## **Educare Forum**

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A project in the Department of Computer Science and Engineering presented in partial fulfillment of the requirements for the Degree of Bachelor of Science in Computer Science and Engineering



United International University

Dhaka, Bangladesh

Month Year

©Your name, Year

#### Declaration

We, Zahidul Islam Razu, Shubhra Sarkar, Rownok Alahi Islam and Pankaj Debnath declare that this project "Educare Forum" and the work presented in it are our own. We confirm that:

- This work was done wholly or mainly while in candidature for a BSc degree at United International University.
- Where any part of this thesis has previously been submitted for a degree or any other qualification at United International University or any other institution, this has been clearly stated.
- Where we have consulted the published work of others, this is always clearly attributed.
- Where we have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work.
- we have acknowledged all main sources of help.
- Where the prooject is based on work done by our self.

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This is to certify that the work presented in the report entitled "**Educare Forum**" is in partial fulfillment of the requirement for the award of degree of Bachelor of Science in Computer Science & Engineering in United International University, Dhaka is an authentic work carried out under my supervision and guidance.

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To the best of my knowledge, the content of this report does not form a basis for the award of any previous degree to anyone else.

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### **Abstract**

This project mainly revolves around an interacting forum between teachers and students. The goal of our project is to create a forum that helps the students of an institute to study more effectively by using the resources of this forum. We have done our project using mainly WordPress, php, html, MySQL, Xampp & CSS. We believe this project will help students to find useful information about their study.

# Acknowledgement

We are grateful to the almighty for his grace so that we can completed the final project. Without health and facility given by the almighty we wouldn't have been able to complete the project successfully.

We would like to thank our project supervisor Dr. Hasan Sarwar for his continuous support, assistance, instruction, encouragement and guidance throughout the project work which helped us to develop an efficient and elegant project.

Thanks to all from the team members of **Educare Forum** 

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## Chapter 1

### 1.1 Introduction

Over six million students currently take one or more of their courses online; 50% of universities offer an online degree program. These numbers are only growing. Technology has changed the nature of education—and the jobs of educators.

Online learning emerged in 1989 when the University of Phoenix began offering education programs through the internet. In 1993 with the start of the first Internet web browser, created by the University of Illinois, online learning began to flourish. In 1998, the first fully online learning programs were founded which are New York University Online, Western Governor's University, the California Virtual University and Trident University International.

Our "Educare Forum" provides an opportunity for any person to learn about various important topics about different courses and discuss about the topic. In this forum, a person can see the contents, share problem about topics, teach each other, learn by stating and understanding, share their skills and ideas.

## 1.2 Objectives of the project

Main objectives of this project are as follows:

- ✓ To learn and adapt the programming languages used in the development of this website.
- ✓ To run and maintain the Educare Forum so that users can use the site to learn and discuss problems on various topics.
- ✓ A person can learn things without having to meet up with an instructor or teacher.
- ✓ To make learning easier and bringing education on ones doorstep.
- ✓ To make a social connection between peoples from different areas who has interest in same educational topics.

### 1.3 Scope of the project

Educare Forum is a forum-based project where a person will have lots of opportunities to learn about different topics. Our site will be very user friendly. Users will be able to see the created forums whether he is registered or not. Registered users will be able to create topics, comment, message other users, ask questions and use some other features. This document contains a complete description of the design of Educare Forum. Our project is mainly based on WordPress, php, html, mysql & CSS.

The admin in charge of this site will have full access to make changes, as admin deems necessary. The changes could include but not limited to adding, removing and updating the data collected on each user. Admin has a vital role in this site, because admin can add, update and delete all posts, groups, comments, members and forums.

Finally, we claim that our project is necessary and helpful for those who are interested to learn.

### 1.4 Overview of the project

In our project "Educare Forum" we studied the basics of web development, web programming and logical things before start implementation of our project.

In this project we got information about members, who can see forums, ask question to moderator, give solution about any topics and also can create topics basis on his/her necessity. User can create groups and join different public group. Registered members can add friend and start private messages among them.

### 1.4.1 Project Description

"Educare Forum" can be described using following modules. Each of following modules has different functionalities.

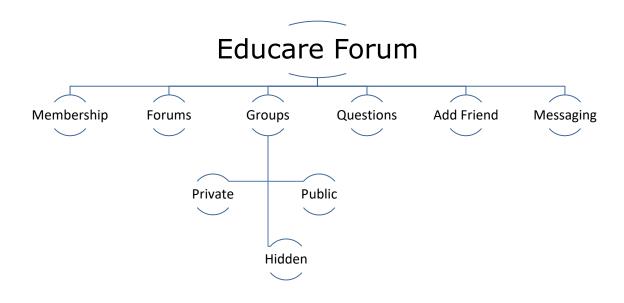


Fig: 1. Educare Forum Project Description

#### 1.4.1.1 Membership:

If any visitor wants to take acquire full facilities of this forum, he/she must be registered in the site.

#### 1.4.1.2 Forums:

Unregistered users can only see the forums whereas Members can not only see those forums but also post, comment, ask questions & answer existing questions.

#### **1.4.1.3 Groups:**

A member can create two types of groups.

- ✓ **Public:** Member will be able to join any public groups created by any member or admin without any approval.
- ✓ **Private:** Members will be able to join private groups provided that their join request is accepted by the creator or moderator of the group.

#### 1.4.1.4 Ask Question:

Members can ask questions about any topic and moderator will provide answer of this question.

#### **1.4.1.5 Add Friend:**

Any Member can make acquaintance with other members, moderators or admins.

#### 1.4.1.6 Messaging:

Members who are friends in our forum can contact interactively with each other through private messages.

#### 1.5 Key Features:

- ✓ **Login/Registration:** Anyone can register on our site by giving proper information. Registered user can login using their username and password.
- ✓ **Searching posts/videos:** Anyone can search posts/videos on our forum using the search button.
- ✓ **Forum discussion:** Members can see the forums created by
- ✓ **Comments and replies:** Registered members can comment & reply to other comments in different forum topics.
- ✓ **Private messaging:** Members can interactively message with each other.
- ✓ **Posting contents:** Members can post different types of pictures & videos.
- ✓ Sharing in social media: Members can share posts & forums in social media easily.
- ✓ **Ask & answer question:** Member will be able to ask question & answer them.

## Chapter 2

### **UML Diagram**

The Unified Modeling Language diagram or the UML diagram used for different types of software modeling business and similar processes, analysis, design, and implementation of software-based systems. UML diagram is a common thing for software developers. It is mainly used to describe, specify, design structure and behavior of artifacts of software systems.

There are different kinds of UML diagrams for different purposes. One kind of UML diagrams are called "Structural UML diagram". Another kind of UML diagram is called "Behavioral UML diagrams". We used these UML diagrams for our project –

- ✓ Use Case Diagram
- ✓ Sequence Diagram
- ✓ Activity Diagram

### 2.1 Use Case Diagram

Use case diagrams basically shows some relationships between actors, system and use cases. Use case diagrams must have some essential components. The main component is actor. Actor is someone who interacts with use case. The relationship between an actor and a use case is shown by connection link. This communication link is important for use case diagrams.

Use case diagrams are very useful for overviewing the project. It helps to show the project's main functionalities and also helps in future planning.

### 2.1.1 Admin or Moderator Forums:

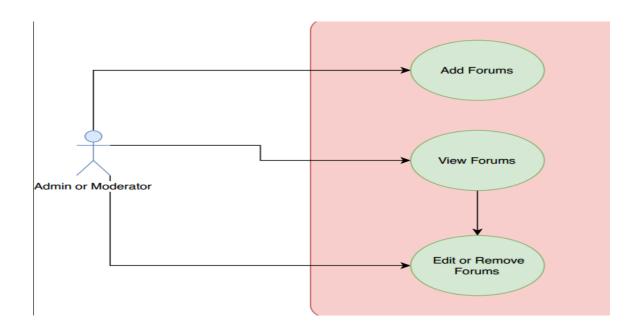


Fig: 2. Use case diagram for Forum Admin or Moderator

### 2.1.2 Admin or Moderator Groups:

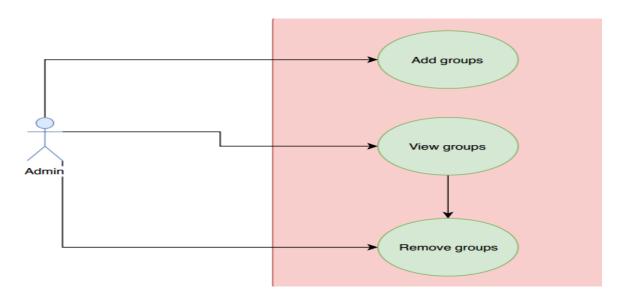


Fig: 3. Use case for diagram for Groups Admin or Moderator

## **2.1.3** Use Case Diagram: Member Forums

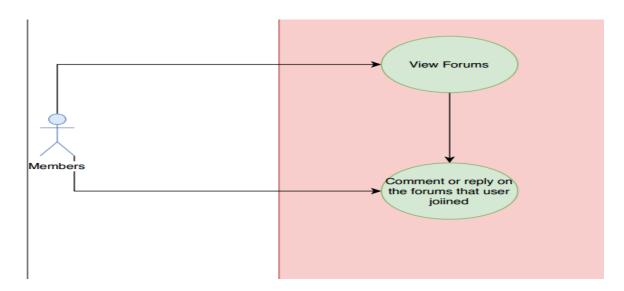


Fig: 4. Use case diagram for Forums Member

# **2.1.4** Use Case Diagram: Members Groups

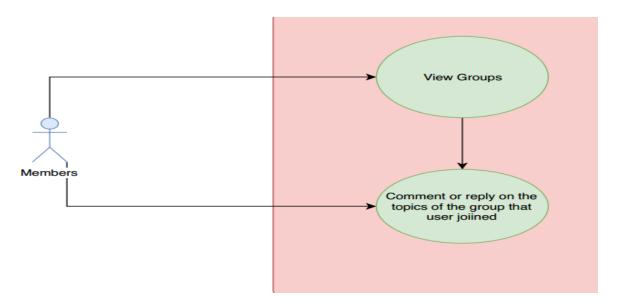


Fig: 5. Use case diagram for Groups Member

#### 2.1.5 Use Case Diagram: Members Messaging

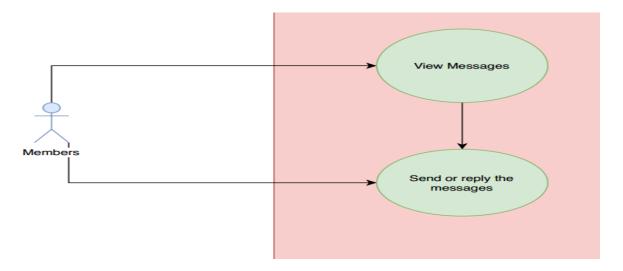


Fig: 6. Use case diagram for Forum Member

# **2.2 Use Case Descriptions:**

Use case consists of

- Primary Actor
- Goal
- Stakeholder and Interests
- Pre-condition
- Successful Scenario
- Alternate Scenario
- Post Condition

Use case descriptions are given below:

# 2.2.1 Use case: Registration

Registration	
Primary Actor	User.
Goal	To fill up the registration form and register to the database.
Stakeholder and Interests	System, User.
Pre-condition	User must fill up the form and provide a unique email id to register to the database.
Successful Scenario	User provides all the relevant information, System checks all the provided information is valid and confirms registration.
Alternate Scenario	System could not register the user due to absence of data or incorrect data input.
Post Condition	User successfully registered into the system.

# 2.2.2 Use case: Login

Login	
Primary Actor	User, Moderator or Admin.
Goal	To login into the System.
Stakeholder and Interests	User, Moderator or Admin.
Pre-condition	User, Moderator or Admin must be registered to the database.
Successful Scenario	User, Moderator or Admin selects login from the home page, provides all the information, systems checks all the provided information are valid and confirms login successful.
Alternate Scenario	System could not validate the info due to absence of data in the database or incorrect data input.  System doesn't allow User, Moderator or Admin to login.
Post Condition	User, Moderator or Admin logs in successfully and enters into the forum.

# 2.2.3 Use case: Admin or Moderator Forum

Admin or Moderator	
Primary actor	Admin or Moderator.
Goal	To create, view, edit and delete forums.
Stakeholder and Interests	System, Admin, Moderator.
Pre-condition	Admin or Moderator is identified and authenticated.
Success Scenario	Admin or Moderator successfully see the contents of the forum and can create, edit and delete forum.
Alternate Scenario	<ul> <li>✓ If system fails, system re-constructs prior state.</li> <li>✓ If the Admin or Moderator who is identified by the system is invalid, the system signals error and reject entry.</li> </ul>
Post Condition	Forum database and contents are updated.

# 2.2.4 Use Case: Members Forum

Members Forum	
Primary actor	Members.
Goal	To view, comment and reply on the forum.
Stockholders and Interests	System, Members.
Pre-condition	Member is identified and authenticated.
Success Scenario	<ul> <li>✓ Members can successfully see the contents of the forum.</li> <li>✓ Members can comment and reply on an ongoing content.</li> </ul>
Alternate Scenario	<ul> <li>✓ If system fails, system can re-construct to prior state.</li> <li>✓ If the member who is identified by the system is invalid, the system signals error and reject entry.</li> </ul>
Post Condition	Forum database and contents are updated.

# 2.2.5 Use case: Admin or Moderator Group

Admin or Moderator Group	
Primary actor	Admin or Moderator.
Goal	To create, view, edit and delete public, private or hidden group.
Stakeholders and Interests	System, Admin, Moderator.
Pre-condition	Admin or Moderator is identified and authenticated.
Success Scenario	Admin or Moderator successfully see the contents of the groups and can create, moderate and delete public, private and hidden groups.
Alternate Scenario	<ul> <li>✓ If system fails, system re-constructs to prior state.</li> <li>✓ If the Admin or Moderator who is identified by the system is invalid, the system signals error and reject entry.</li> </ul>
Post Condition	Group database and contents are updated.

# 2.2.6 Use case: Members Group

Members Group	
Primary actor	Members.
Goal	To view, comment and reply on the group.
Stakeholders and Interests	System, Members.
Pre-condition	Member is identified, authenticated and joined in the group.
Success Scenario	<ul> <li>✓ Members can successfully see the contents of the group.</li> <li>✓ Members can comment and reply on an ongoing content.</li> </ul>
Alternate Scenario	<ul> <li>✓ If system fails, system re-constructs to prior state.</li> <li>✓ If the member who is identified by the system is invalid, the system signals error and reject entry.</li> </ul>
Post Condition	Group database and contents are updated.

# 2.2.7 Use case: User Messaging

User Messaging	
Primary actor	User.
Goal	To give message to other users in the forum.
Stakeholders and Interests	Members, System.
Pre-condition	Member is identified and authenticated and must be logged in.
Success Scenario	<ul> <li>✓ Members can successfully go to the messages section and send messages to their desired profiles.</li> <li>✓ Members can reply the messages that send to him by other users.</li> </ul>
Alternate Scenario	<ul> <li>✓ If system fails, the message can't be sent.</li> <li>✓ If the member who is identified by the system is invalid, the system signals error and reject the message.</li> </ul>
Post Condition	Message successfully sent to the desired users.

# 2.2.8 Use case: User Profile

User Profile	
Primary actor	User.
Goal	To see and edit user profile.
Stakeholders and Interests	Members, System.
Pre-condition	Member is identified and authenticated and must be logged in.
Success Scenario	Members successfully go to their profiles section and see their messages, notifications, change profile photo, cover photo, id name and password.
Alternate Scenario	<ul> <li>✓ If system fails, system re-constructs prior state.</li> <li>✓ If the member who is identified by the system is invalid, the system signals error and reject entry.</li> <li>✓ If new username and password are already used by others, then the change will not happen.</li> </ul>
Post Condition	Profile database and contents are updated.

# 2.2.9 Use case: Logout

Logout			
Primary Actor	User, Moderator or Admin.		
Goal	To logout from the System.		
Stakeholders and Interests	User, Moderator or Admin.		
Pre-condition	User, Moderator or Admin must be logged in.		
Successful Scenario	User, Moderator or Admin clicks on the logout button and go back to the login page.		
Alternate Scenario	System doesn't allow User, Moderator or Admin to logout.		
Post Condition	User, Moderator or Admin logs out successfully from the forum.		

### 2.3 Sequence diagram:

Sequence diagrams, also called event diagrams describe interactions among classes in terms of an exchange of messages over time. A sequence diagram is a good way to visualize and validate various runtime scenarios. These can help to predict how a system will behave and to discover responsibilities a class may need to have in the process of modeling a new system. Sequence diagram is very useful diagram for modeling and document how your system will behave in various scenarios.

As example some sequence diagram of our project given below,

### 2.3.1 User Registration sequence diagram:

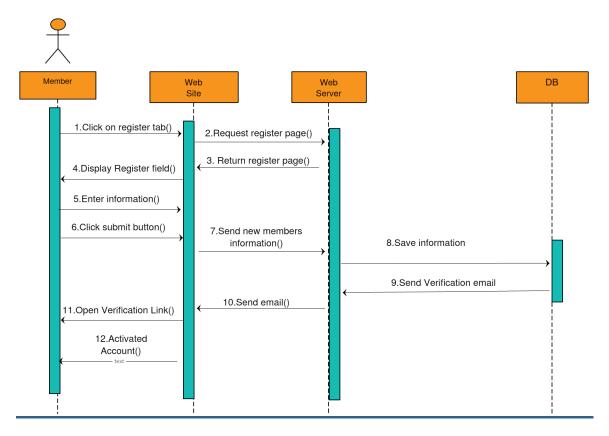


Fig: 7. Sequence Diagram for User Registration

In this diagram we can see a user is tries to register by clicking on the register page. A registration form then appears and then user provides the needed information. After saving those information system sends a verification link to user in the provided email ID. When user open the verification link user's profile is activated.

# 2.3.2 User Login sequence diagram:

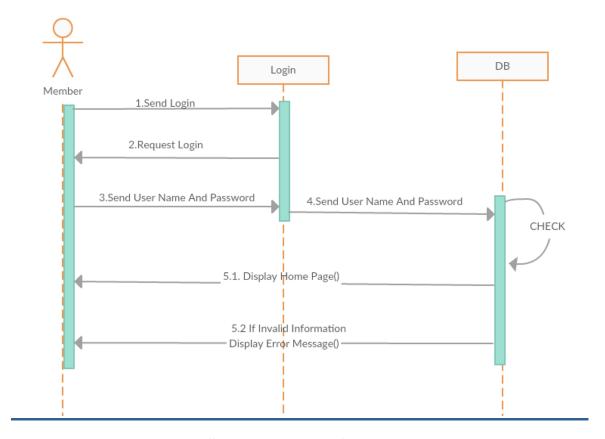


Fig: 8. Sequence Diagram for User Login

When a registered user tries to login to the site, user provides the needed information for that. System then checks if the provided information is correct or not. If information is valid then user is taken to the home page and if the information is wrong or invalid user is displayed an error message by system.

## 2.3.3 User Forums sequence diagram:

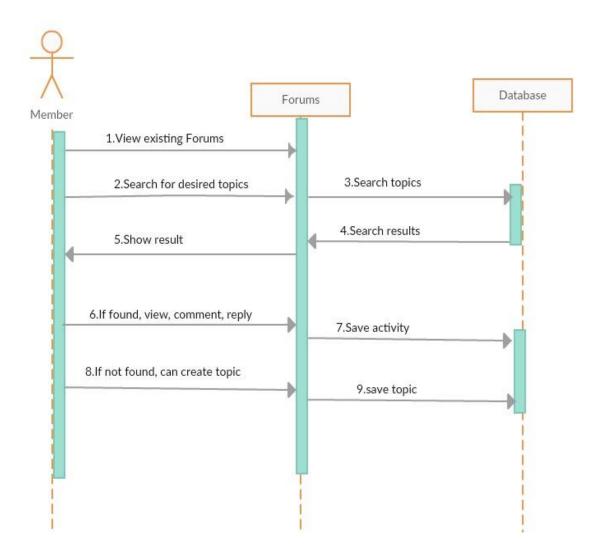


Fig: 9. Sequence Diagram for Forum

In this diagram, we can see that user can see existing forums. They can search any topic in the forum and system then shows the results of that search. If the topic is found user can comment, reply on that and system then saves user's activity. If topic is not found user can create a new topic and system, then saves the topic.

## 2.3.4 User Groups sequence diagram:

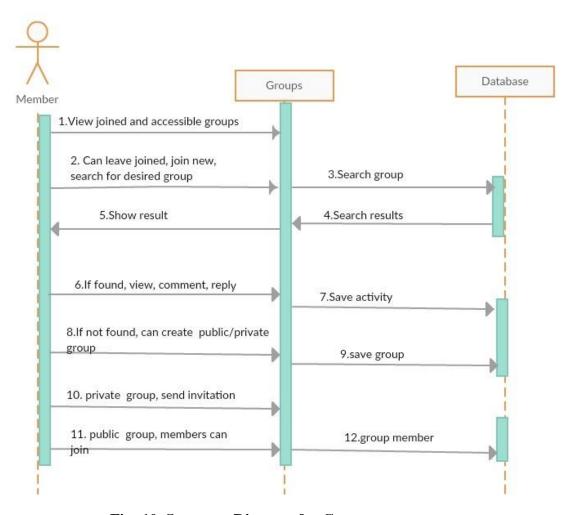


Fig: 10. Sequence Diagram for Groups

User can see the groups already created in the forum. User can join the group and comment on those groups. User can search groups, if not found he/she can create their own group and system will then save those group.

If the group is private then user will have to ask permission to join the group and then system will ask group moderator or admin to approve the request.

# 2.4 Activity Diagram

Activity diagram is mainly an UML diagram that represents the flow of activities of a system. This diagram can also be described as an operation of the system. This diagram mainly used for modeling the work flow of the system by using different kinds of activities.

# 2.4.1 Login:

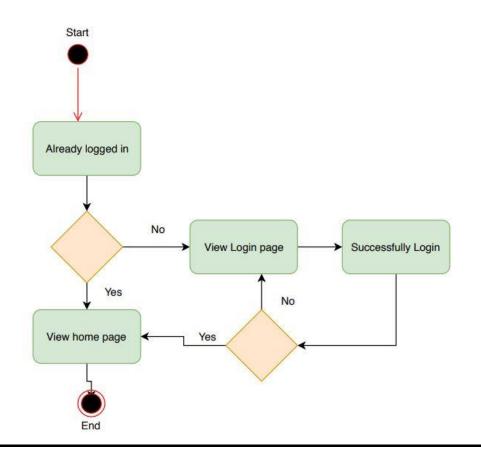


Fig: 11. Login Activity Diagram

# 2.4.2 Registration:

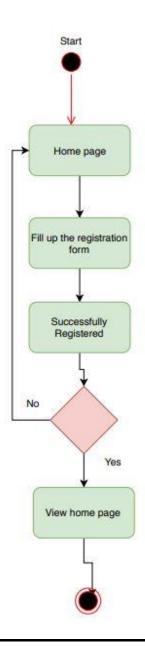


Fig: 12. Registration Activity Diagram

# **2.4.3 Forums:**

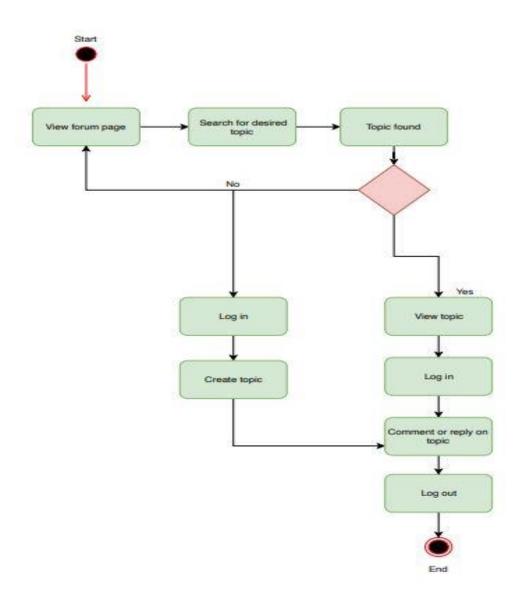


Fig: 13. Forum Activity Diagram

# **2.4.4 Groups:**

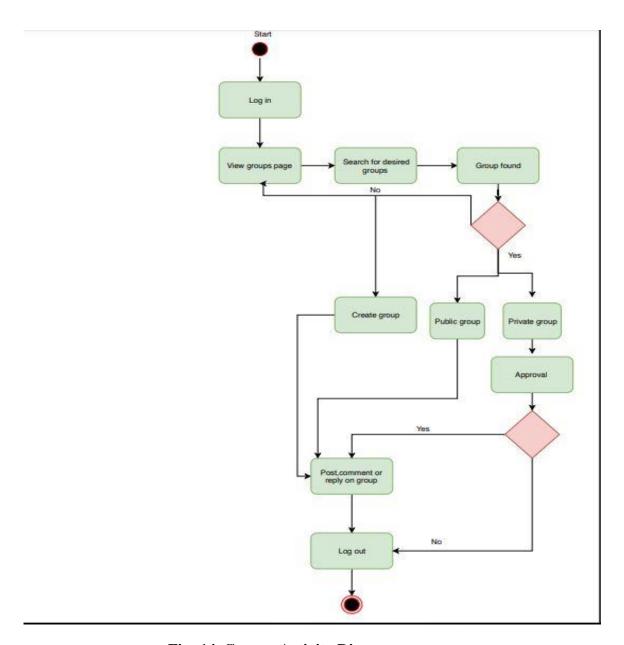


Fig: 14. Groups Activity Diagram

## Chapter 3

## **Technologies Used**

The languages we used to develop our projects are given below:

- ✓ HTML5
- ✓ CSS3
- ✓ PHP

The WordPress theme we used to implement our project is given below:

✓ Education Hub

The WordPress plugins we used to implement our project is given below:

- √ bbPress
- ✓ BP Better Messages
- ✓ Buddy Press
- ✓ Current Username on Navigation Panel
- ✓ Custom Sidebars
- ✓ DW Question Answer
- ✓ Elementor
- ✓ Menu Icons
- ✓ Simple Custom CSS & JS
- ✓ Social Plug
- ✓ Theme My Login
- ✓ User Menus
- ✓ WP Mail SMTP

The software tools we used to develop our project are given below:

- ✓ Creately
- ✓ Draw.io
- ✓ Sublime Text Editor

Xampp (Version 3.2.2)

# Chapter 4

# **Screenshots of the Website:**

# 4.1 Login

	🕯 Home	Questions	Register	a Log In				
	Log In							
	You are now logg	ed out.						
	Username or E-ma	ı						
	I							
Password								
	Remember Me		Log In					
	Register   Lost Pa	ssword						
	Contact us				About Us			
	Feel free To Contac	t with us						
	FORUM							
	Proudly powered by Educare							

Fig: 15. Login Page

### **4.2 Home:**

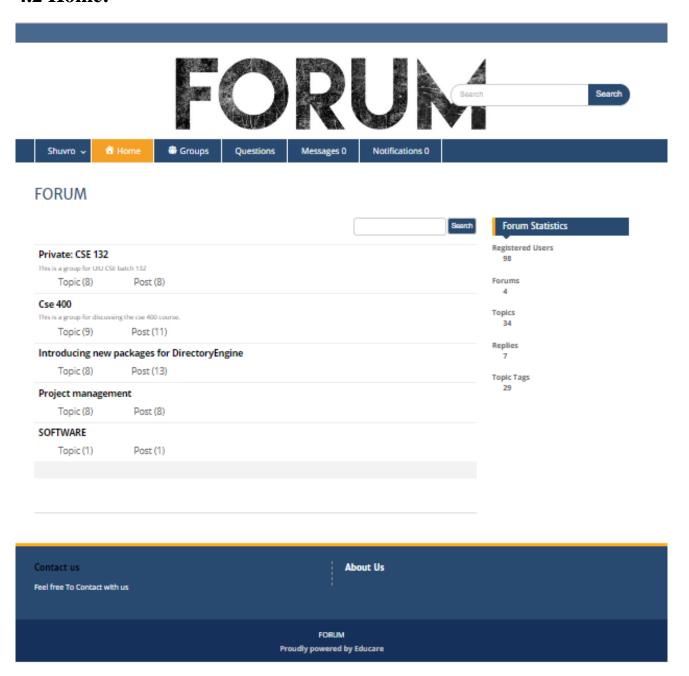


Fig: 16. Home Page

### 4.3 Groups

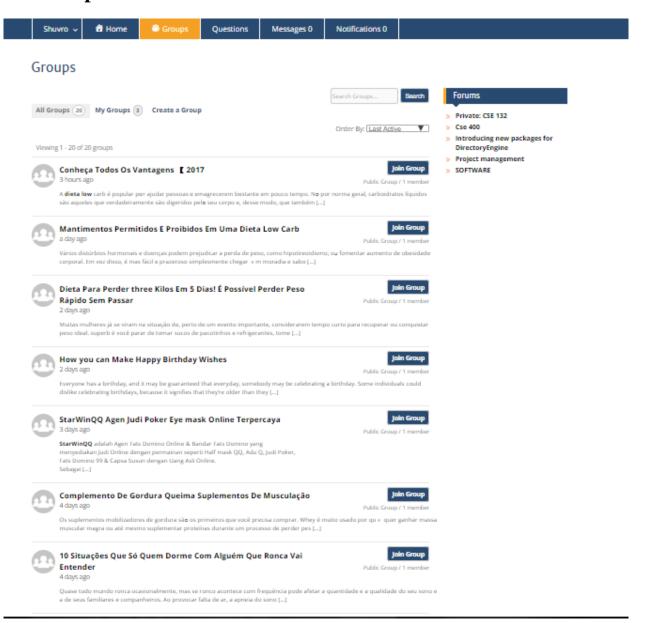


Fig: 17. Groups Page

## 4.4 Question & Answer

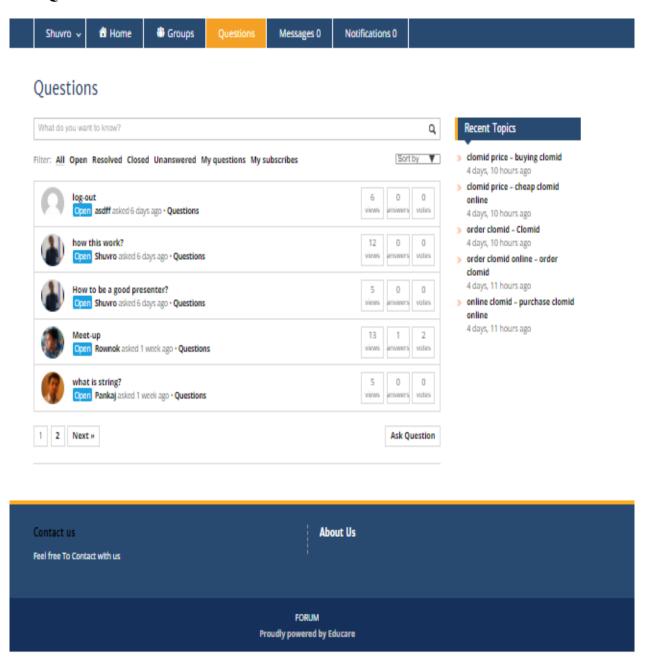


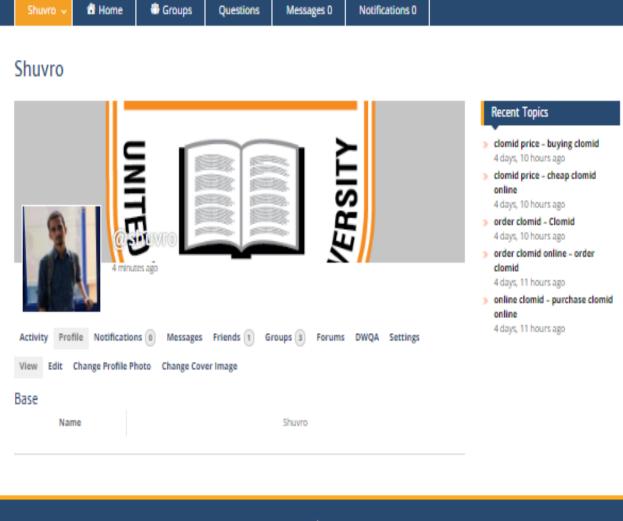
Fig: 18. Questions & Answer Page

### 4.5 Profile

🏻 Home

Groups

Questions



Notifications 0

Contact us **About Us** Feel free To Contact with us FORUM Proudly powered by Educare

Fig: 19. Profile Page

# 4.6 Messages

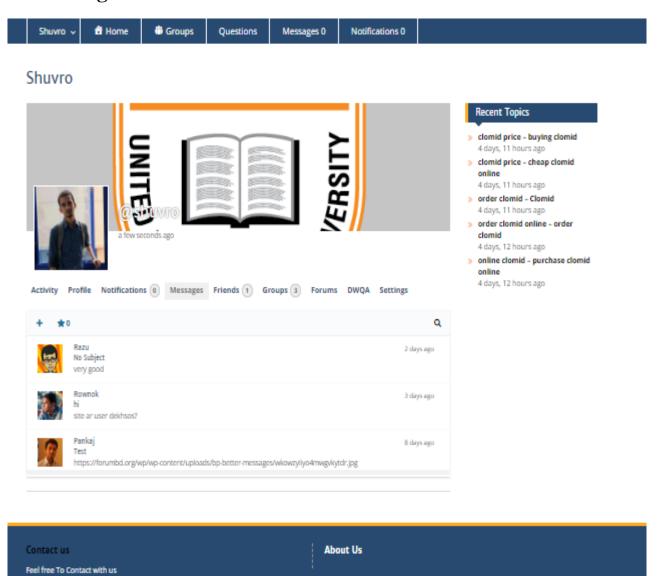


Fig: 20. Messages Page

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### 4.7 Notifications

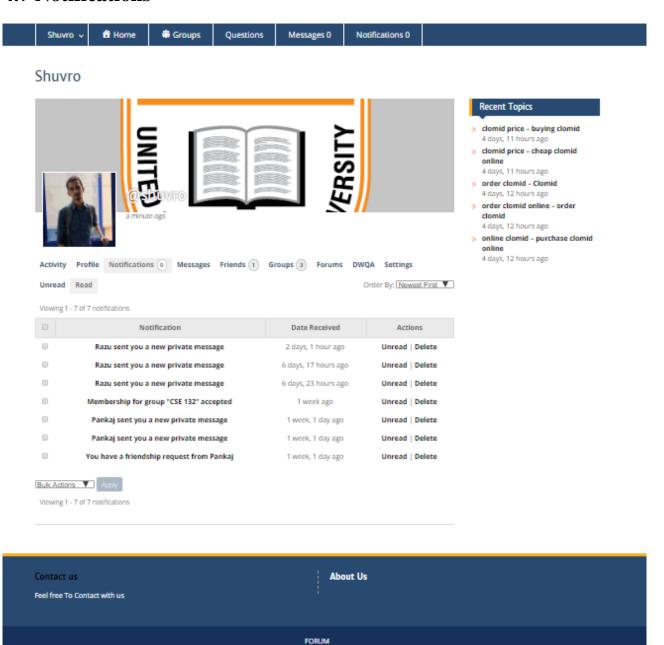


Fig: 21. Notifications Page

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## **Chapter 5: Others**

#### **5.1 Benefits**

"Educare Forum" is basically serves as an online forum /discussion board or message board for the students and the teachers. The main benefits of this site is given below —

- This site enables users to interact with each other by seeing different types of topics on different type of courses.
- This site can also serve for exchanging tips and discussing topics related to a certain subject.
- We tried to establish a friendly, open environment, use authentic tasks and topics, emphasize learner-centered instruction.
- "Educare Forum" also encourages users to give constructive feedback and suggestions and gives students experience, reflect and share the benefit of using threaded discussion.
- This site also encourages dialogue and referencing of other peoples postings and anyone can use emoticons to help convey their ideas and feelings.

### **5.2 Problems Faced**

We've faced several problems in our development process of our site. Some of the major problems we've faced are given below:

- Lack of Suitable Themes: We've found it hard to find suitable theme for our project.
- **Backend Problems**: We've faced some real difficulties when we started customizing our site in the backend. WordPress site has built-in codes, which are really long. Understanding those codes and finding out the exact part which we wanted to customize was really tough for us.
- **UX Designing:** UX designing part consumed a lot of time because we tried our best to implement an easy-to-use site with a professional vibe in it.
- **Site Speed:** In our site's early development process, the site was very slow and it took irritatingly long time to respond. We have overcome this problem by removing several unimportant themes and plugins.
- Making Website Live: Basically, we implemented the site using PHPmyadmin
  and localhost. Later, when we tried to convert the site into a live site we saw that
  many of our pages stopped working. Later, we had to overcome that by changing
  some codes in the backend.

### **5.3 Limitations**

We have tried our heart and soul to make a successful education forum for the teachers and the students. But there are some limitations in our project to which solutions can be provided as a future development. At a glance our drawbacks are —

- We weren't able to add audio calling in our forum.
- We couldn't add conference call in our forum.
- We couldn't add video calling in our site.
- We weren't able to implement group chatting through our site.

### **5.4 Future Plans**

Since this is our first version of the project in the deployment, there are many scopes and possibilities in our project to work with. Here are some of those-

- We will try to develop our website as durable as possible from the building up process that is from the initial stage.
- We will try to add audio chatting, conference call and video chatting in the future version of the project.
- We will try to make our site even more user-friendly, easy to use and simple as possible.
- We will try to integrate improved security measures on the site in the future.

## **Chapter 6: Conclusion**

### **6.1 Conclusion**

The internet has become a major resource in modern education, thus online learning systems have gained significance all over the world. If there is a course one always wanted to take or a skill one always wanted to learn, but he/she has not had the time to take a traditional face-to-face class or there hasn't been an opportunity near them, then online learning might be the answer.

Nowadays, online learning sites offer everything from one-hour live workshops to online degrees. There is literally something for everyone, all they have to do is find it. Online learning also gives one the chance to communicate with others and understand their cultures as people from all over the world can also learn the same topic.

However, learning online is different from learning in a face-to-face setting, and it is important to think about one's goals, needs and interests before committing oneself to something. He/she also needs to think about the time they have available, their comfort level with using technology and the equipment that is at their disposal. As we all become more familiar with computers and computer access becomes increasingly common, online learning will continue to open doors and offer learning opportunities for those who are interested.

This is to conclude that the project we undertook was worked upon with sincere effort.

Most of the requirements have been fulfilled and the requirements that are remaining can also be completed with some more time and effort.

### **6.2 References**

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