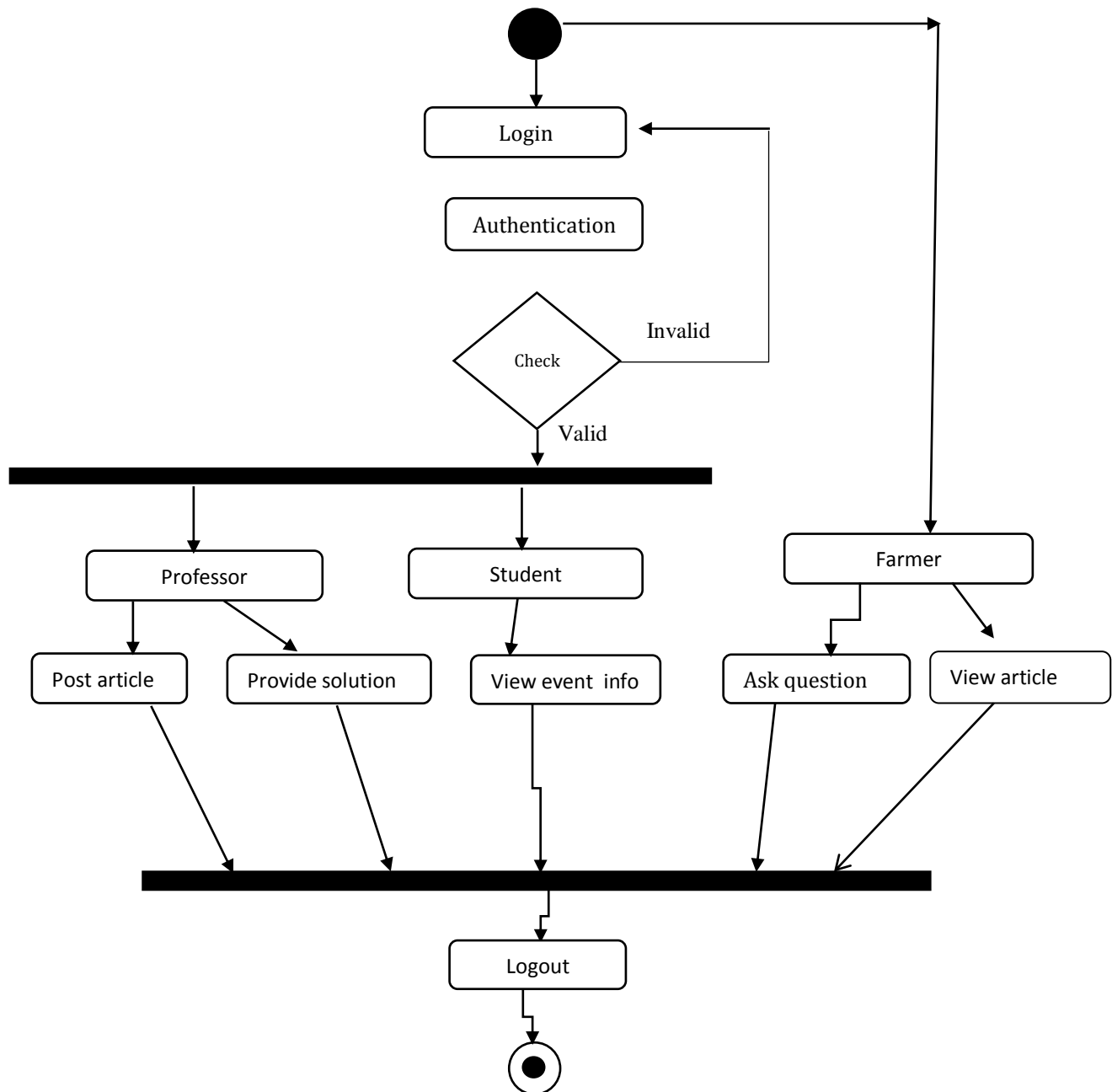
Activity diagram is in a general sense a stream diagram to represent the stream by one action/activity to another action/activity. The movement can be characterized as an activity of the structure. The control stream is attracted starting with one procedure then onto the next. This development can be successive, isolated or simultaneous.

Activity outlines are really graphical charts of stream of works which shows the stepwise activities and exercises which are available into the application.

- **Activity Diagram For ADMIN Side:**



- Activity Diagram For User Side:**



## **5. VERIFICATION AND VALIDATION:**

### **5.1 Introduction:**

The verification and validation can also be referred to as software quality control. It is the process of checking whether the software fulfills its purpose and meets all the requirements.

### **5.2 Methodology used: Agile methodology:**

The meaning of Agile is swift or versatile. "Agile process model" refers to a software development approach based on iterative development. Agile methods break tasks into smaller iterations, or parts do not directly involve long term planning. The project scope and requirements are laid down at the beginning of the development process. Plans regarding the number of iterations, the duration and the scope of each iteration are clearly defined in advance.

Each iteration is considered as a short time "frame" in the Agile process model, which typically lasts from one to four weeks. The division of the entire project into smaller parts helps to minimize the project risk and to reduce the overall project delivery time requirements. Each iteration involves a team working through a full software development life cycle including planning, requirements analysis, design, coding, and testing before a working product is demonstrated to the client.

- Agile methodology is a type of project management process, mainly used for software development, where demands and solution evolve through the collaborative effort of self-organizing and cross-functional teams and their customers.
- Ability to respond to change from requirements.

**5.3 Phases of Agile Model:**

- **Requirements gathering:** In this phase, you must define the requirements. You should explain business opportunities and plan the time and effort needed to build the project. Based on this information, you can evaluate technical and economic feasibility.
- **Design the requirements:** When you have identified the project, work with stakeholders to define requirements. You can use the user flow diagram or the high-level UML diagram to show the work of new features and show how it will apply to your existing system.
- **Construction/ iteration:** When the team defines the requirements, the work begins. Designers and developers start working on their project, which aims to deploy a working product. The product will undergo various stages of improvement, so it includes simple, minimal functionality.
- **Testing:** In this phase, the Quality Assurance team examines the product's performance and looks for the bug.
- **Deployment:** In this phase, the team issues a product for the user's work environment.
- **Feedback:** After releasing the product, the last step is feedback. In this, the team receives feedback about the product and works through the feedback.



**Fig. Agile Model**

Figure 18 Agile model.

The scope of work is not defined up front so We have used agile developmet approach to have agility and flexibility at the core of the entire development process. To find solutions for the evolving requirements through regular collaboration and communication. To Plan, analyze, design, develop, document, and test simultaneously and iteratively.

We have used agile model for web development by creating modules and integrating them per sprint. Then optimizing the site through several minor adjustments, rather than waiting for weeks and making major changes.

## 6. IMPLEMENTATION RESULT:

### 1. Login:

Contact Number : 0831- 2472482
Sign In

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### Login

Username

Password

Login

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### 2. Professors Table:

Contact Number : 0831- 2472482

Professors | Students | Logout | Articles | Ask Question | My Questions |

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Areas of Technology

Sugarcane Scenario

Users

Id	Username	FullName	MobileNumber	EmailId	Password	RegDate	Actions
1	Professor 1	Professor 1	sdsdsdsds	dsdsdsds@dfdf.hhj	\$2y\$10\$JS5GofQ1GY/fs1v2ksN/d.04v1emd.I64M/OsQ0Yo3mloaDKSelwq	2/21/20 9:55 AM	View Edit Delete
2	Professor 2	Professor 2	sdsdsdsds	sdsdsd@sdsdd	\$2y\$10\$/M2oJoYu6NUHyZUe6nAQEO1z599tvDBSI41pR8Ry17y.Vq/Iw7WDI	2/21/20 9:56 AM	View Edit Delete
3	admin	user2	sdfsd fsf	sdfsd f@dfdfd	\$2y\$10\$JS5GofQ1GY/fs1v2ksN/d.04v1emd.I64M/OsQ0Yo3mloaDKSelwq	2/21/20 10:03 AM	View Edit Delete

< previous

next >

Page 1 of 1, showing 3 record(s) out of 3 total

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**3. Student List:**

Contact Number : 0831- 2472482
Professors | Students | Logout | Articles | Ask Question | My Questions |

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Students

List

Id	Name	Mobile Number	Semester	Actions
1	Vishwanath	9964729524	1	<input type="button" value="View"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>

**4. List of Articles:**

Contact Number : 0831- 2472482
Professors | Students | Logout | Articles | Ask Question | My Questions |

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Articles

List

Id	Department	Title	User	Paper	Created	Actions
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## 7. Question Ask:

Contact Number : 0831 - 2472482

Professors | Students | Logout | Articles | Ask Question | My Questions |

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Question Ask

Home

Form

Full Name

Mobile Number

Email

Address

City

Activate Windows

Go to Settings to activate Windows

## 8. My Questions:

Contact Number : 0831 - 2472482

Professors | Students | Logout | Articles | Ask Question | My Questions |

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Messages

List

Search

New

Id	Full Name	Mobile Number	Email	City	Created	Actions
1	-	-			2/21/20 10:48 AM	<a href="#">View</a> <a href="#">Reply</a> <a href="#">Edit</a>
2	Vishwanath	9353821703	vishusm4u@gmail.com	Belgaum	2/21/20 10:49 AM	<a href="#">View</a> <a href="#">Reply</a> <a href="#">Edit</a>
3	werwer	1231231234	werwerer@fgfg,jkjk	sdfsdf	2/22/20 10:51 AM	<a href="#">View</a> <a href="#">Reply</a> <a href="#">Edit</a>
4	sdsdsd	1231231234	vishusm4usd@gmail.com	sdsdsdsd	4/19/20 8:16 AM	<a href="#">View</a> <a href="#">Reply</a> <a href="#">Edit</a>
5	sdsdsd	1231231234	vishusm4usd@gmail.coms	sdsdsdsd	4/19/20 8:18 AM	<a href="#">View</a> <a href="#">Reply</a> <a href="#">Edit</a>
6	Ramesh	7090638827	rajraj0106@gmail.com	Belgium	4/19/20 3:07 PM	<a href="#">View</a> <a href="#">Reply</a> <a href="#">Edit</a>

Activate Windows

Go to Settings to activate Windows

**7.1 Testing Technology:****Black Box Testing:**

Black Box Testing is one of the approaches to the testing scenario, or we can call it the type of testing. In black-box testing will do the test engineers, where the framework functionality will be checked. The black box testing code will not visible to the test engineers. Here we are checking the missing function if any interface error, we will be checking the performance of the software and its behaviors. Here we also check any external error regarding the database access, etc.

**White Box Testing:**

White Box Testing is also called as Code testing. This testing is done by the developer while developing the code for the software. This testing is concerned with the developer where the code will be visible to perform the testing, and this testing involves step by step procedure to perform the testing. In this testing, we check all the independent condition and also the path in the code, whether all the related path is executed at least once or not.

We also check whether the necessary loop and the condition were checked are not, here we are checking the boundaries of the possibilities for the logical condition or decision for the accurate and false .here we will check the data structure is valid or not.

Ensure whether the possible validity check and validity lookups have been provided validate data entry.

**7.2 Testing Strategies:**

- Level 1 is generally the work to be tested by other developers or other interns (this is typical
- The first level of testing where the focus is not on requirement but end-user testing) Ratio: 0% end-user:
  - 100% Technical
- Level 2 is the level where a senior programmer developer comes into the testing cycle of the screen that was
  - unit tested by the developer in this phase the onus is to test software for technical
  - Requirements specified.
  - The ratio here is: 80% of Technical and 20% of end-user.
- Level 3 is where the tester will be come into the picture. The software tester will test the software for both the ends users as well as a technical point of view.
  - The ratio here is: 50% of Technical: 50% of end-user
- Level 4 is where we develop the code at Release-Ready. Here the screen is tested to the core and each and every standard must be followed and identified.
  - The ratio here is: 80% User Testing – 20% Technical
- This approved us to test the screen at four different levels and at the end of four weeks when the screen goes to manufacture; it is generally bug-free because more people have looks at the screen from different viewpoints.

### 7.3 Levels of testing:

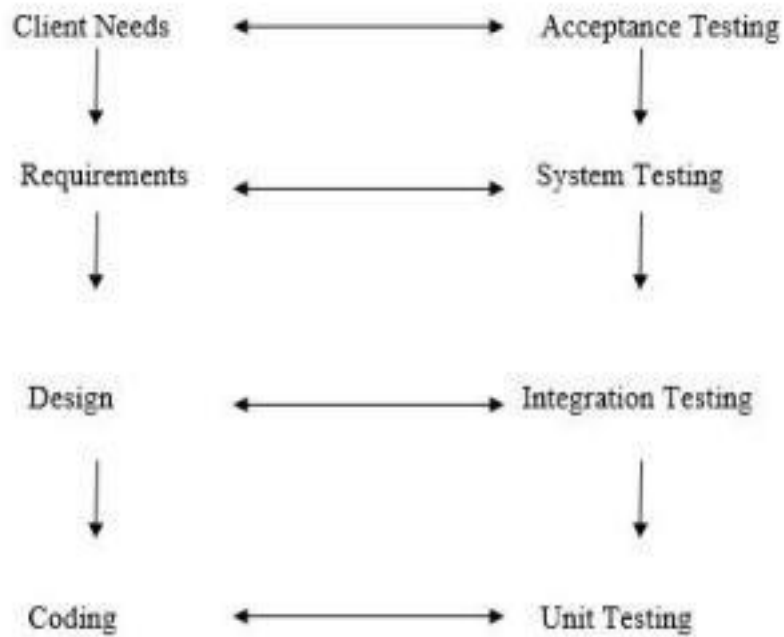


Figure 19 Levels of testing.

The different testing is carried out, which reflects its effectiveness and Efficiency of different phases of the software development where these tests help to uncover the error in the corresponding phase.

There are two general strategies for testing software mentioned above in the fig 19. The above mentioned stages described below.

#### **System Testing:**

This section details the tests carried out on the application with the aim of observing whether the set functional and non-functional requirements have been met. It also gives explanations on the types of tests used on the developed application.

**Functional Testing:**

The term function testing used to test whether the functions of the applications are working as specified in the system requirement. Testing was applied on the several use cases to see if they performed as expected or not.

**Test Cases:**

Identifier	1
Test-case	Login and Logout of the application
Description	Users perform login with a username and password pair then logout
Utilized use case	Login and Logout
Results	Successful login and access granted or Successful logout
Pass/Fail	Pass

**Table 7-1. Login and Logout Test Case**

Identifier	2
Test-case	Add new users
Description	The administrator adds new users into the system.
Utilized use case	Add user Results
Results	User added successfully and saved in the database
Pass/Fail	Pass

**Table 7-2 Add New User Test Case**

Identifier	3
Test-case	Manage existing users
Description	The administrator edits details of an existing user in the system.
Utilized use case	Manage Use
Results	User details updated successfully and saved in the database
Pass/Fail	Pass

**Table 7-3. Manage User Test Case**

Identifier	4
Test-case	Category
Description	Admin adds and deletes different categories
Utilized use case	Adding and Deleting
Results	Successful added new category and updated
Pass/Fail	Pass

**Table 7-4, Category Managing Test Case**

**7.2 TEST CASE:**

TEST ID	TEST DESCRIPTION	TEST RESULT
1	Check whether Username& password is same as entered while signup	Pass
2	Check whether the password contains alphanumeric or special characters	Pass
3	Table columns should not have description information available	Fail
4	Null values should not be allowed for primary key column	Pass
5	No information is lost in the process	Pass
6	Check if table should have primary key column or no	Pass
7	Check if application is platform independent	Fail
8	Invalid Password Login	Fail
9	Invalid Username Login	Fail
10	Valid Password and Username Login	Pass

Table 7-5 List of Test Case

## **8. Conclusion and Future Enhancement**

### **8.1 Conclusion:**

The assignment became developed using the latest Ionic Framework technology for farmers. The project helped us to advantage information about constructing cellular utility. The advanced software has been made person-pleasant and free of errors. This utility also saves the time of the farmer by means of making the whole lot smooth i.e. farmer can get each and the whole thing records approximately sugarcane production.

It facilitates the farmer as well as the professor to give the facts.

- The educators who additionally gives different explores and gives the arrangement
- To the farmers identified with the sugarcane ventures through the web application and android application.

### **8.2 Future Enhancement:**

For further development of this web application we will be adding more features in our next version to make the project match the maximum requirement of farmers and customers.

Some of the features which we will be adding as follows:

- The suggestions/recommendations are provided to help farmers about farming.
- Various search option to be made available
- The "SNSI" is a web application grew extraordinarily for online entrance for farmers. Innovation has grown with the goal that Sugarcane farmers can get the arrangement through the online procedure. Despite the fact that they can get each arrangement identified with their individual sugarcane land.



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