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Online Interactive Platform For BULC

In partial fulfilment of the requirements for the degree of

Bachelor of Science in Information Technology

Supervisor: Dr. Abdul Hafeez

Department of Computer Sciences

Bahria University, Lahore Campus

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C e r t i f i c a t e

We accept the work contained in the report titled
"ONLINE INTERACTIVE PLATFORM
FOR BULC",
written by
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as a confirmation to the required standard for the partial fulfilment of the degree of Bachelor of Science in Information Technology

Approved by:

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June 4*th*, 2018

DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

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03-135142-030	IQRA ASHRAF	

Date : _____

Specially dedicated to
my beloved, mother and father
(Huria Muhammad)
my beloved , mother and father(Late)
(Iqra Ashraf)

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We would like to thank everyone who had contributed to the successful completion of this project. We would like to express our gratitude to our research supervisor, Dr.Abdul Hafeez for his invaluable advices, guidance and his enormous patience throughout the development of the research.

In addition, we would also like to express our gratitude to our loving parent and friends who had helped and given me encouragement.

Huria Muhammad

Iqra Ashraf

ONLINE INTERACTIVE PLATFORM FOR BULC

ABSTRACT

Due to encompassing speed of Information and communication technologies (ICT) and its advantages, most of the educational institutions utilizing ICTs for communication and interaction among stakeholders. Lack of appropriate online interaction platform was observed by most of teachers, students and us during the four years of study here at Bahria University Lahore Campus (BULC). It was also demand of visiting faculty members to have platform to communicate the students remotely. Although most of the teachers and students are using different social media channels at their own choice like WhatsApp, Facebook and Google groups etc. There is a need of an effective web-based platform for effective synchronous and asynchronous interaction and communication among these stakeholders. In our final year project, we tried to develop Online University Interaction Platform (OUIP) for BULC using incremental development methodology. It is based on PHP language using WAMP Server as a local host for executing this platform. With the help of this platform, students and teachers can exchange information asynchronously through notifications and messages. Moreover, teacher can interact with students synchronously through live chat, virtual classroom and discussion board. This application will be useful for students, teachers and management of the campus. We recommend integrating proposed platform with CMS of Bahria University as an enhancement.

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LIST OF ABBREVIATIONS

OUIP	Online University Interaction Platform
CMS	Content Management System
PHP	Personal Hypertext Processor
WAMP	Windows Apache My SQL PHP
BULC	Bahria University Lahore Campus
ICT	Information and Communication Technologies

CHAPTER 1

INTRODUCTION

This chapter elaborates the problem, background and the main objective of our final project. Moreover scope of the project is also defined in it.

1.1 Background

Information and Communication Technology (ICT) is referred as another field of Information Technology, because it let its user to access store, transfer and manipulate information. According to Tezci[1], Information and communication technology (ICT) is a combination of information Technology (IT) and communication technology (CT); in which software and applications are included. Information and communication technology deeply impacts education as explained by Katz[2]; ICT can quickly master students' learning ability and problem solving becoming more autonomous. Computer and Internet technology is widely used in academics for Synchronous and Asynchronous interaction among students and Teachers. Asynchronous interaction involves one way interaction such as online notifications and messages whereas Synchronous interaction involves real time interaction with the help of live Virtual Class and Discussion forum between stakeholders (student, teacher, admin).Although there are many different social applications available for these purposes but they can’t be used for official purposes and people mostly ignore them.

1.2 Problem Statements

There are lots of application and tools available for students and teachers for interacting with each other like WhatsApp and e-mail with web-based applications, problem with these tools is that most of the students ignore WhatsApp messages and email. Student cannot focus on important messages through these applications. Moreover, as reviewed by Baron[3] in his study of online interaction platform, there is lack of a single platform for delivering academic, student resource centre notifications, cause many students to participate and cannot respond back . Meanwhile, there is a lack of the current content management system (CMS) used at Bahria University to provide notifications to students. Bahria University is facing shortage in providing students with timely information, either they are related to academics or Student Resource Centre (SRC). Our CMS does not have function such as virtual class and discussion forum. So, this platform (OUIP) will fill this gap of interaction.

.

1.3 Aims and Objectives

The key objective of our final year project is to develop a web-based Online University Interaction Platform for BULC where students and teachers can interact synchronously and asynchronously with each other.

- **Synchronously(Real time interaction)**

    - Live video chat where students can interact synchronously with their teachers using audio/visual capabilities.

    - Chat session where student, teacher and admin can interact with the help of messages.

- **Asynchronously (non-simultaneous interaction**)

    - Notifications of events and academics can be received by students and teachers.

    - Recorded class, where teachers can add a recorded session and students can view these classes.

1.4 Scope of Project

We basically focused on synchronous and asynchronous communication Problem. As we discussed that, there is lack of a single platform for delivering academic. For this purpose, we are developing a system that overcomes the problems faced by students and teachers to interact with each other's.

Our system performs following functions:

- Showing all notifications at homepage.

- Developing a Discussion Forum.

- Introducing Recorded class session.

- Introducing Virtual Class

.

CHAPTER 2

SOFTWARE REQUIREMENT SPECIFICATION

In this chapter, the background of the system requirements is drawn with its function and non-functional requirements. A general use case diagram is illustrated in different use cases

2.1 Software Requirements Specification

A software requirements specification (SRS) is a description of a software system to be developed. The software requirements specification lays out functional and non-functional requirements, and it may include a set of use cases that describe user interactions that the software must provide.

2.2 Functional Requirements

Following are the functional requirements of our project

- **Login**

Students, Teachers and Admin can login using their password and email

- **Registration**

  Students, Teachers and Admin can register after filling all fields.

- **Events**

  - **Add Event**

    Teachers and Admin can add event in this platform.

  - **Edit Event**

    Teachers and Admin can also edit events in this platform.

  - **Delete Event**

    Teachers and Admin can also delete events in this platform.

  - **View Event**

    Students, Teachers and Admin can view events uploaded previously.

- **Virtual Class**

  Teachers can arrange a virtual class so students can have synchronous interaction with the teacher.

- **Recorded Session**

Teachers can also add a recorded session so students can view it later.

- **Discussion Forum**

Student, Teacher and Admin can discuss about different events and academics in this.

- **Logout**

Student, Teacher and Admin have to logout to keep its data protected.

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2.3 Non-Functional Requirements

Following are the non-functional requirements of our project.

.

- **Accuracy:**

Each information being delivered to user should be accurate.

- **Reliability:**

System should be reliable so that data of user and his access can’t be duplicated.

- **Easy to Operate:**

System is easy to operate for all of itsusers; no extensive training is needed for operating our platform (OUIP).

.

2.3.1 Hardware Constraints for clients

The server machine which can access this system will have following hardware specifications

- Processor speed is minimum 1GHZ.
- Ram is minimum 1GB.
- Hard disk of minimum 20GB.
- Operating system is windows XP with internet explorer browser.

2.4 Assumptions and Dependencies

2.4.1 Need of Internet

Internet connection is necessary to run our application on the local server.

2.4.2 Remote server must be installed

Remote server must be installed on your laptop/pc.

2.5 Stakeholder Description

Our system has following stakeholders:

- Admin: Person who will be controlling students and teachers.

- Tacher: Person controlling students and adding Synchronous and Asynchronous communications.

- Student: Person interacting with adding Synchronous and Asynchronous Communications provided by Teachers and Admin.

2.6 Use Case Diagram

It tells the operations which user can do with this system. The user can perform two operations, either he / she can exercise or view errors in his performed exercises. On the other hand, the system can measure the accuracy of exercise, can train the model.

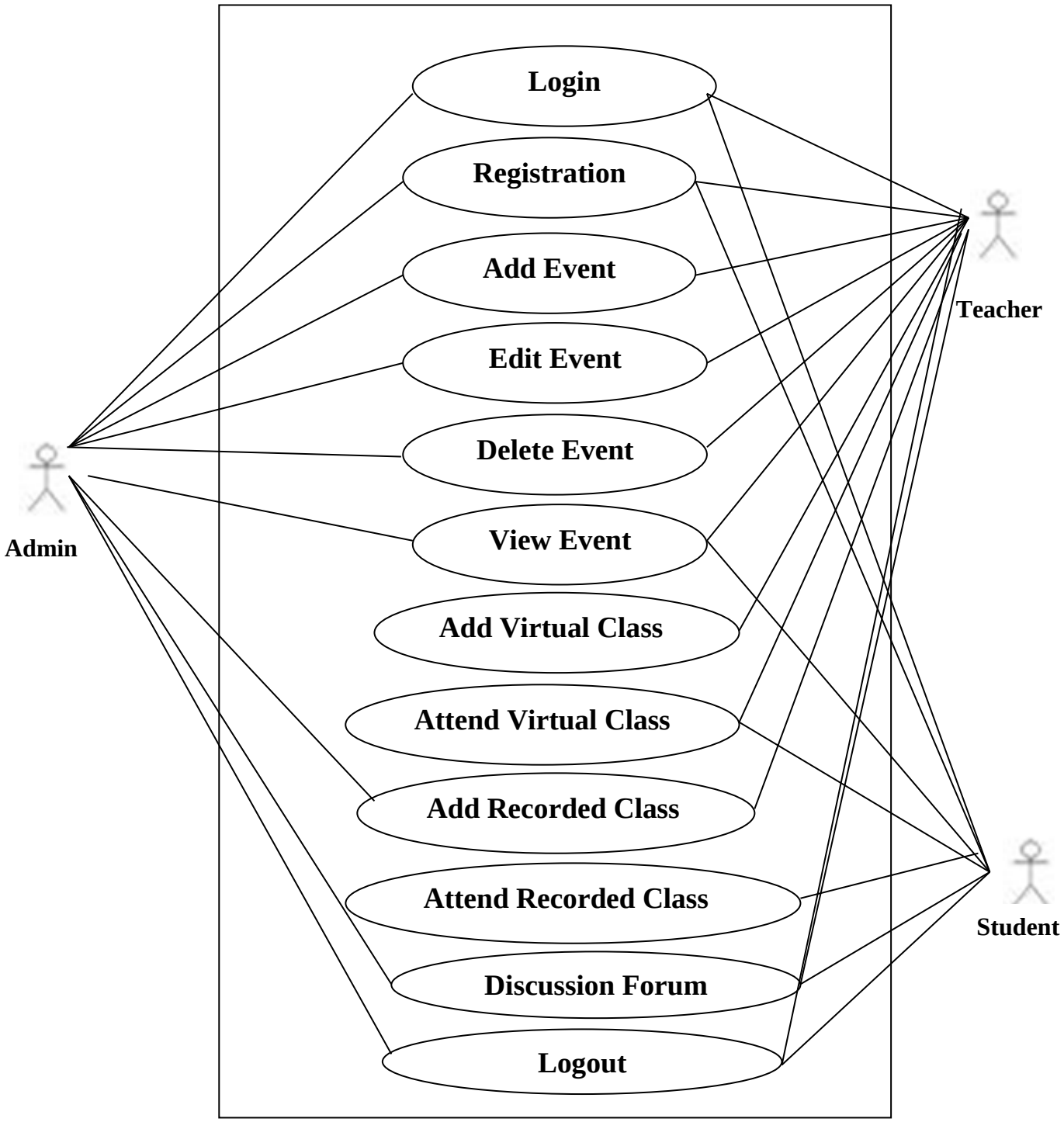

Figure 2.1: Use Case Diagram

2.7 Use Cases

We have developed some of main use cases which are shown below.

2.7.1 Use case Description:-

Use case description mainly includes use case number, Scope, Primary Actor, Pre-conditions, Post-conditions an Main Success Scenario:

Table2.1: Illustrates Figure 2.1(use case diagram of OUIP)

Use case of deleting a notification by admin is shown in Table2.1: Figure 2.1

UC01:	Delete Notification **(by admin)**	
Scope:	After the login Admin can Delete notification.	
Level:	N/A	
Primary Actor:	Admin	
Stakeholders and Interests:	N/A	
Pre-conditions:	A registered Admin	
Post-conditions:	Admin can only Delete notification in that case if he or she has registered himself or herself.	
Main Success Scenario:	**Actor**	**System**
	Admin opens the URL and click on delete notification.	System will display a confirmation page listing the notification.
Extensions:	N/A	
Special Requirements :	N/A	
Technology and Data Variants List:	N/A	
Frequency of Occurrence:	May vary	
Open issues:	N/A	

Table2.2: Illustrates Figure 2.1(use case diagram of OUIP)

Use case of adding a notification by teacher is shown in Table2.2: Figure 2.1

UC02:	Add Notification **(by teacher)**	
Scope:	After the login Teacher can Add notification about any new alert happening in University.	
Level:	N/A	
Primary Actor:	Teacher	
Stakeholders and Interests:	N/A	
Pre-conditions:	A registered Teacher.	
Post-conditions:	Teacher can only Add notification in that case if he or she has registered Himself or herself.	
Main Success Scenario:	**Actor**	**System**
	Teachers open the URL and add notification about any new activity.	System will display a confirmation page listing the notification.
Extensions:	N/A	
Special Requirements :	N/A	
Technology and Data Variants List:	N/A	
Frequency of Occurrence:	May vary	
Open issues:	N/A	

Table 2.3: Illustrates Figure 2.1(use case diagram of OUIP)

Use case of Registration by student is shown in Table2.3: Figure 2.1

UC03:	Registration **(by student)**	
Scope:	Registration is necessary to visit the website and see confidential data.	
Level:	N/A	
Primary Actor:	Student	
Stakeholders and Interests:	N/A	
Pre-conditions:	An unregistered Student.	
Post-conditions:	When the student gets registered. New profile is created.	
Main Success Scenario:	**Actor**	**System**
	Student clicks the register button on the home page. Student enters all of the required information. Student clicks the send button.	System displays the register page. System checks that all of the required information was entered if yes system will update the employee record in the employee and account table in the database.
Extensions:	N/A	
Special Requirements:	N/A	
Technology and Data Variants List:	N/A	
Frequency of Occurrence:	May vary if student forgets his /her id.	
Open issues:	N/A	

Table 2.4:Illustrates Figure 2.1(use case diagram of OUIP)

Use case of login by student is shown in Table2.4: Figure 2.1

UC03:	Login **(by student)**	
Scope:	Student must visit website and search detail after login.	
Level:	N/A	
Primary Actor:	Student	
Stakeholders and Interests:	N/A	
Pre-conditions:	A registered student	
Post-conditions:	When the student must be login to the system. He/she visit the whole website.	
Main Success Scenario:	**Actor**	**System**
	Student enters his user id and password.	System will validate the log-in information against the account table in the database.
Extensions:	N/A	
Special Requirements :	N/A	
Technology and Data Variants List:	N/A	
Frequency of Occurrence:	May vary	
Open issues:	N/A	

CHAPTER 3

DESIGN AND METHODOLOGY

This chapter shows the overall architecture of the platform that encompasses sequences, classes, and activity diagrams. It is en-focuses the method used to develop this project

3.1 System Design

The plan to elaborate system design, interfaces, modules and data in detail is known as system design that corresponds to the specified requirement. It can also be seen as a process from system theory to the final result of product development. It is misunderstood with various fields such as system engineering, analysis, and architects.

3.2 System Sequence Diagram

Objects are connected in series, chronologically, this sequence is called sequence diagrams. It displays the classes and objects contained in the system scenario to check the requirements of the specific environment. In logical view of the plan under work, sequence diagrams are usually associated with use case recognitions. They are sometimes called event scenarios and diagrams.

Following is a description of how our users interact with our system

3.2.1 Student: Login Sequence Diagram

Figure 3.1 illustrates the sequence diagram of student login.

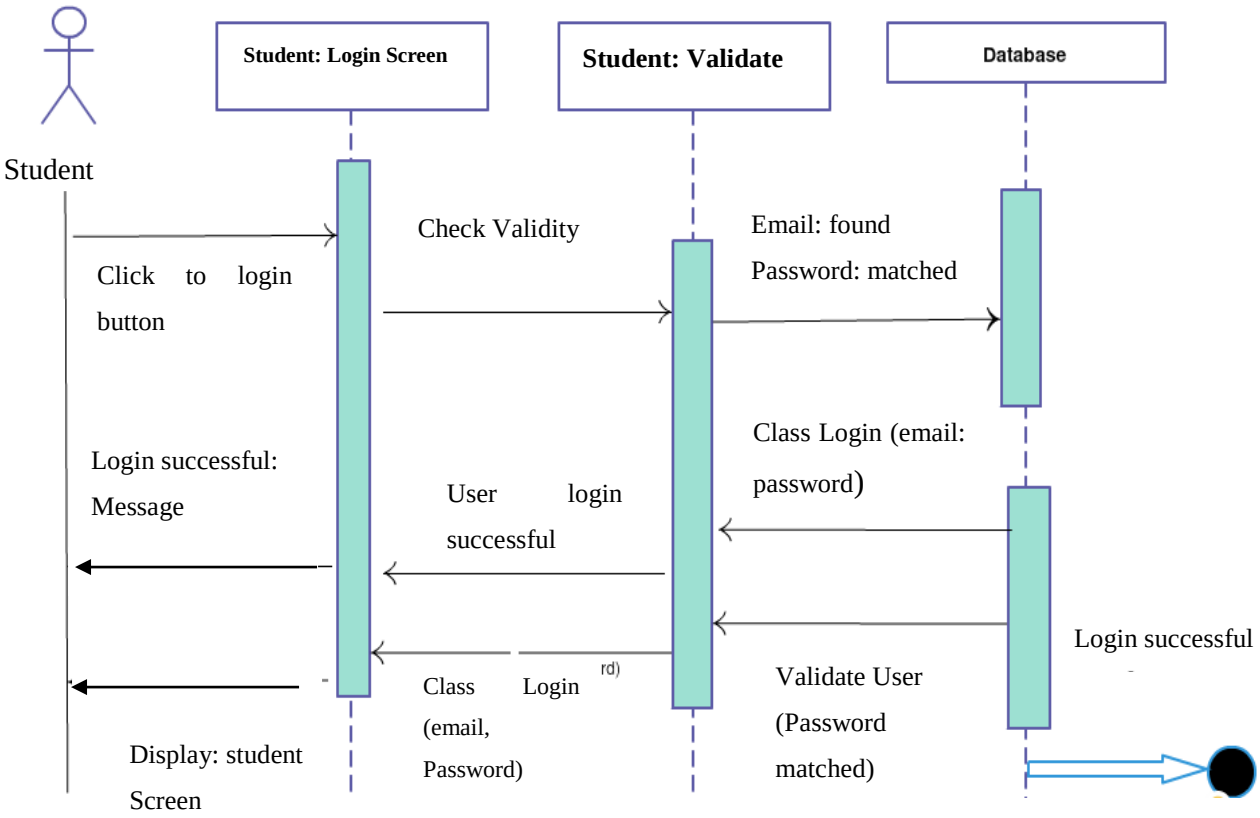

Figure 3.1: Student: Login Sequence Diagram

3.2.2 Student: Registration Sequence Diagram

Figure 3.2 illustrates the sequence diagram of student registration.

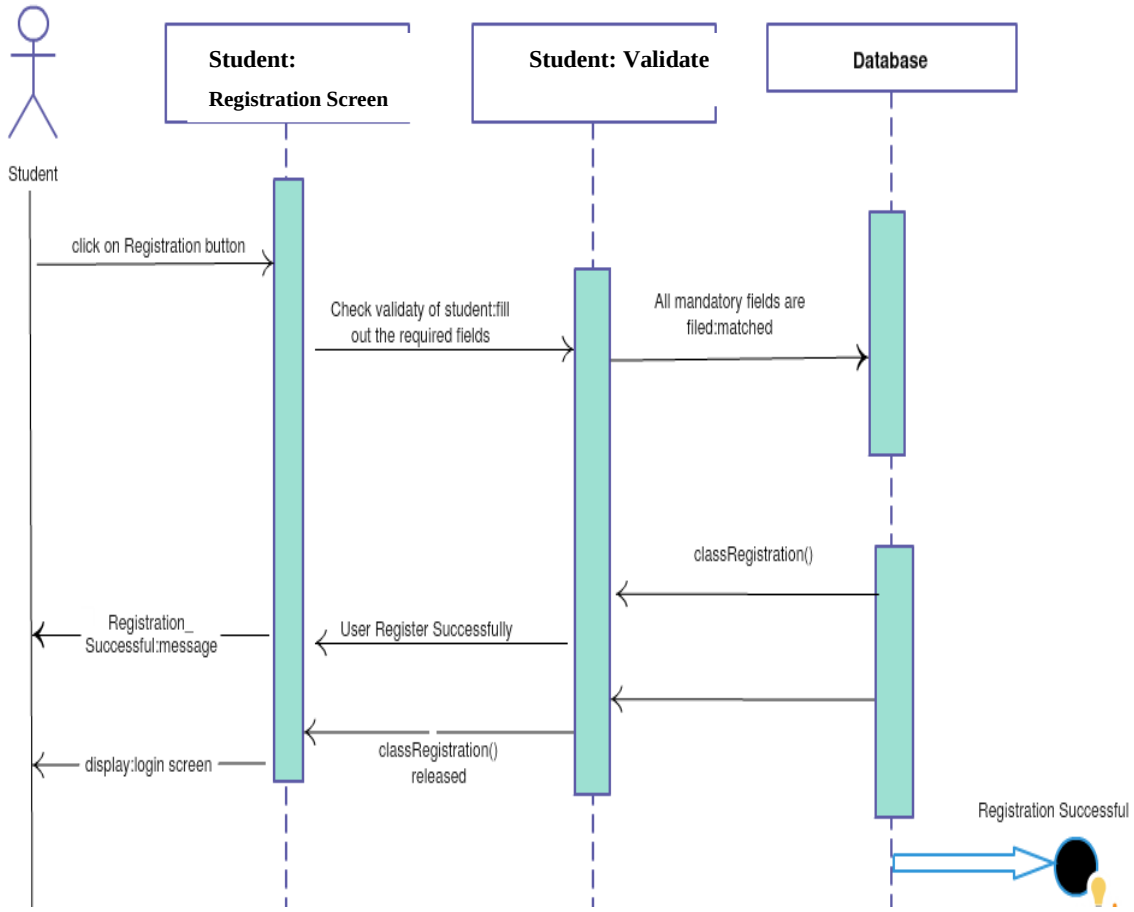

Figure3.2: Student: Registration Sequence Diagram

3.2.3 Teacher: Add event Sequence Diagram

Figure 3.3 illustrates the sequence diagram of teacher add notices.

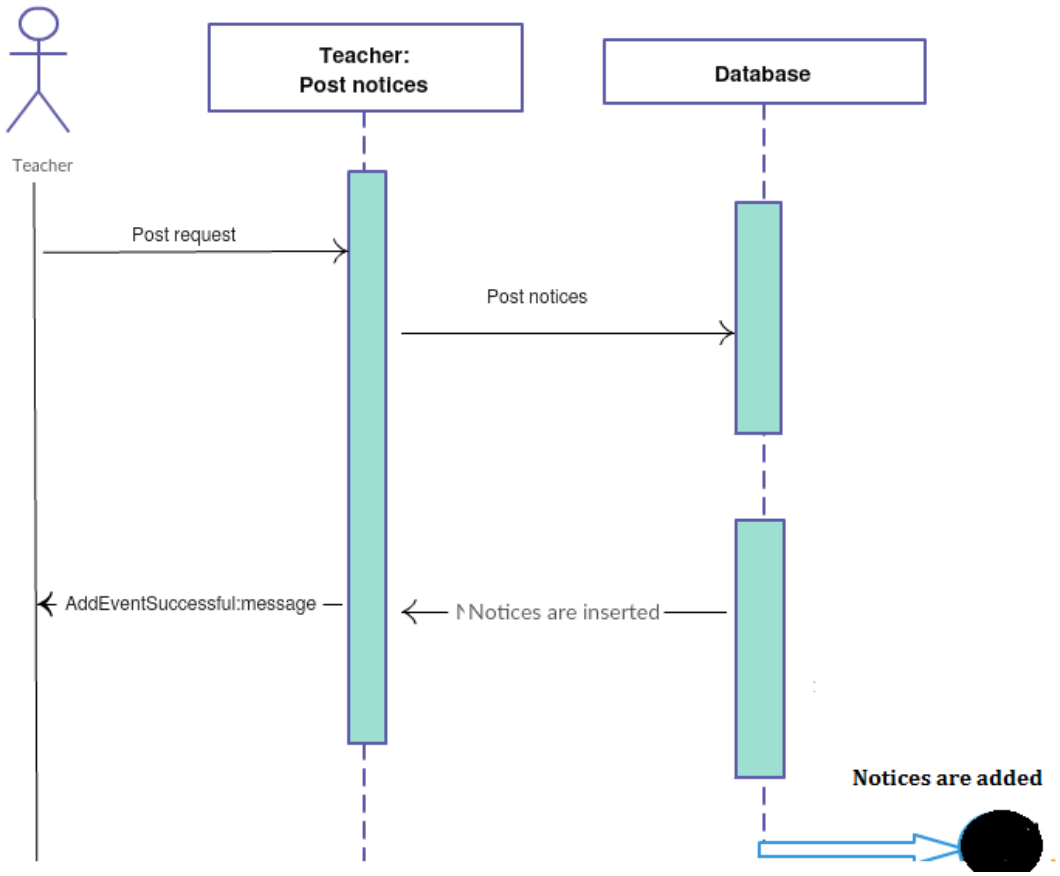

Figure 3.3 Teacher: Add event Sequence Diagram

3.2.4 Teacher: Edit event Sequence Diagram

Figure 3.4 illustrates the sequence diagram of teacher edit notices.

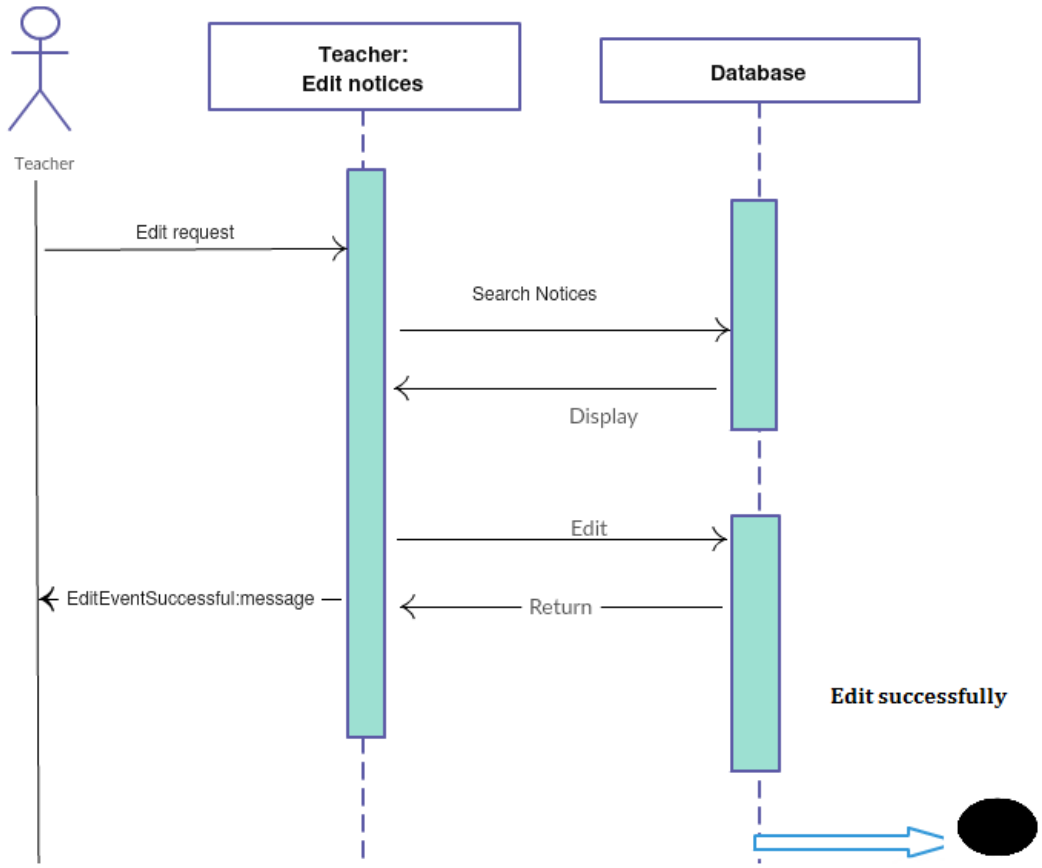

Figure 3.4 Teacher: Edit event Sequence Diagram

3.2.5 Teacher: Delete event Sequence Diagram

Figure 3.5 illustrates the sequence diagram of teacher delete notices.

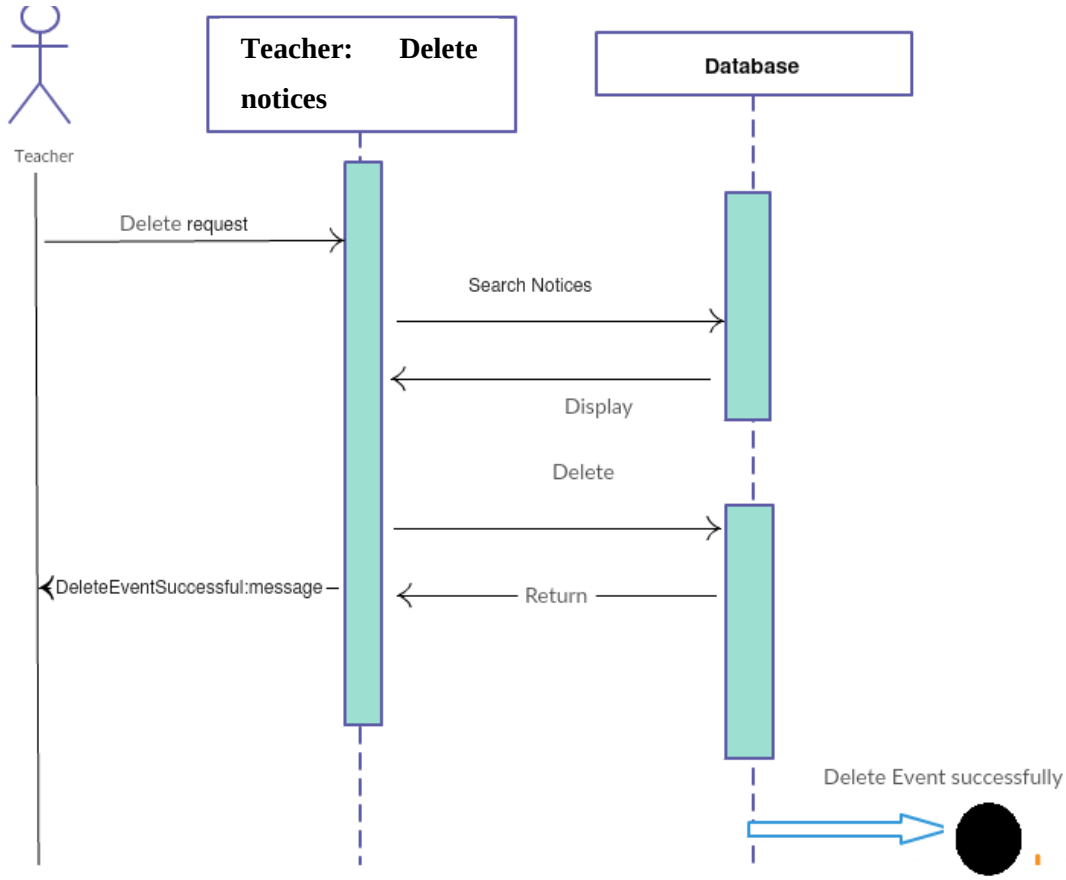

Figure 3.5 Teacher: Delete event Sequence Diagram

3.2.6 Teacher: Add virtual classroom Sequence Diagram

Figure 3.6 illustrates the sequence diagram of teacher add virtual classroom.

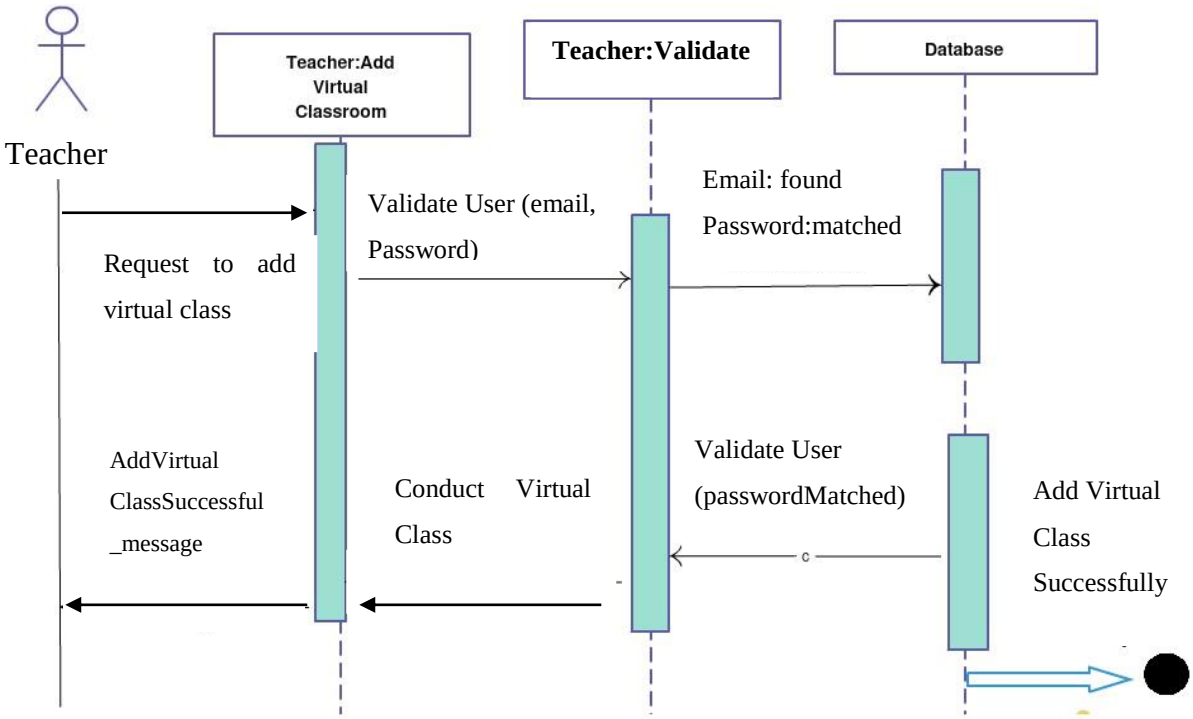

Figure 3.6: Teacher: Add virtual classroom Sequence Diagram

3.2.7 Student: Attend virtual classroom Sequence Diagram

Figure 3.7 illustrates the sequence diagram of student attend virtual classroom.

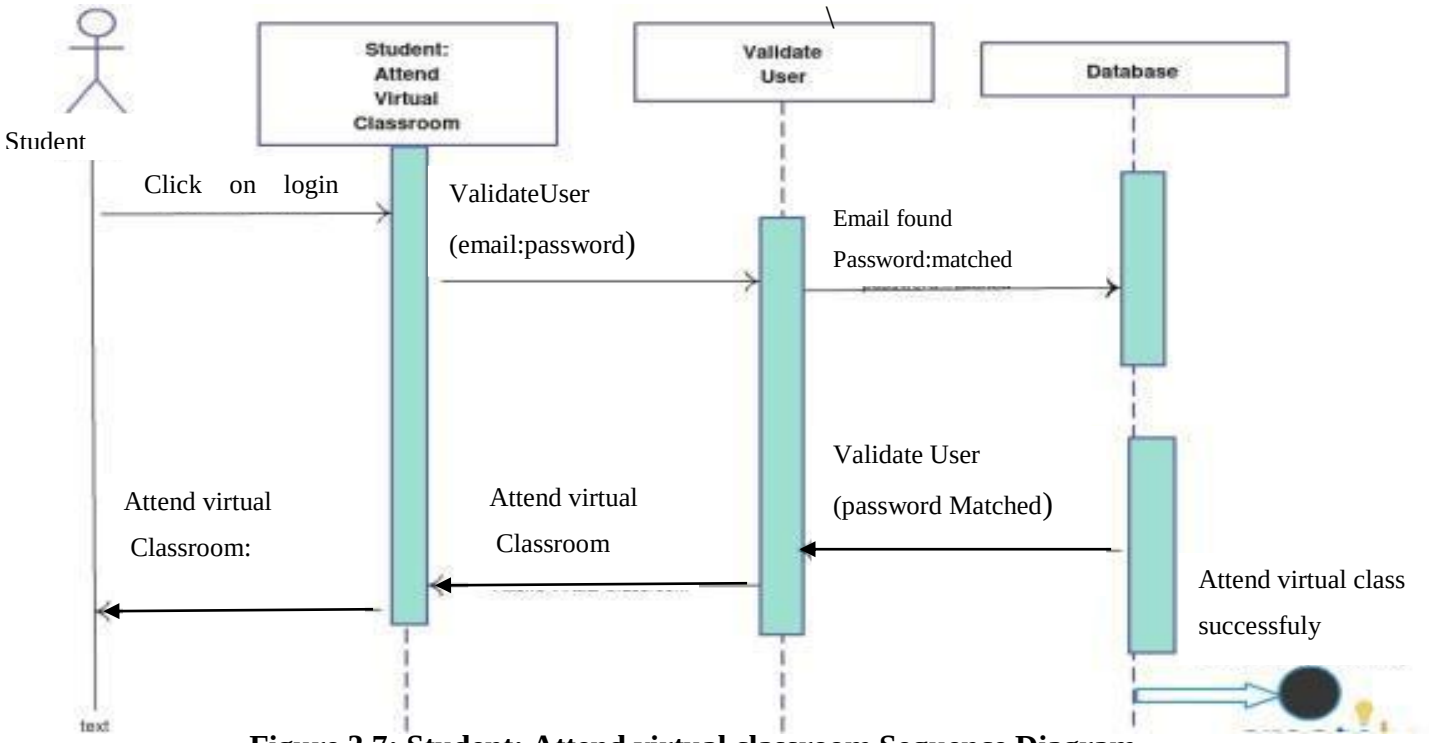

Figure 3.7: Student: Attend virtual classroom Sequence Diagram

3.2.8 Teacher: Add recorded classroom Sequence Diagram

Figure 3.8 illustrates the sequence diagram of teacher add recorded classroom.

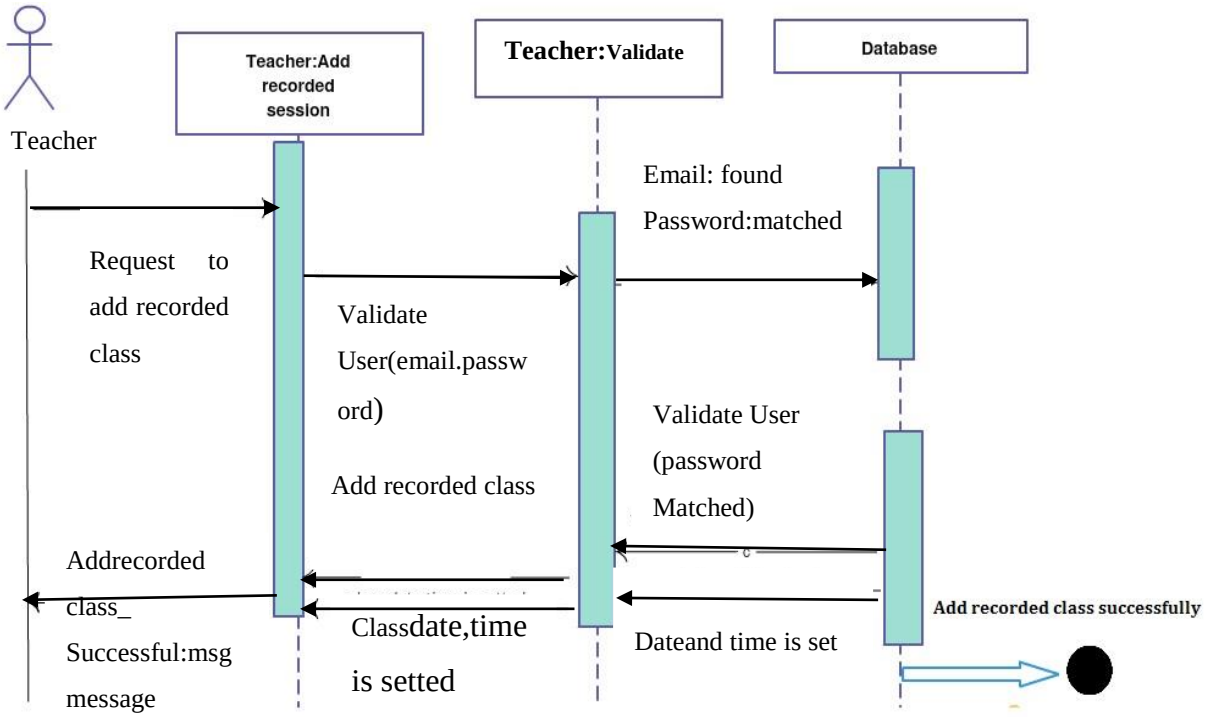

Figure 3.8: Teacher: Add recorded classroom Sequence Diagram

3.2.9 Student: View recorded classroom Sequence Diagram

Figure 3.9 illustrates the sequence diagram of teacher view recorded classroom

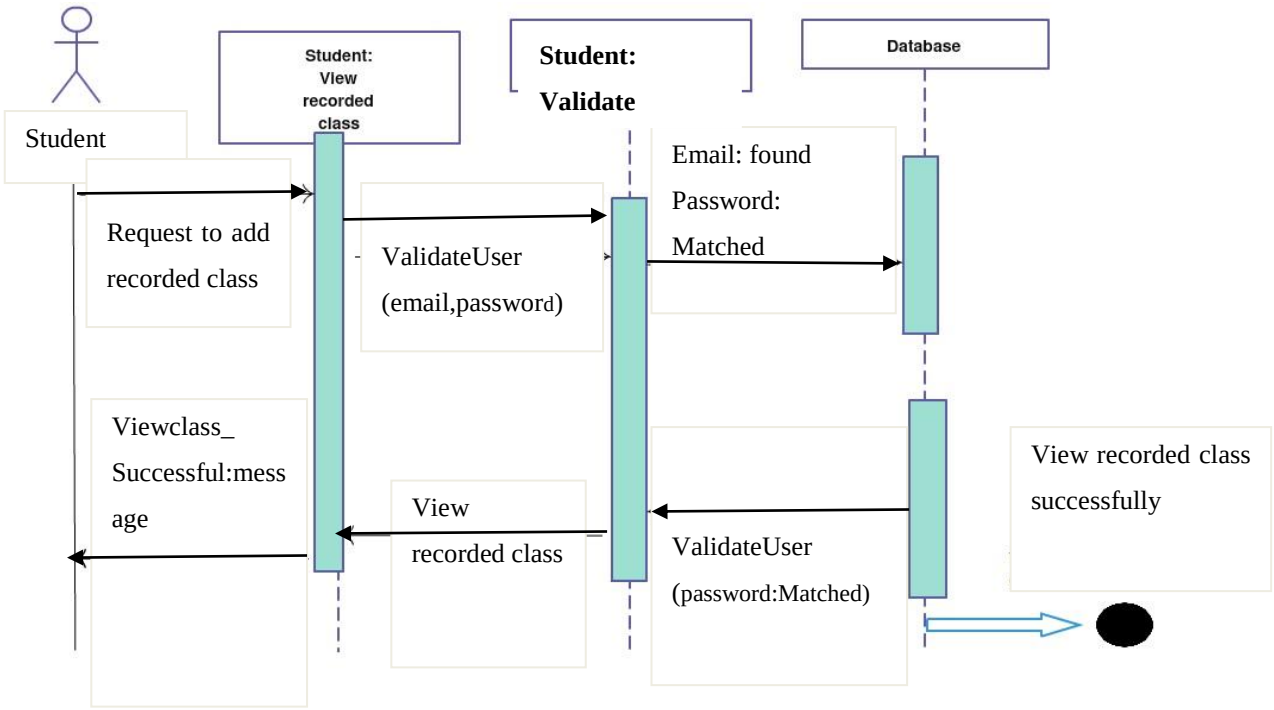

Figure 3.9: Student: View recorded classroom Sequence Diagram

3.2.10 Student: Discussion forum Sequence Diagram

Figure 3.10 illustrates the sequence diagram of student discussion forum

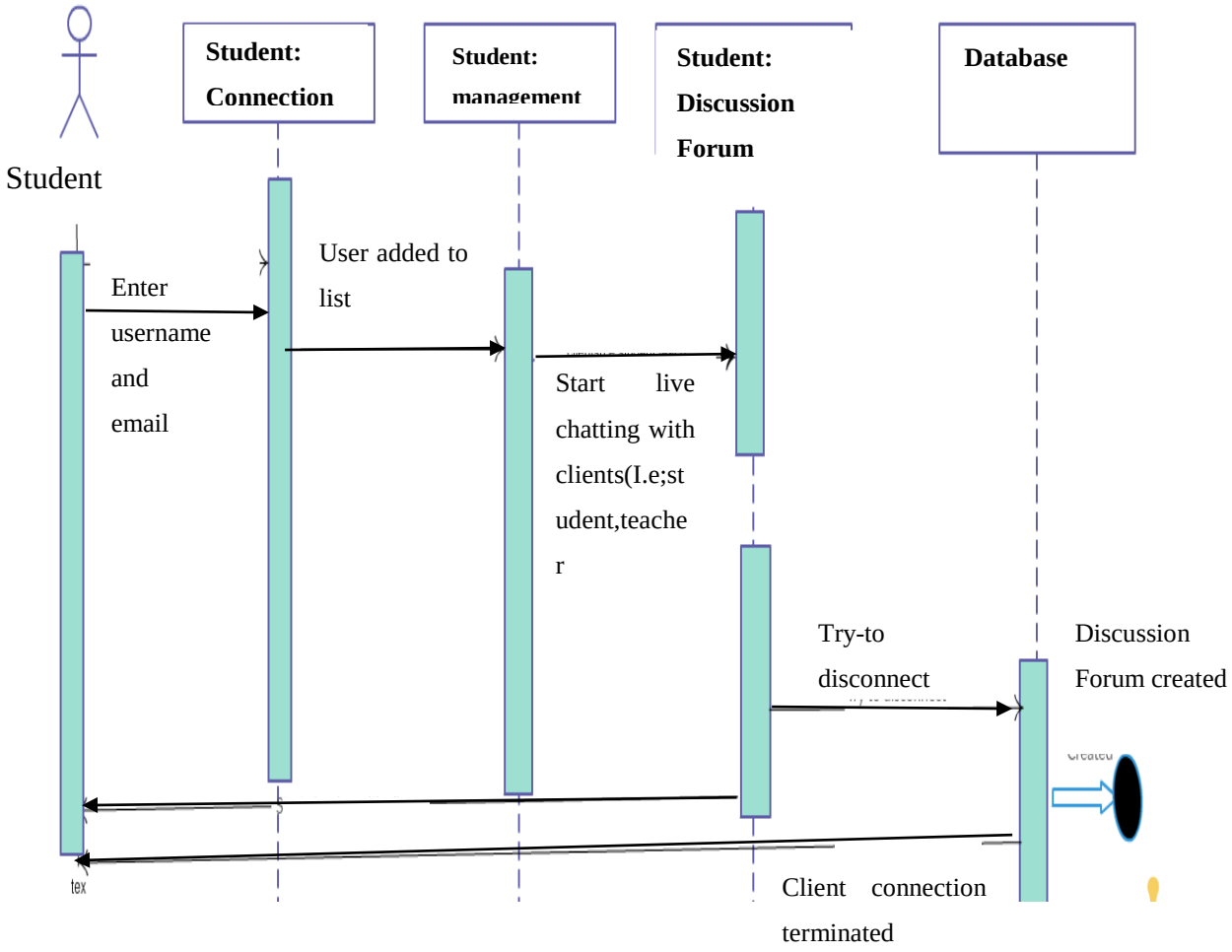

Figure 3.10: Student: Discussion forum Sequence Diagram

3.2.11 Admin: Logout Sequence Diagram

Figure 3.11 illustrates the sequence diagram of admin logout.

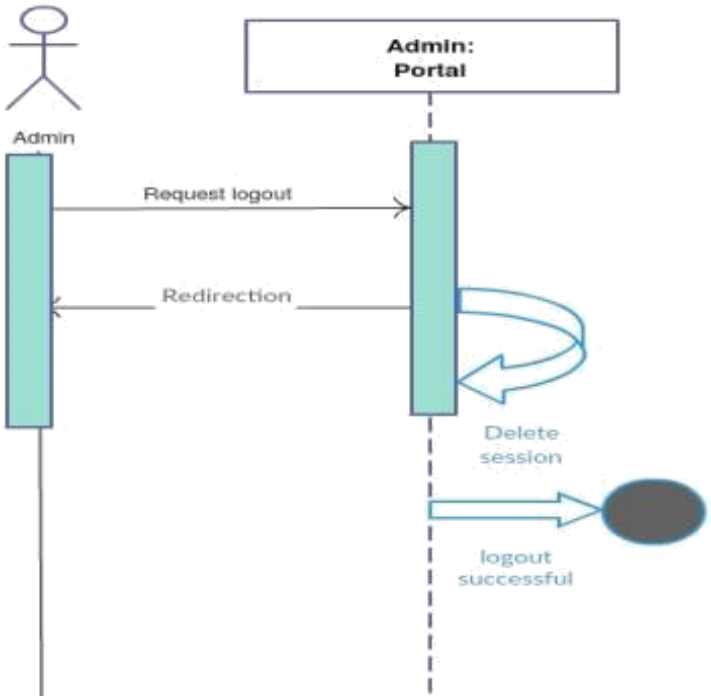

Figure 3.11: Admin: Logout Sequence Diagram

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3.3 Class Diagram

A constructive illustration that depicts system structure by displaying the system's qualities, classes, tasks and the associations among objects is known as class diagram as shown in figure 3.12. In this, our classes are using accumulation relationship.

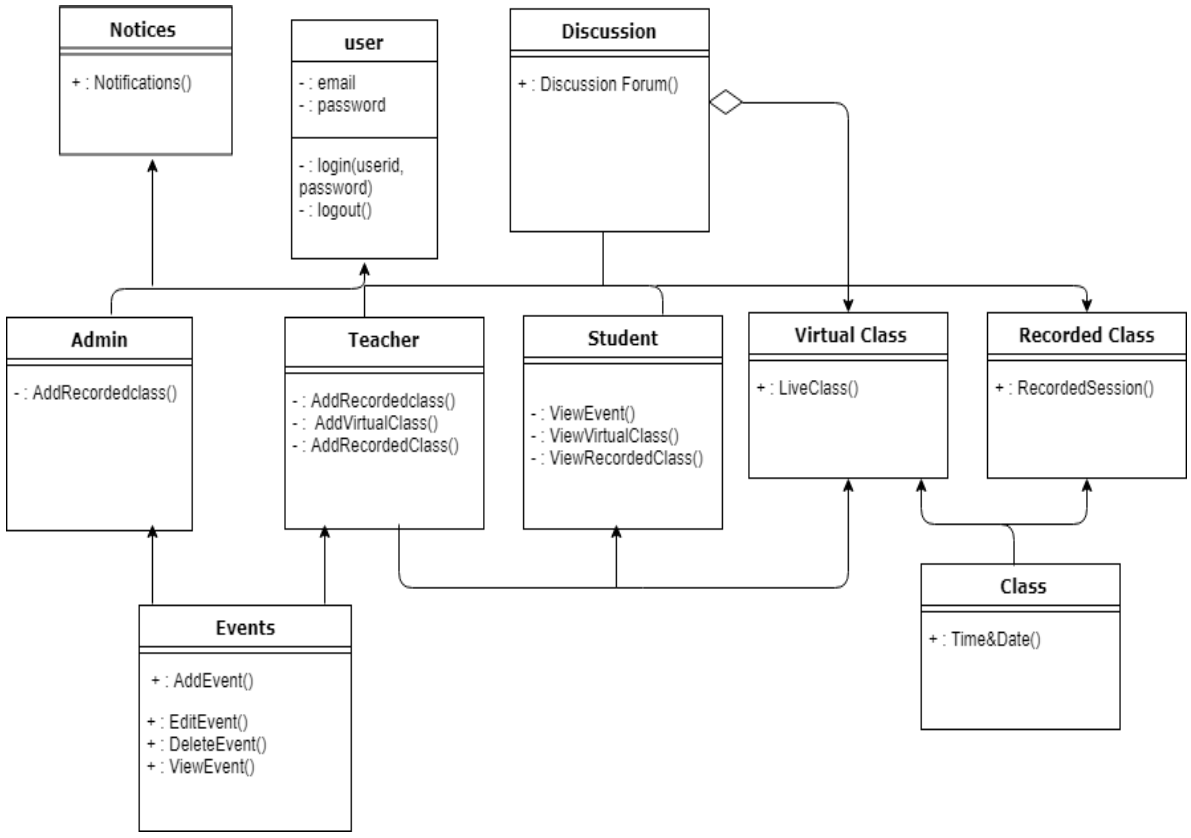

Figure 3.12: Class Diagram

3.4 Activity Diagram

The flow chart showing the cascade of activities is called the activity diagram. These activities are called system operations

3.4.1 Discussion Forum Activity Diagram

Figure 3.13 illustrates Discussion Forum Activity Diagram

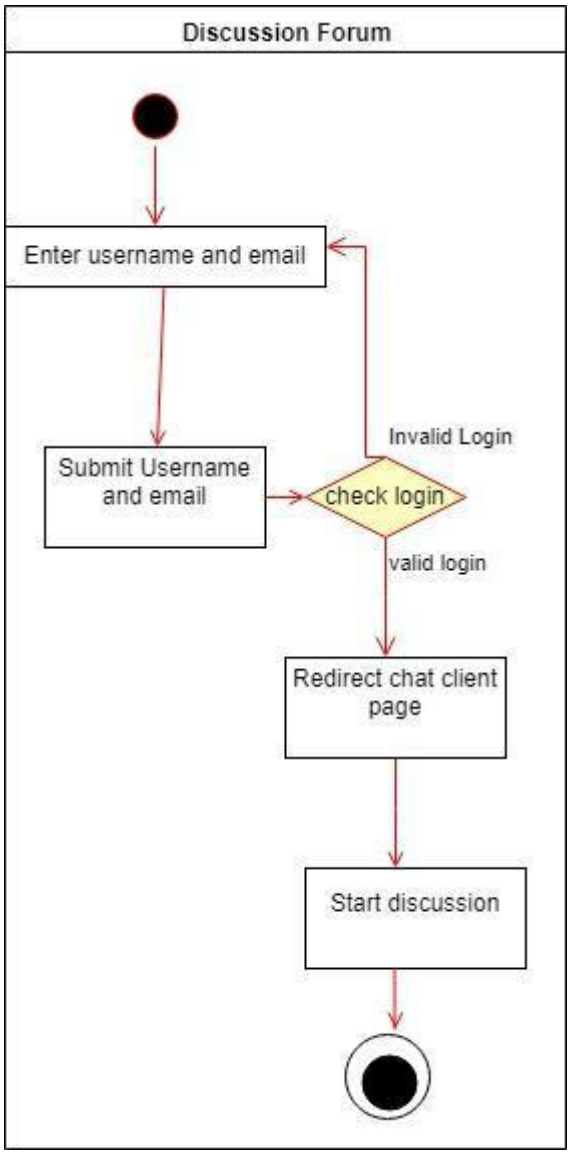

Figure 3.13: Discussion Forum Activity Diagram

3.4.2 Virtual Classroom Activity Diagram

Figure 3.14 illustrates Virtual Classroom Activity Diagram

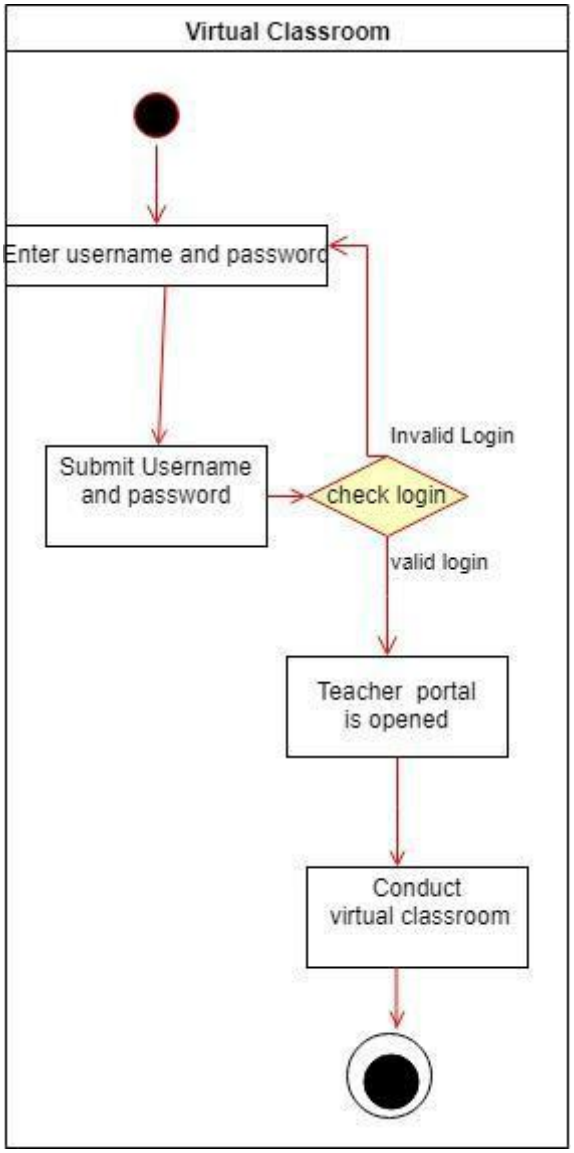

Figure 3.14: Virtual Classroom Activity Diagram

3.4.3 Teacher Portal Activity Diagram

Figure 3.15 illustrates Teacher Portal Activity Diagram

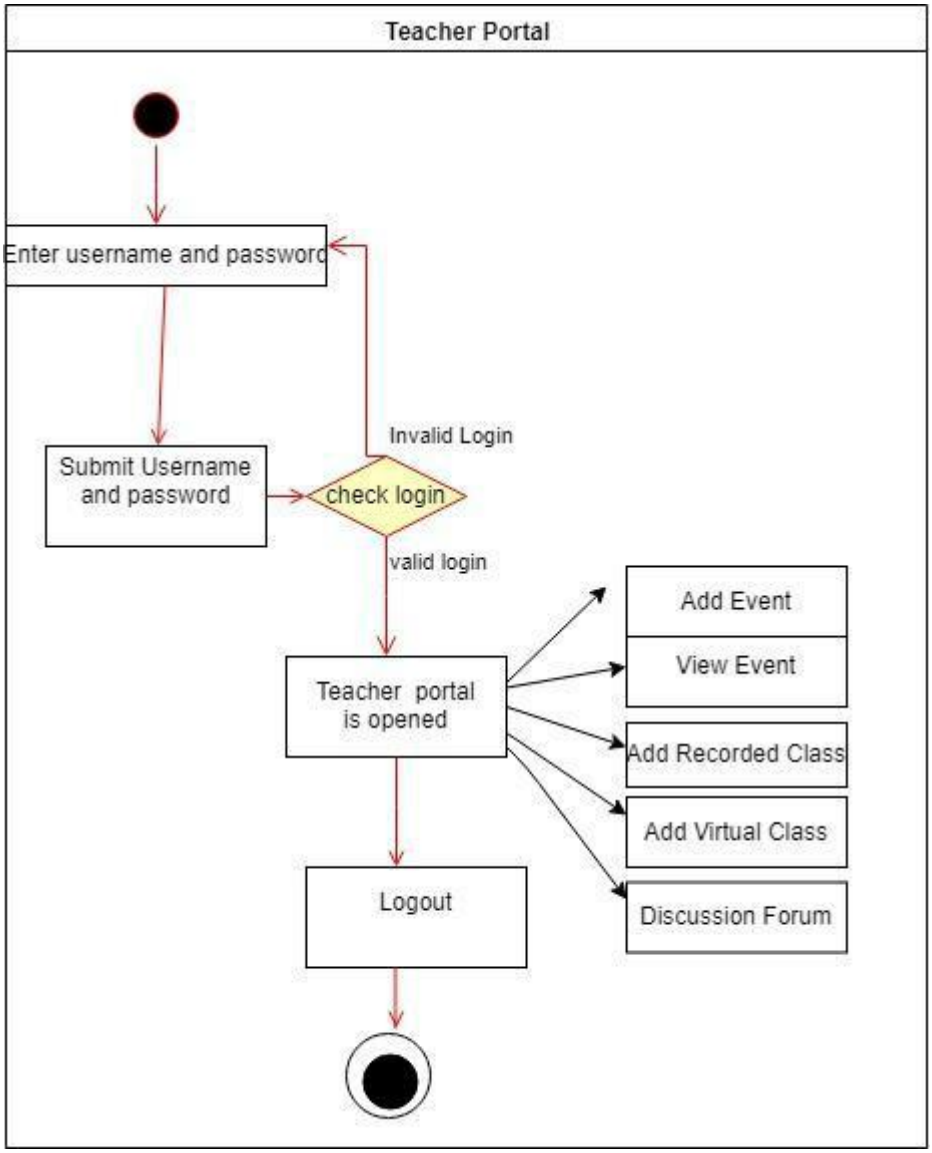

Figure 3.15: Teacher Portal Activity Diagram

3.4.4 Admin Portal Activity Diagram

Figure 3.16 illustrates Admin Portal Activity Diagram

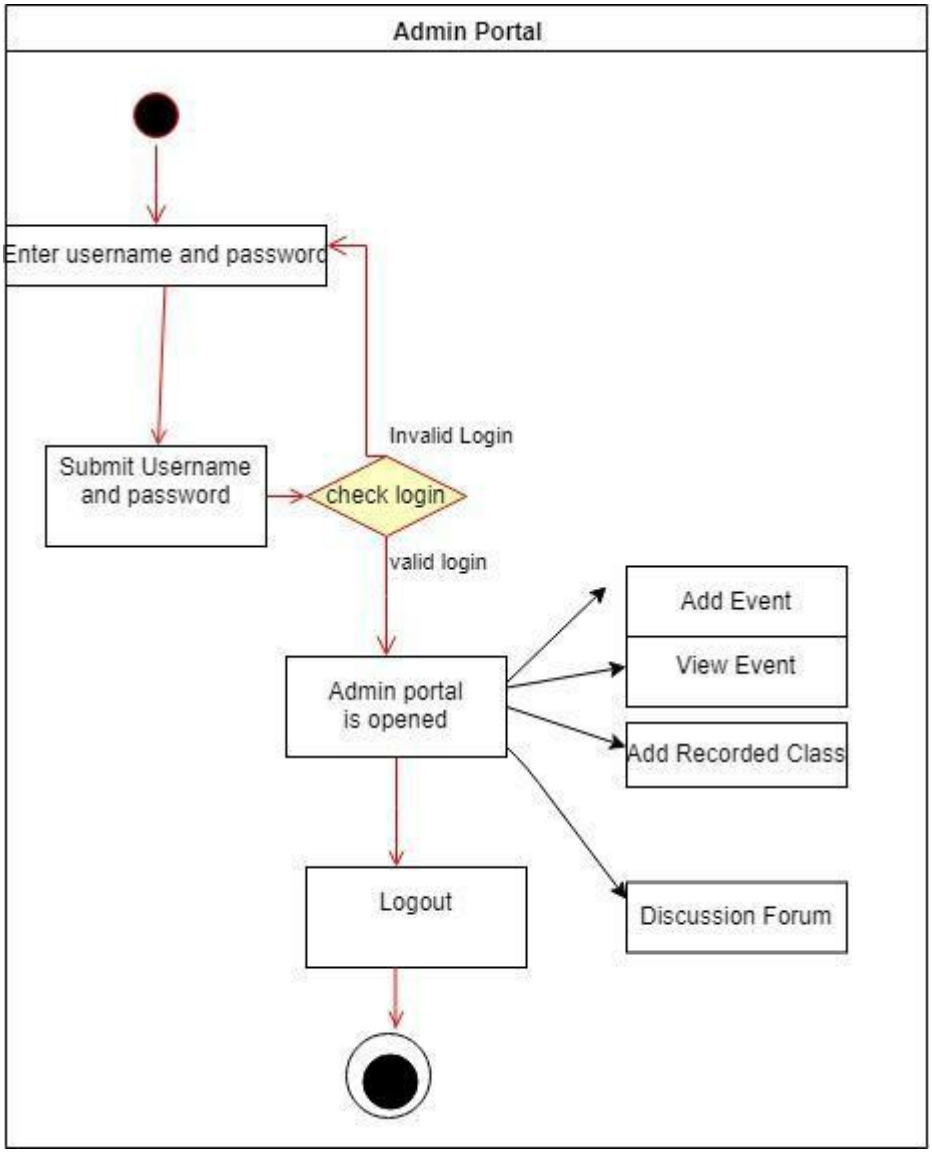

Figure 3.16: Admin Portal Activity Diagram

3.4.5 Student Portal Activity Diagram

Figure 3.17 illustrates Student Portal Activity Diagram

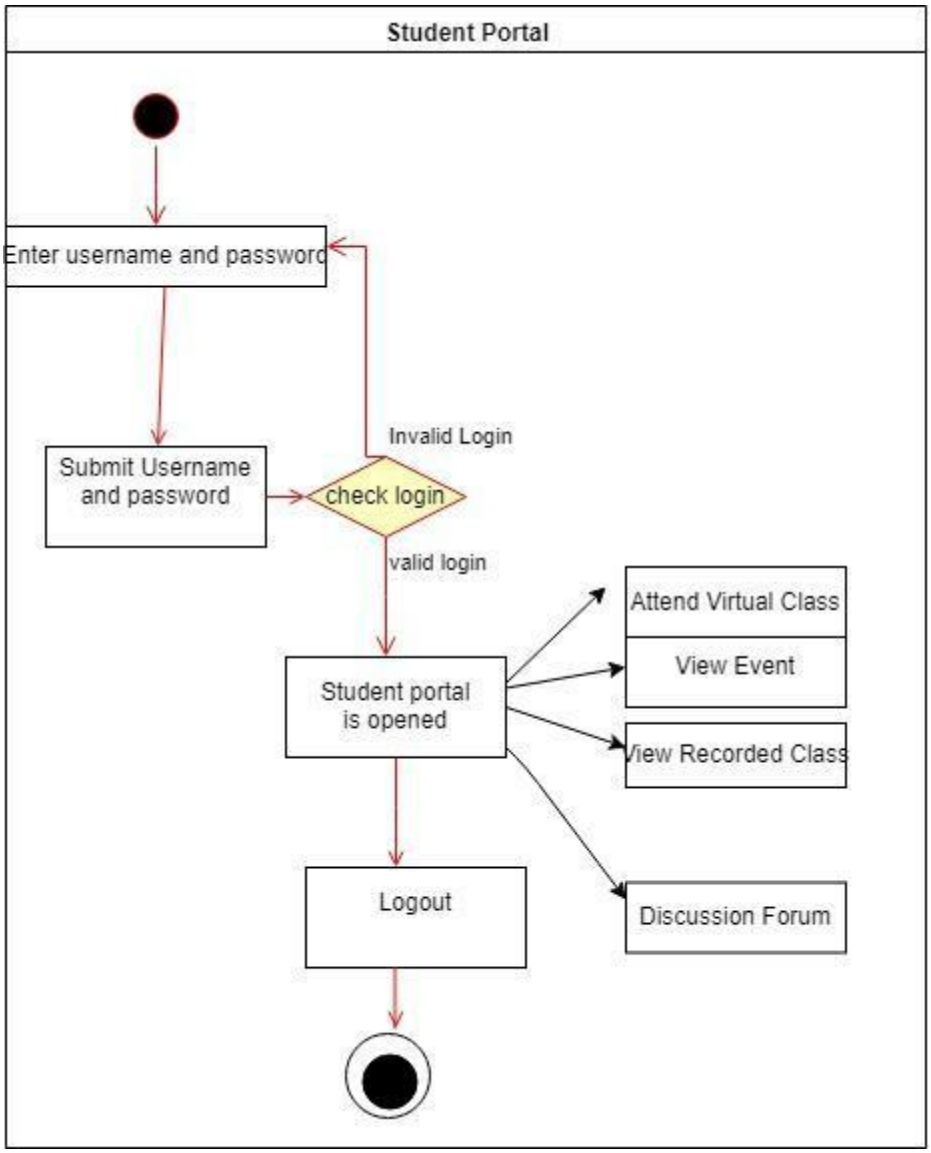

Figure 3.17: Student Portal Activity Diagram

3.5 Methodology:-

Research methodology is the specific procedures or techniques used to identify, select, process, and analyze information about a topic. Since we have established our application in the form of increments due to which our project is based on the incremental process model. Initially, we build an admin (Admin, Teacher) module, it took the feedback from student module and vice versa.

3.5.1 Incremental Process Models

The incremental process model is a method of software development where the product is designed, implemented and tested incrementally (a little more is added each time) until the product is finished. It involves both development and maintenance.. Well differentiated software requirements are seen in numerous circumstances, but this overall development process can be seen as a linear process. For the instance, a limited set of software functions can be further improved, changed in a future release of software, and provided to users. For this purpose, we included a process planned to produce a series of incremental software. According to Qui[4] is best approach for computer based learning environment.

This model is a combination of linear and parallel process basis. As time goes on, it applies linear processing in staggered form.

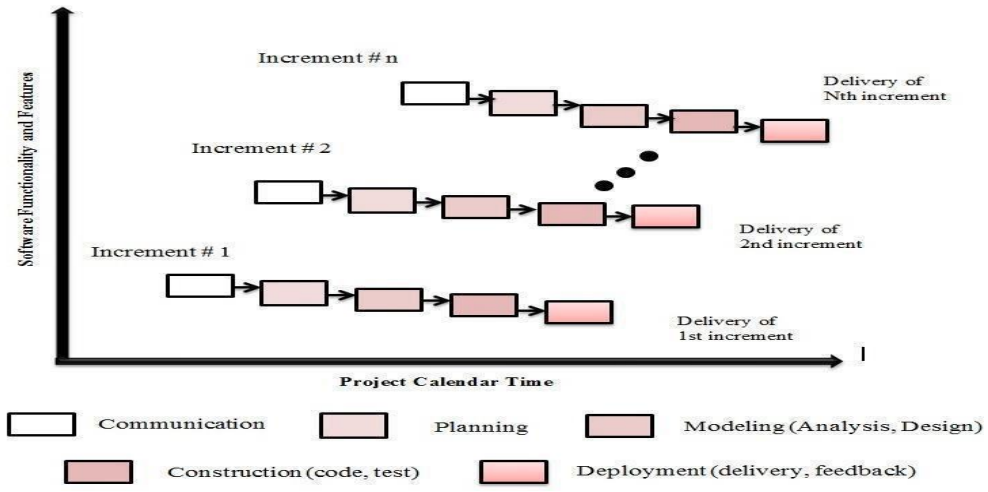

Figure 3.18: Incremental model

3.5.2 When to use Incremental Model

Due to following reasons, we used incremental model.

- These models are used where necessities are clear and can implement by phase wise.
- Generally such model is used in net applications and product based firms.

3.5.3 Advantages of Incremental Model

Below are the main motives of choosing this model

- More flexible – less expensive to change scope and necessities.
- Easier to trial and repair during a smaller iteration.

CHAPTER 4

DATA AND EXPERIMENTS

This chapter en-focuses; on the main testing and the techniques used in this project for getting accurate results to fulfil our users need

4.1 PHP and WAMP server

According to Ullman [5]; PHP like other languages, is server site scripting language, and best language for world wide web and web based application as it allows the designer to build web pages and grip data returned from web browsers. PHP encompasses the number of additions that makes it easier for the database to correlate. PHP code can simply be mixed with HTML code or mixed with various template engines and Web frameworks. PHP code is generally handled by a PHP interpreter instigated as a regular Web server native or component.

The environment depicting the web development of windows is known as WAMP. With catalogues such as Apache, MySQL and PHP, it makes it easier for you to make web applications. To attain data set that comes with PHP my admin. Its usage is very quick and installation is done automatically. A file that can be refrained from the server without opening the setting. This is the only package that can duplicate the production server.

4.2 Database

The data is stored in PhpMyAdmin->MySql.

Following are few screen-shots of notification.sql:

4.2.1 Tables of project

Figure 4.1 illustrates database tables of project

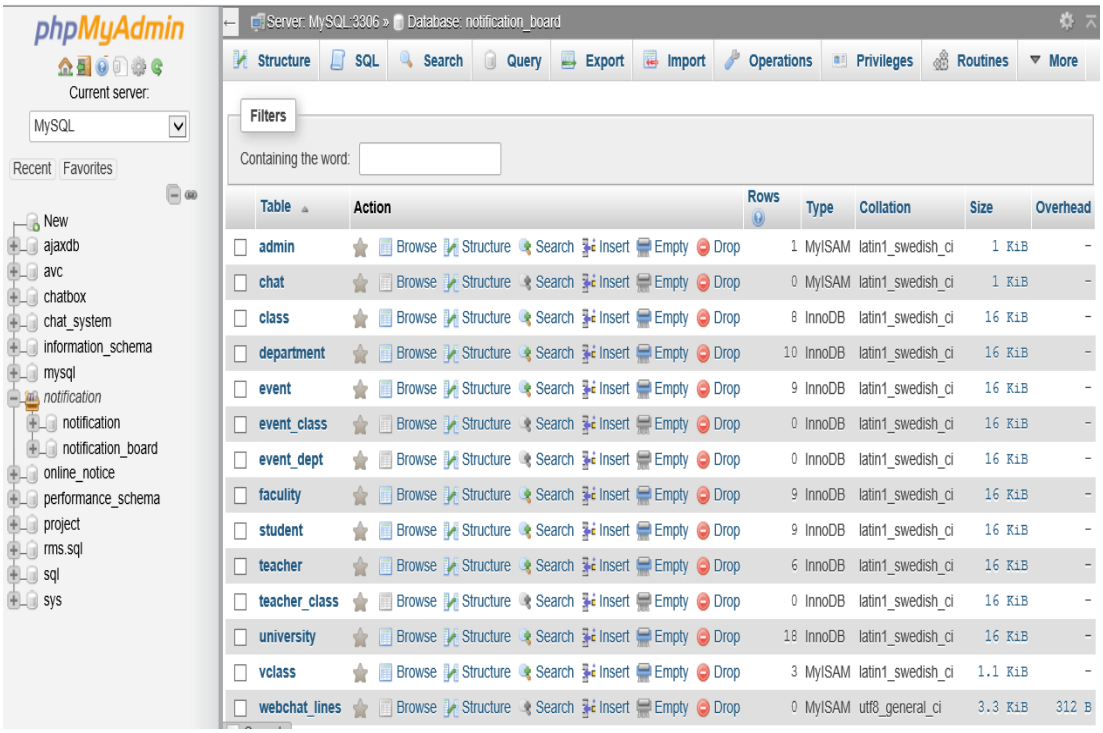

Figure 4.1: Tables of project

4.2.2 Teacher table

Figure 4.1 illustrates database teacher table of project

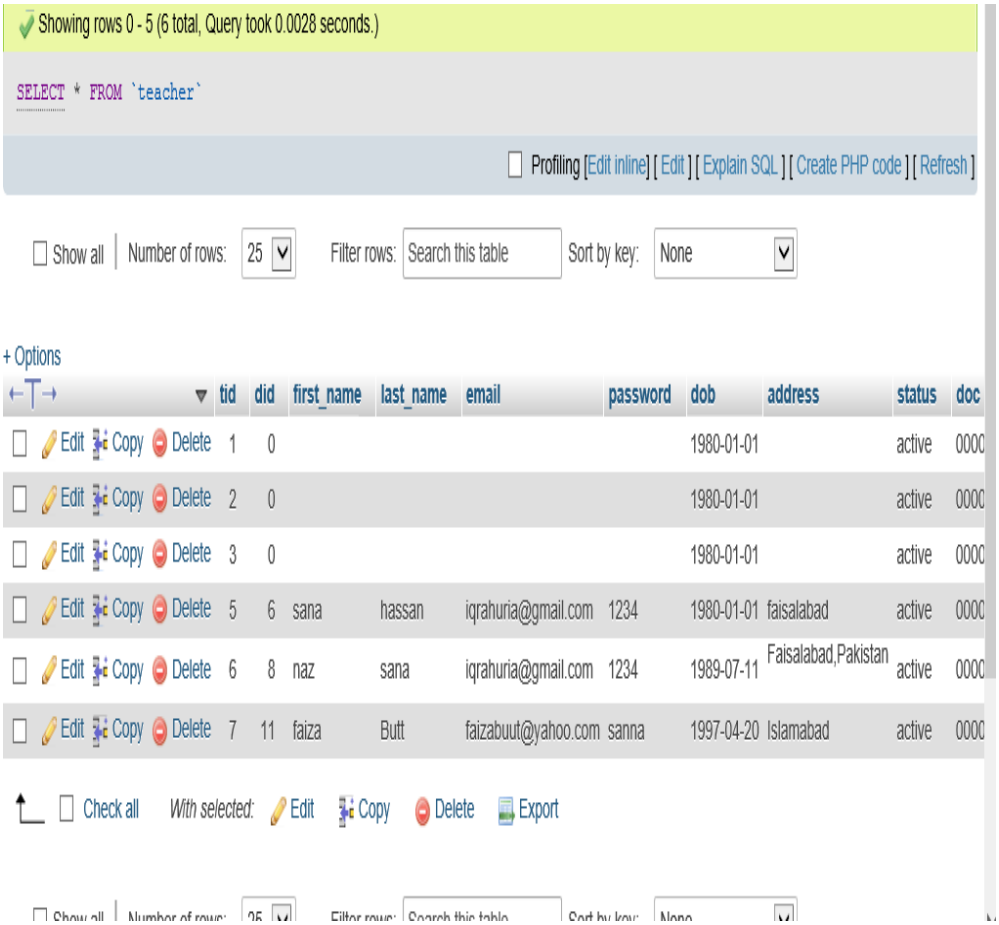

Figure 4.2: Teacher table

4.2.3 Design of database that shows primary and foreign key

Figure 4.1 illustrates database that shows primary and foreign key

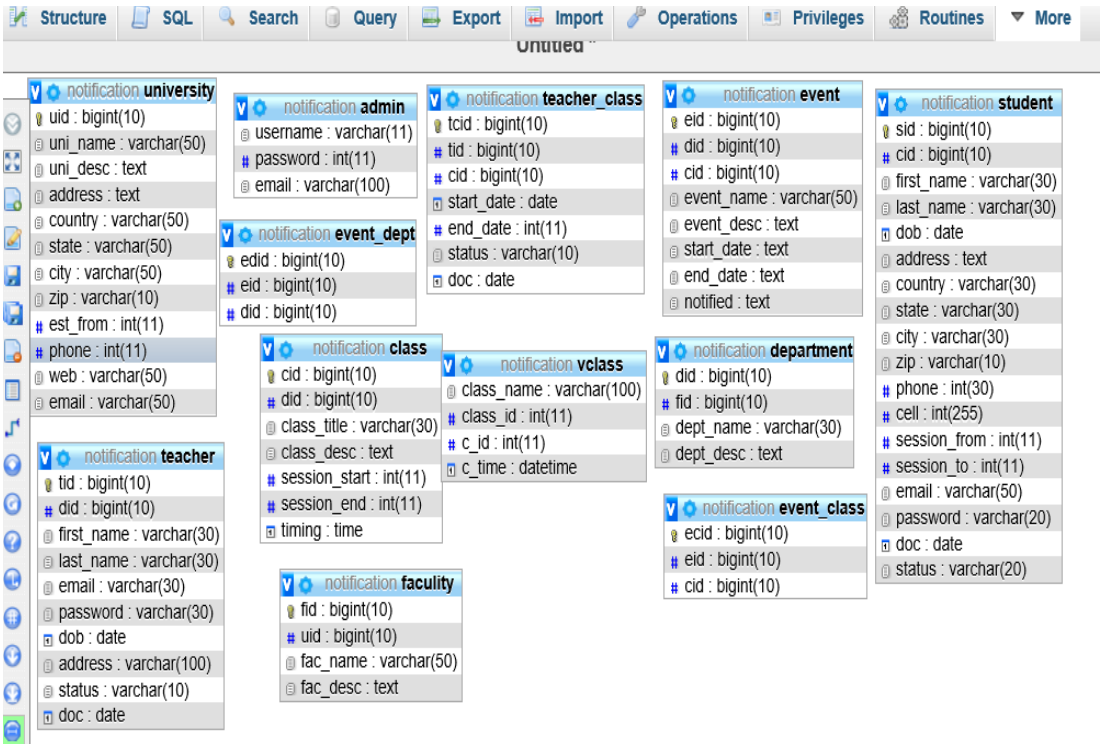

Figure 4.3: Design of database that shows primary and foreign key

4.3 Web Testing

Web testing verifies that the web application has the appropriate features and design to provide a superior user experience with the performance and security the user expects. As the name implies, the web application runs in a web browser rather than being installed on the user's device.

- Functional testing: It ensures that the application is doing what it is supposed to do. Basically it tests the function of the application.
- Security Testing: Applications based on web can be easily attacked and are vulnerable. So security testing is essential to guard from attacks.

- Database testing: is one of the main tests that requires expertise in checking tables, creating queries, and creating procedures. You can run the test on a web application or desktop, and the database can be used with applications such as SQL and Oracle.
- Cookie testing: The cookie is only the identity of the user and is used to track where the user navigated the entire page of the website. The communication between the web browser and the web server is stateless.

4.3.1 Objectives of Testing

A good test is said to be a test with a high probability of finding an unknown error. The process of finding an error is known as a test, and in a successful test it is a test that exposes an undiscovered error. Its basic purpose is to show that the project contains no mistakes.

4.4 Types of Testing

Testing Phase	Objectives
Unit Testing	For uniform working of project many functions and system block are tested
Module Testing	To test the functionality of units and there interaction between modules
Integration Testing	To test interfacing between modules
Acceptance Testing	To check running of system .

Table: 4.1 Types of Testing

4.4.1 Unit Testing

The testing of program blocks, field certification, working and navigation is called unit testing. These tests are used in important blocks of programs and other programs. The table below shows the sample test case framework for unit testing.

4.4.1.1 Unit Testing – Test Case

Testing Phase	Objectives
Test Case Description	The case that deals with proper entering of input
Expected Inputs	Standard data entered by user
Expected Outputs	Successful result of inputs and notification.
Actual Test Results	Confirmation notification of successful implementation Of events.

4.4.2 Module Testing

It is used to check the interface between various programs within a single module. It tests the general function of all modules related to the function of one program with others.

4.4.3 Integration Testing

This test is used to examine the function and interface of the module. The system contains the number of modules that will start working on OUIP. And these modules work uniformly giving desirable results. The feature of the module is tested by this test. if one module is changed, it will show changes in other modules. Integration tests should be checked, whether changes are harmful for the module.

4.4.4 Acceptance Testing

The system has been accepted as a perfect movement. This test checks whether the requirements of the user environment are satisfied and also checks whether the observer specified quality standards and policies of the system.

CHAPTER 5

RESULTS AND DISCUSSIONS

In this chapter we will discuss the result obtained after application development, and its overall working and interface.

5.1 Results

As shown in the following figure 5.11, we are building the following interface and module of Online University Interaction Platform:-

5.1.1 Main Screen of project

The main screen of project is shown in Figure 5.1

Figure 5.1: Main Screen of project

5.1.2 Discussion Forum

The discussion forum of synchronous interaction is shown in Figure 5.2

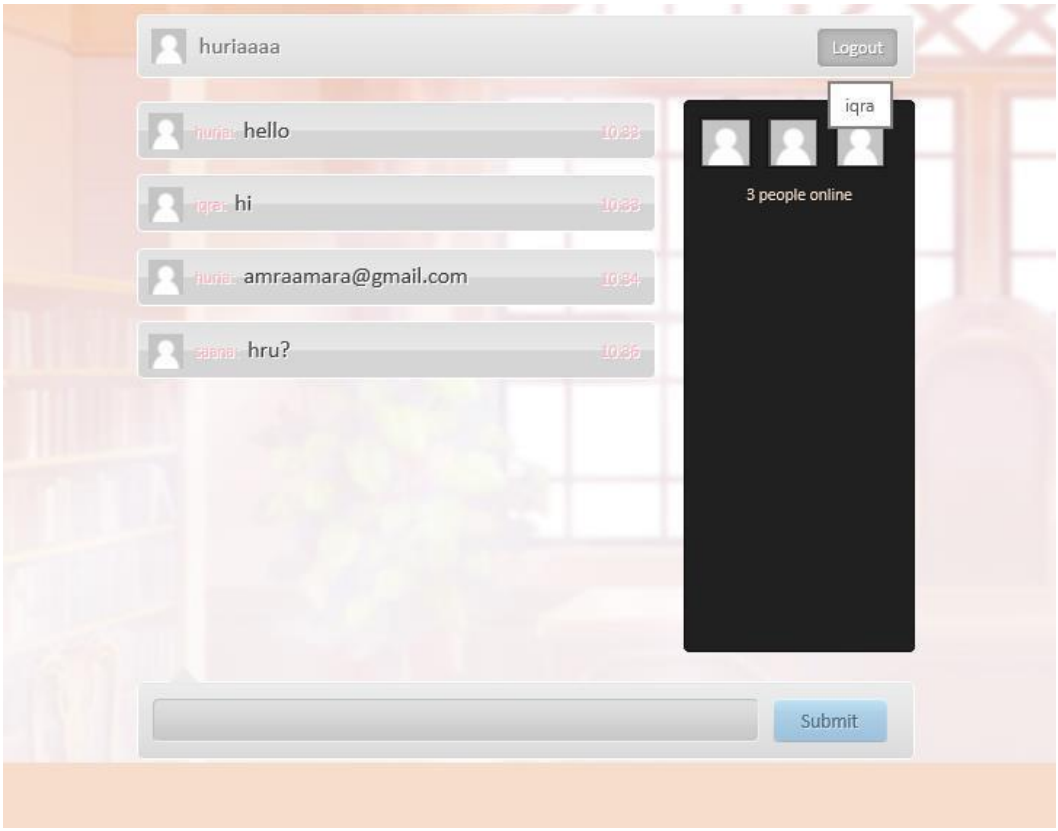

Figure 5.2: Discussion Forum

5.1.3 View Event

The view event of Asynchronous interaction is shown in Figure 5.3

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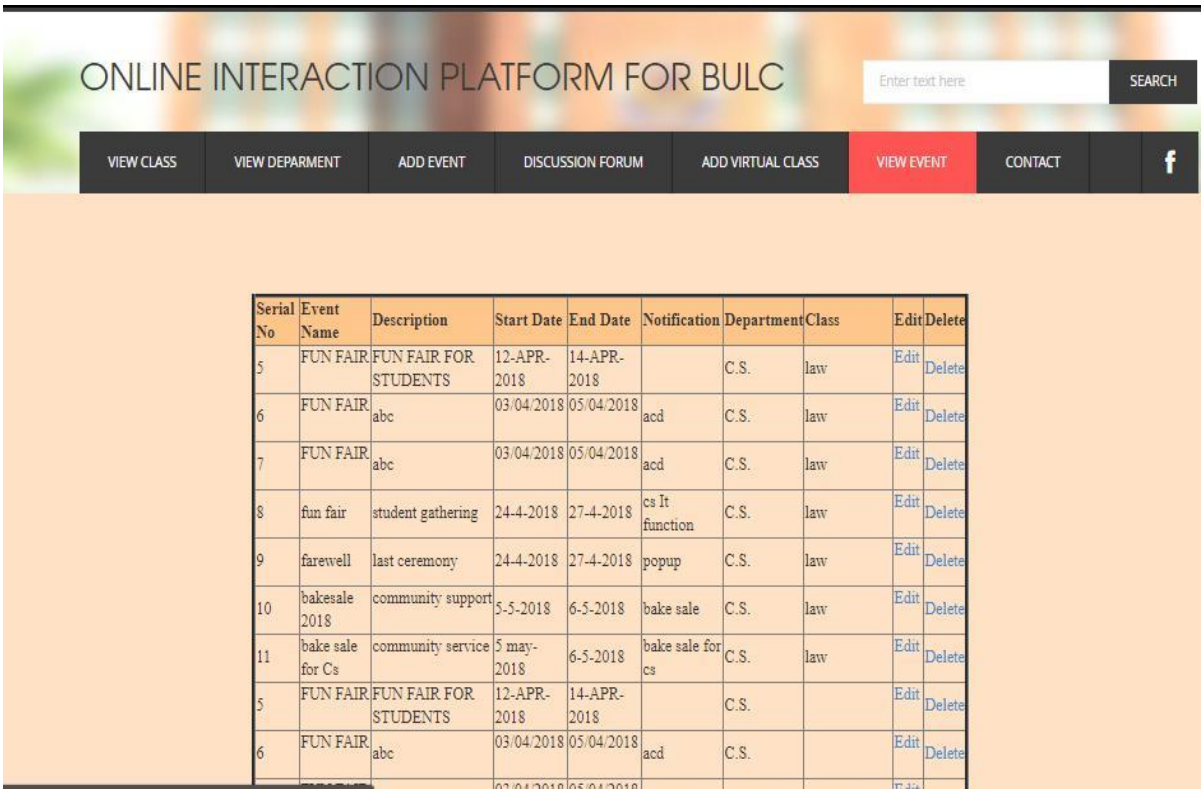

Serial No	Event Name	Description	Start Date	End Date	Notification	Department	Class	Edit	Delete
5	FUN FAIR	FUN FAIR FOR STUDENTS	12-APR-2018	14-APR-2018		C.S.	law	Edit	Delete
6	FUN FAIR	abc	03/04/2018	05/04/2018	acd	C.S.	law	Edit	Delete
7	FUN FAIR	abc	03/04/2018	05/04/2018	acd	C.S.	law	Edit	Delete
8	fun fair	student gathering	24-4-2018	27-4-2018	cs It function	C.S.	law	Edit	Delete
9	farewell	last ceremony	24-4-2018	27-4-2018	popup	C.S.	law	Edit	Delete
10	bakesale 2018	community support	5-5-2018	6-5-2018	bake sale	C.S.	law	Edit	Delete
11	bake sale for Cs	community service	5 may-2018	6-5-2018	bake sale for cs	C.S.	law	Edit	Delete
5	FUN FAIR	FUN FAIR FOR STUDENTS	12-APR-2018	14-APR-2018		C.S.		Edit	Delete
6	FUN FAIR	abc	03/04/2018	05/04/2018	acd	C.S.		Edit	Delete

Figure 5.3: View Event

5.1.4 Teacher side: Add Recorded class

The Add recorded Class of Asynchronous interaction is shown in Figure 5.4

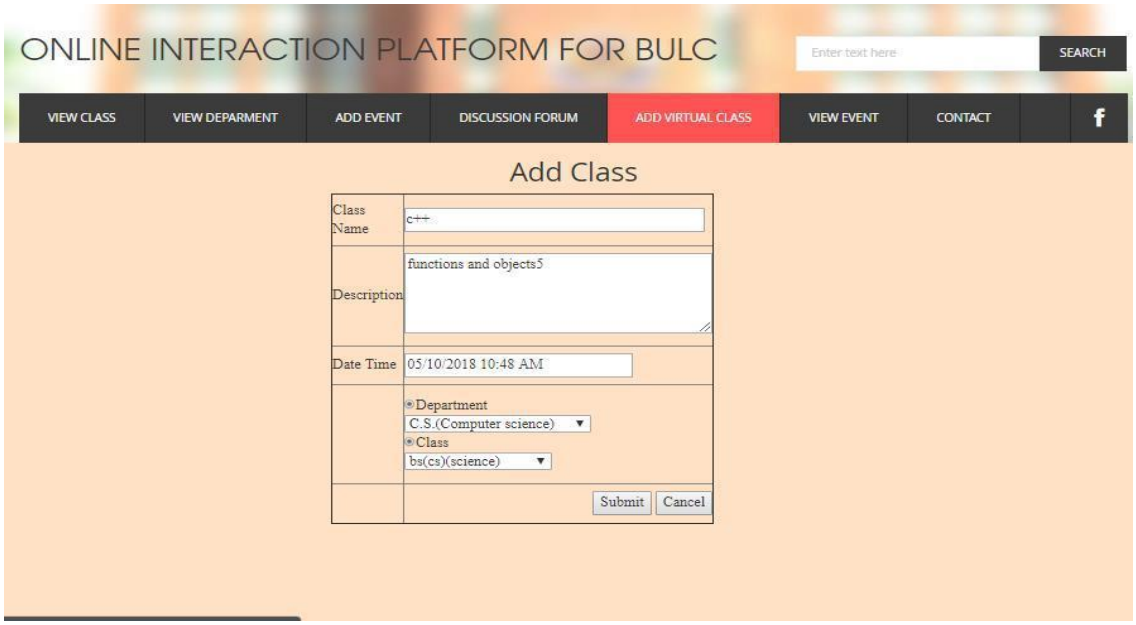

Figure 5.4: Teacher side: Add Virtual class

5.1.5 Student side: Recorded class message

The recorded class of Asynchronous interaction is shown in Figure 5.5

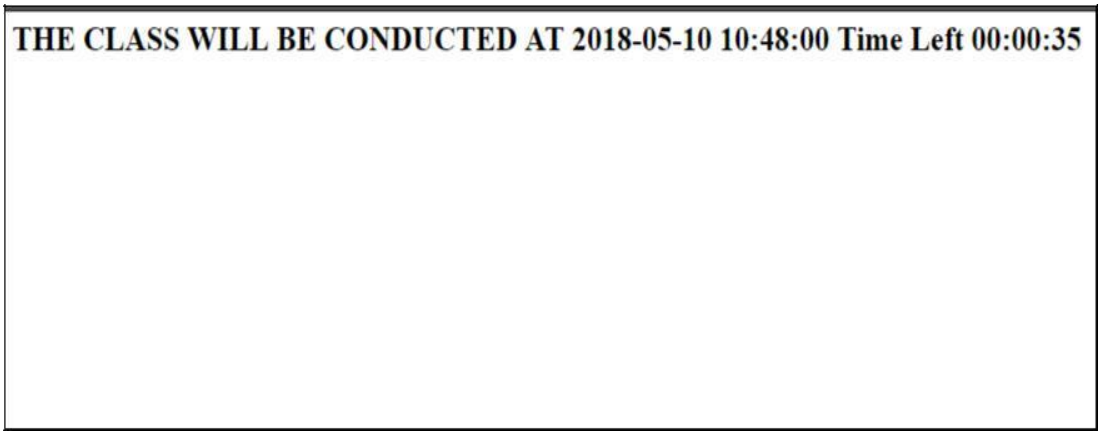

Figure 5.5: Student side: virtual class message

5.2 Discussion

As you can see from the above prototype, our project is projected for synchronous and asynchronous interactions among students and teachers. Our platform is able to meet users need in a more effective and efficient way. Teachers and admincan send notifications and messages to students and can place virtual and recording classes where both teachers and students can interact in real time environment as well.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

In this chapter we will discuss the conclusion of our platform and recommendations that will summarize the whole project and its output

6.1 Conclusion

This project will let all the users (Teachers, students, Admin) to interact with each other over Synchronous and Asynchronous means; this will provide a mean of transfer of notifications and it will take communication to advanced level through virtual class and recorded class session that will benefit both students and teachers to fulfil their requirements.

The plan of a virtual classroom system that functions as a learning platform with occasions based synchronous and asynchronous means has been presented. The system comprises of numerous modules which aid it to meet up with its intended objectives. The notice module enables teachers to notify the students, the chats module allows members to have a real-time synchronous conversation and the virtual modules allow to participate in computer-generated classroom synchronously.

6.2 Recommendations

Our project is built on the needs of students and teachers, we recommend to integrate our platform with CMS (content management system) of Bahria University ; to eliminate the barrier of interaction among students and teachers. Our project can be extended to an Interactive Learning Management System where all learning activities (quizzes, assignment etc.) can take place for the ease of users. This project can be used on a larger platform and in all campuses of Bahria University.

If more work is being done to it, this application of electronic notice **(OUIP)** can also be extended to include subsequent functions:

1. Classification of Notice: Notifications can be characterized in different categories, so that it's convenient for user to simply cope with the notices. Classification can also be done by making groups. Describing the notice to be disseminated in a specific group can make it more secure.

2. Documents and PDF files: The attachments can be further enhanced to include PDF files or DOC files. Then there will not be much requirement to send images with the notices. A single file would aid all the purposes.

3. Feedback: Response on the notifications can also be taken. It can upsurge communication among associated members and any problem can be simply sorted out on the spot.

REFERENCES

1. Tezci, E., *Attitudes and knowledge level of teachers in ICT use: The case of Turkish teachers.* Journal of Human Sciences, 2010. **7**(2): p. 19-44.
2. Katz, I.R., *Beyond technical competence: Literacy in information and communication technology*. Educational Technology, 2005. **45**(6): p. 44-47.
3. Baron, S.P. and T.G. Cohen, *Real Time Online Interaction Platform*. 2009, Google Patents.
4. Qiu, L. and C.K. Riesbeck. *An incremental model for developing computer-based learning environments for problem-based learning*. in *Advanced Learning Technologies, 2004. Proceedings. IEEE International Conference on*. 2004. IEEE.
5. Ullman, L., *PHP for the World Wide Web: Visual QuickStart Guide*. 2004: Peachpit Press.