

UIU Counseling Hour Management System



SRS Report

CSE 3411 / CSI 311 : System Analysis and Design

Team Phoenix

Student Name	Student ID
Iftekhar Mahmud	011182073
Rafi Abrar Kabir	011212012
Irfan Hossain	011202015
Iqbal Ahsan	011201385
MD Sarwar Uddin	011211111

Course Teacher: Umama Rahman, Lecturer
Email : umama@cse.uiu.ac.bd



**Department of Computer Science and Engineering
United International University
Dhaka, Bangladesh
December 19, 2023**

Table of Contents

Table of Contents	1
1. System Definition and Description	2
2. Problems	2
3. Motivation	3
4. Proposed Features	3
5. System Study	3
5.1. Research Paper Study	8
6. Benchmark Study	9
7. Gap Analysis	10
8. Feature Finalization	10
9. Feasibility Analysis	11
10. SWOT Analysis	13
11. Context Diagram	14
12. Usecase Diagram	15
13. Dataflow Diagram	16
14. Activity Diagram	17
15. State Diagram	18
16. Deployment Diagram	18
17. CRC Card	19
18. Class Diagram	20
19. UI Design	21
20. Conclusion	24

1. System Definition and Description

UIU Counseling Hour Management System is an integrated platform designed to streamline faculty-student communication within the UIU community. Faculty members can effortlessly allocate Counseling hours based on availability, allowing students to schedule sessions to address their academic concerns efficiently. This system not only enhances transparency by showing real-time availability but also optimizes time management for both teachers and students, fostering a more productive academic environment.

2. Problems

Without the UIU Counseling Hour Management System, students face some of these problems:

1. Without a defined system, it can be hard for students to find and book appointments with faculty, leading to delays in getting help.
2. Without a defined system, the process of seeking help may lack privacy, discouraging students from reaching out due to stigma or embarrassment.
3. In the absence of a structured system, resources may not be optimally utilized, with some faculty being overbooked while others have underutilized hours.
4. In urgent situations, students may not know where to turn, which can exacerbate crises if immediate counseling support is not available.

3. Motivation

Our motivation is the problems of students of UIU. Through this system, we want to make learning easier for students of UIU.

4. Proposed Features

- **Booking Table:** Teachers will give their schedules and students can book a time slot.
- **Faculty Search:** Students will be able to search the faculty of their respective courses.
- **Confirm Booking:** After selecting a time slot students, and faculty can confirm the booking.
- **Virtual Class:** To clearly understand any topic, students can have virtual classes with teachers.
- **Live Chat:** If students do not want to have virtual classes, then they can do live chat with teachers.
- **Private Storage System:** Teachers can store their notes in a private storage system which they will use to make students understand their lessons.

5. System Study

Information Gathering:

The purpose of information gathering for the UIU Counseling Hours Management System is to efficiently collect, organize, and manage data relevant to Counseling sessions. This process involves understanding the scheduling needs of students and faculty, tracking session availability, and ensuring optimal time allocation. The goal is to streamline the appointment process, enhance accessibility to Counseling services, and improve overall student satisfaction and Counseling efficacy at UIU.

Onsite Observation:

- To improve the efficiency of our website, we visited several universities and institutions that provide Learning Management Systems (LMS) or E-Learning Management Systems (ELMS).
- In this project, the main users are the students and faculty of the university. We have engaged in discussions with both faculty members and students to understand their expectations regarding Counseling.

Survey:

Q1. Have you ever used the university's counseling services before? (only student)

- YES [78.6%]
- NO [21.3%]

Decision:

Since, a high percentage of students (78.6%) have previously used the university's counseling services, so, we will design the system to give the best user experience in the university's Counseling system to students and faculty.

Q2. Which features do you think are essential for a counseling hour management system?

- Booking Table [89.5%]
- Confirm Booking [73.7%]
- Faculty Search[63.2%]
- Live Chat[47.4%]
- Virtual Class[63.2%]

Decision:

Since the percentage in the case of all features is more than 45%, so, we will try to implement all of the features and make them easy to use.

Q3. How often do you think you would need counseling in a trimester?

- Rarely[0%]
- Occasionally[53.3%]
- Regularly[26.7%]
- Frequently[20%]

Decision:

The collective response suggests that teachers anticipate a substantial need for counseling throughout the trimester. To accommodate these varying needs, the counseling hour management system should be designed to offer flexible scheduling options and ensure consistent availability to support teachers when required, catering to their occasional, regular, and frequent counseling needs. This emphasizes the importance of a system that can handle diverse counseling requirements across different intervals within a trimester.

Q4. Do you think a digital counseling hour management system could facilitate better communication and collaboration among teachers and students involved in counseling?

- YES[100%]
- NO[0%]

Decision:

Since all the students think that a digital counseling hour management system could facilitate better communication and collaboration among teachers and students, so, we will build a system that will facilitate better communication and collaboration among teachers and students involved in Counseling.

Q5. How satisfied are you with the proposed Counseling hour management system?

- More Satisfied[98%]
- Less satisfied[1%]
- More or less[1%]

Decision:

Since students are more satisfied with this proposed system, we will make the system more efficient, user-friendly, secure, flexible, and responsive.

Q6. Have you utilized the university's counseling services to assist students in the past? (For Faculty)

- YES: 80%
- NO: 20%

Decision:

Since a majority of teachers (80%) have utilized the university's counseling services, their insights and experiences can provide valuable input into designing an effective counseling hour management system.

Q7.What are the key challenges you face in managing counseling hours and appointments currently? (For Faculty)

Responses (Multiple responses allowed):

- Time management: 60%
- Coordination with other faculty: 40%
- Difficulty in tracking student progress: 20%
- Lack of a streamlined system for appointments: 70%

Decision:

The most prominent challenge faced by teachers is the lack of a streamlined system for appointments (70%). Addressing this within the new counseling hour management system should be a priority.

Q8.What features or functionalities do you believe would greatly benefit you in managing counseling hours effectively? (For Faculty)

Responses (Multiple responses allowed):

- Appointment scheduling: 80%
- Progress tracking tools: 2%
- Private Storage System 90%

Decision:

Appointment scheduling (80%) and private storage systems (90%) are highly prioritized by teachers, highlighting the importance of easy-to-use and efficient features for effective counseling hour management.

Q9.How do you foresee the implementation of a new counseling hour management system impacting your current counseling methods or workload? (For Faculty)

- Positive impact: 70%
- Neutral impact: 20%
- Increased workload: 10%

Decision:

The majority of teachers foresee a positive impact (70%) from the new system, emphasizing the potential benefits it could bring to their counseling methods.

Q10.Would you prefer any training or orientation sessions on using a new counseling hour management system before its full implementation? (For Faculty)

- YES: 60%
- NO: 40%

Decision:

A majority of teachers (60%) express the need for training or orientation sessions, indicating the importance of providing adequate support for a smooth transition to the new system.

In this survey, the total number of participants was 19.

68.4% of students and 31.6% of faculty took part in this survey.

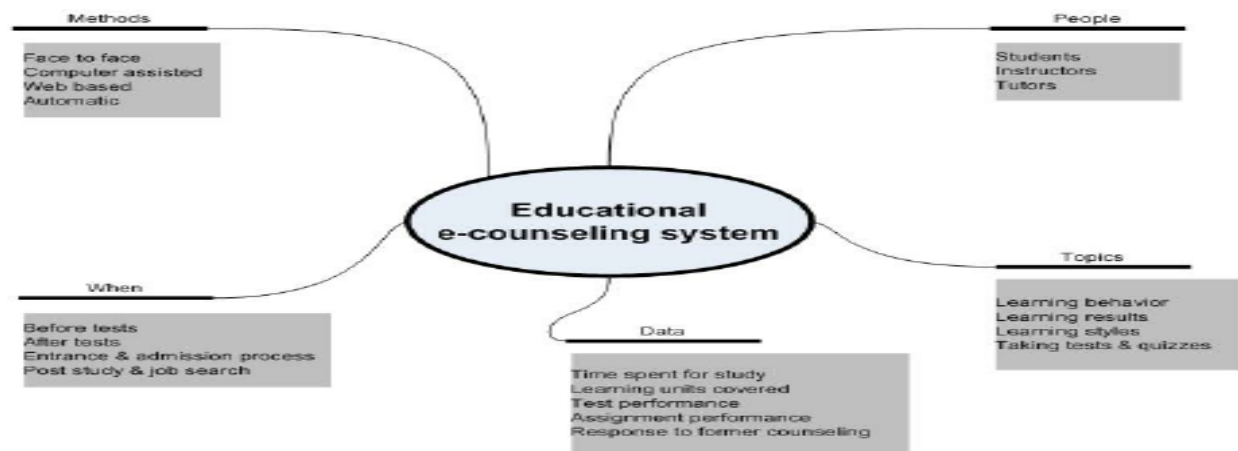
77.2% of males and 22.8% of females took part in this survey.

Students and faculties from all departments took part in this survey.

5.1. Research Paper Study

Reviewing research papers and online articles could provide additional insights into enhancing our website's features. By examining these resources, we can understand how to increase our website's effectiveness and gain knowledge from experts' opinions. Certain studies outline strategies for feature optimization. For Example:

From this research paper 'Student Online Counseling Kernel System Based on Learning Behavior and Test Performance': We got the idea that we can introduce the Virtual Class feature in our system.



6. Benchmark Study

We can discover more efficient methods to enhance our project beyond the standard set by benchmark products. By comparing various products, we aim to achieve superior performance.

Products→ Features↓	UIU ELMS	MintBook	TalentLMS	DayOne Tech	PocketStudy	UIUCHMS
BookingTable	No	No	No	No	No	Yes
Faculty Search	Yes	No	No	No	No	Yes
Confirm Booking	No	No	No	No	No	Yes
Virtual Class	No	Yes	Yes	Yes	Yes	Yes
Live Chat Feature	Yes	No	Yes	Yes	Yes	Yes
Private Storage system	Yes	No	Yes	No	Yes	Yes

7. Gap Analysis

Gap analysis plays a pivotal role in system analysis and design. It allows us to discern the strengths and weaknesses of a project. By examining these gaps, we gain clarity on our current actions, primary objectives, and potential benefits. This analysis informs us about necessary additions and redundancies in our approach.

Problem	Current State	Desired State	GAP	Impact	Recommendations
Students have difficulty booking Counseling hours with faculty.	Students must email faculty directly to request Counseling hours.	Students can book Counseling hours online.	There is no centralized system for booking Counseling hours.	Students may not be able to get the support they need.	Implement an online Counseling hour booking system.
Faculty have difficulty managing their Counseling hours.	Faculty must manage their Counseling hours manually.	Faculty can manage their Counseling hours automatically	Faculty do not have a way to manage their Counseling hours automatically	Faculty may not be able to effectively manage their time.	Provide faculty with online tools for managing their Counseling hours

8. Feature Finalization

After doing the gap analysis, we finalized these features to introduce into our system:

1. Booking Table
2. Confirm Booking
3. Faculty Search
4. Live Chat
5. Virtual Class
6. Private Storage System

9. Feasibility Analysis

A Feasibility Study of this project is an assessment of the Practicality/Sustainability of the UIU Counseling Hours Management System.

Types of Feasibility Study of UIU Counseling Hours Management System:

Economical Feasibility:

- cost-benefit analysis.
- Determine Expenses vs. revenue.
- Determine the Profit or Loss of the proposal (NPV, Cash-flow methods..)

This project can be financed through university funds. so there are no financial risks involved in this project. After analyzing this, the chance of it being profitable is higher.

Year	Expenses	Present Value of Expenses	Revenue	Present Value of Revenue	Accumulated Cashflow: NPV(R)-NPV(E)
Present	15000	15000			(15000)
2nd	2000	1818	30000	27273	10455
3rd			45000	37190	47645
4th	3000	2254	60000	45079	90470
5th			70000	47811	138281
6th			80000	49674	187955
Total		19072		207027	

Net Present Value = $207027 - 19072 = 187955$

Since, $NPV > 0$, the project is financially sustainable.

Technical Feasibility:

Hardware: Server, Database server, Networking Equipment, Backup System, Load Balancers.

Software: Web Server, Database Management System, Programming Language, Security Software, Vision Control System.

These existing technologies support our system.

Behavioral Feasibility:

- From the survey, we can assure you that users will accept this project
- This project performs the intended tasks correctly.
- The UI of this system is user-friendly.
- It can handle a large number of users.
- The database can handle increased data load without degrading performance.

10. SWOT Analysis

Strengths:

- Strong support from the university administration
- Dedicated counseling staff
- Access to a wide range of resources with technology
- Potential to serve a large number of students

Weaknesses:

- This system is only for UIU students
- Lack of experience with developing and implementing a new counseling hour management system
- Need to coordinate with the university department and systems

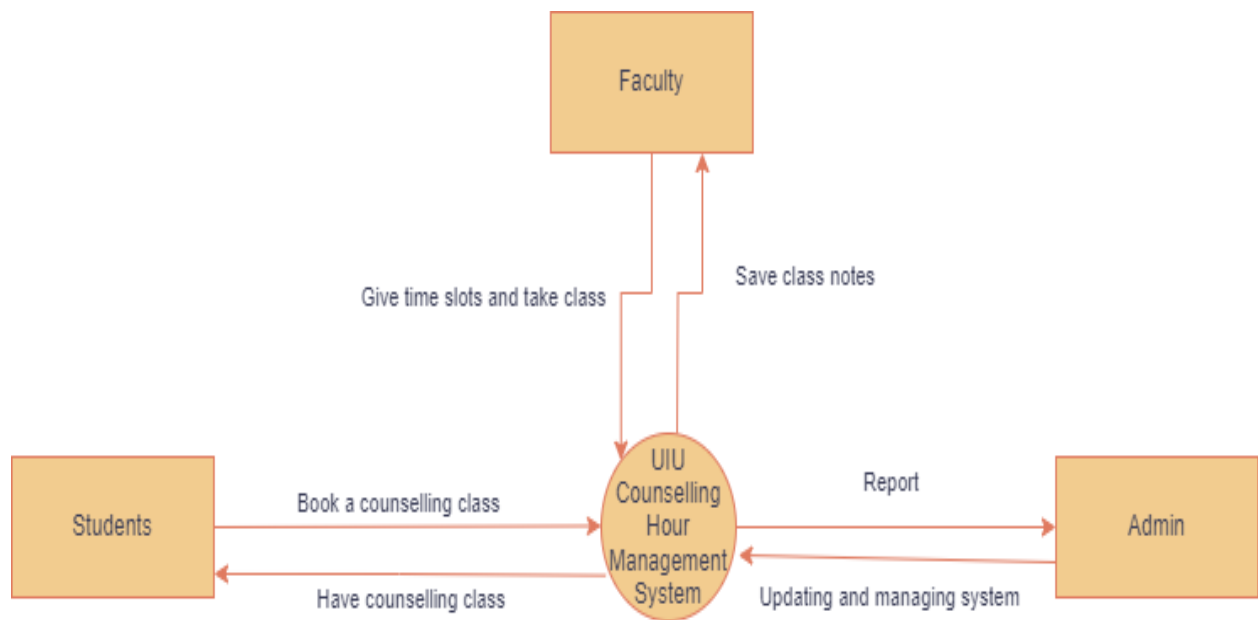
Opportunities:

- To improve the quality and efficiency of counseling services
- To increase access to counseling services for student
- To collect data on student needs and outcomes

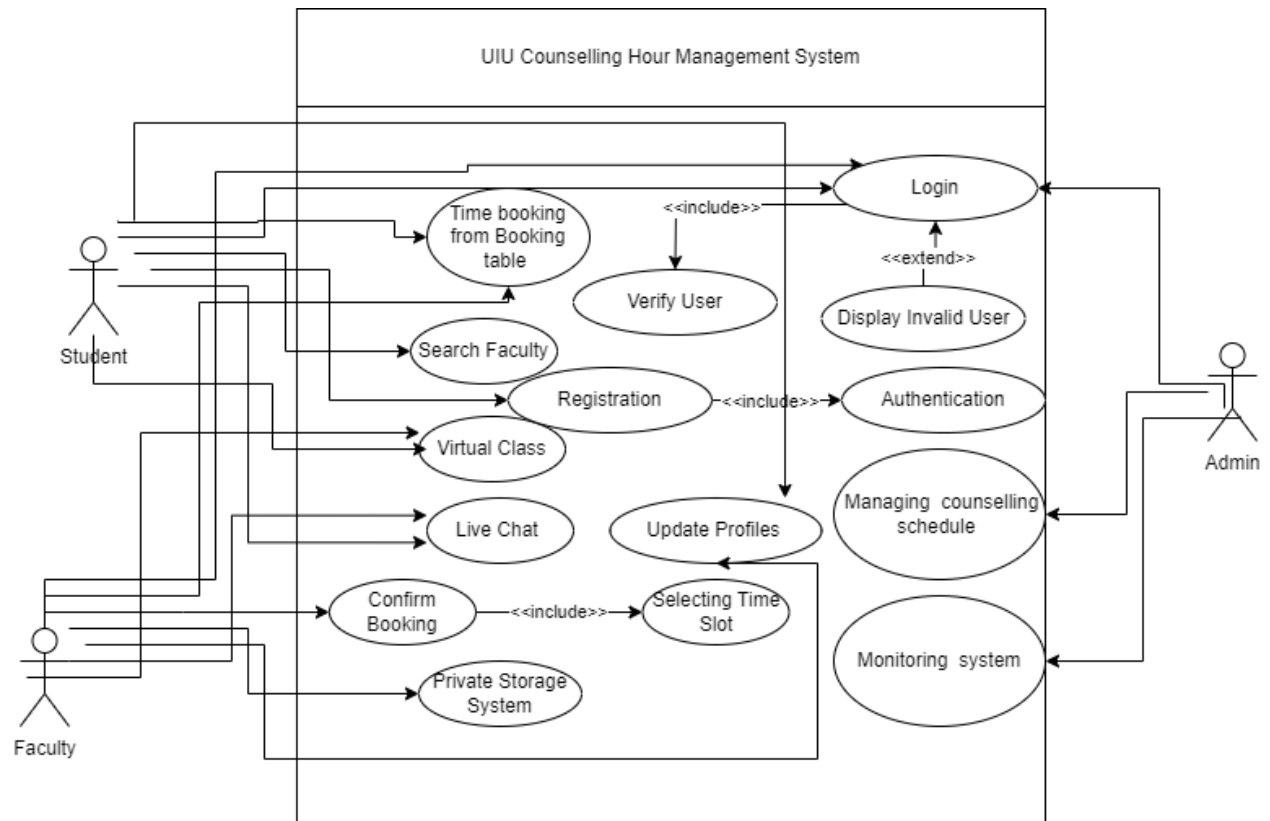
Threats:

- Competition from other universities and counseling providers
- Financial problem.
- The system can be crashed.

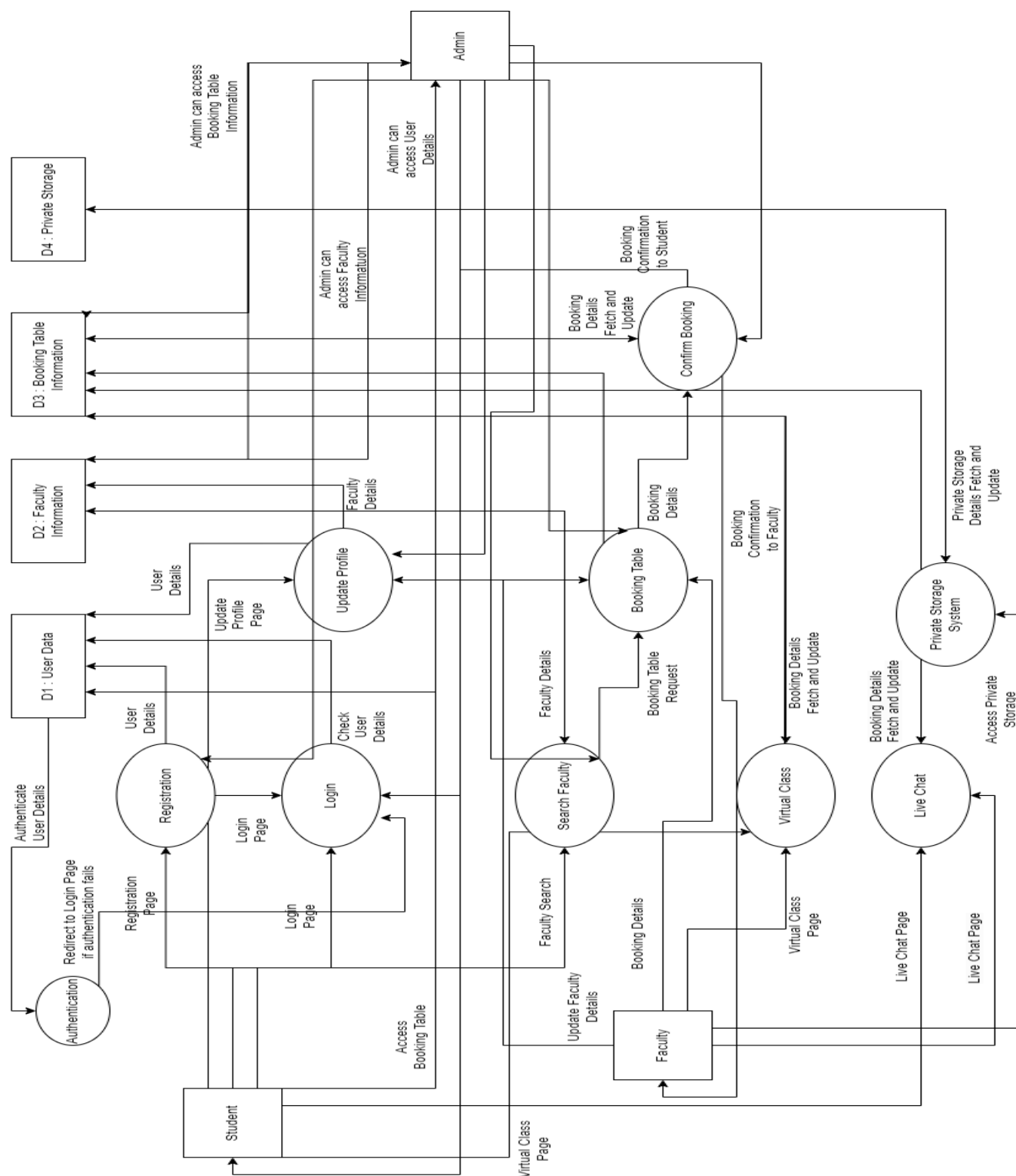
11. Context Diagram



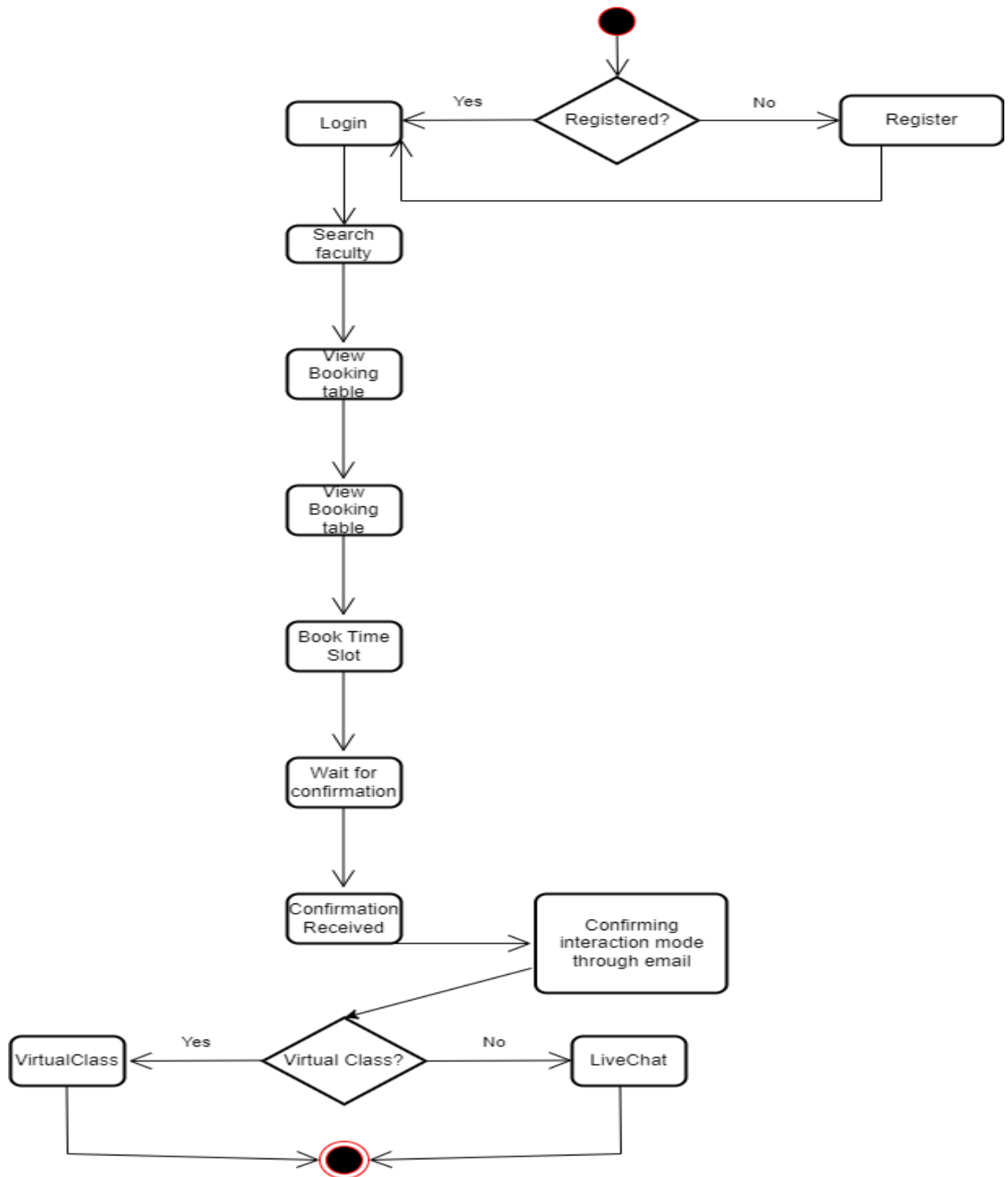
12. Usecase Diagram



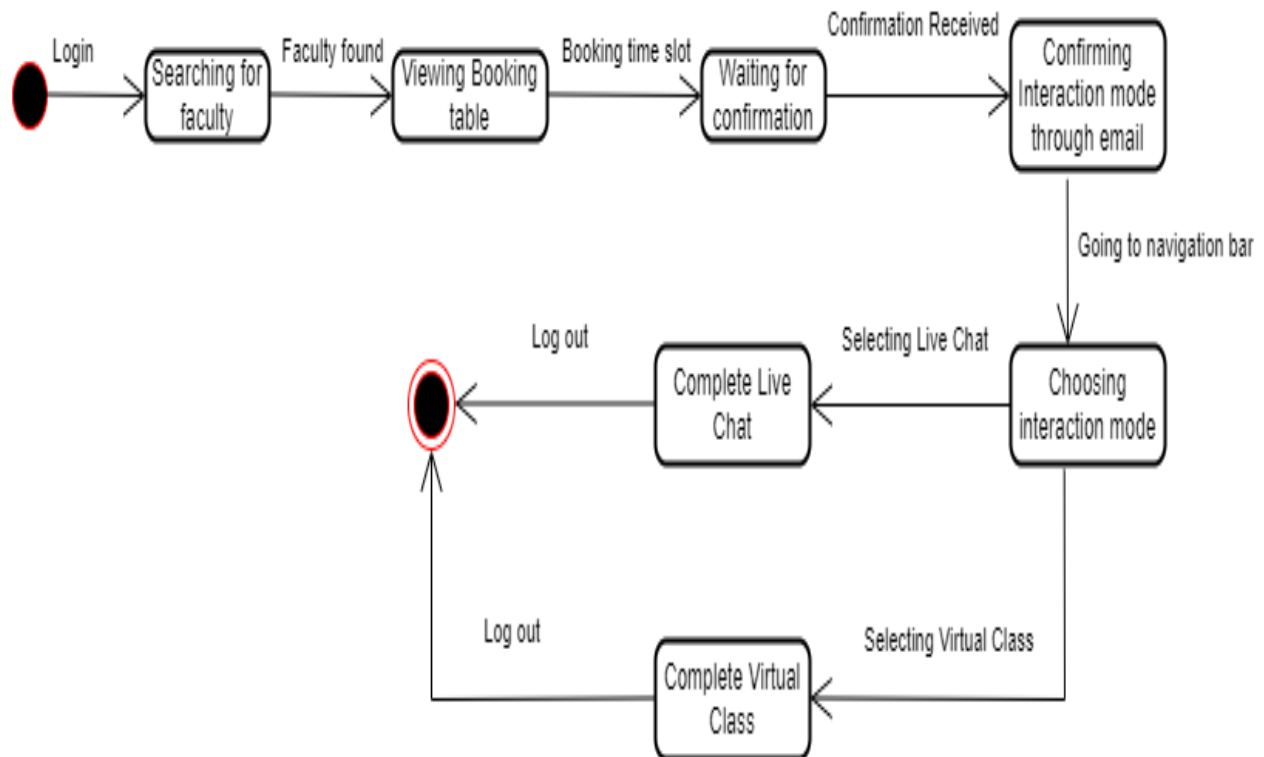
13. Dataflow Diagram



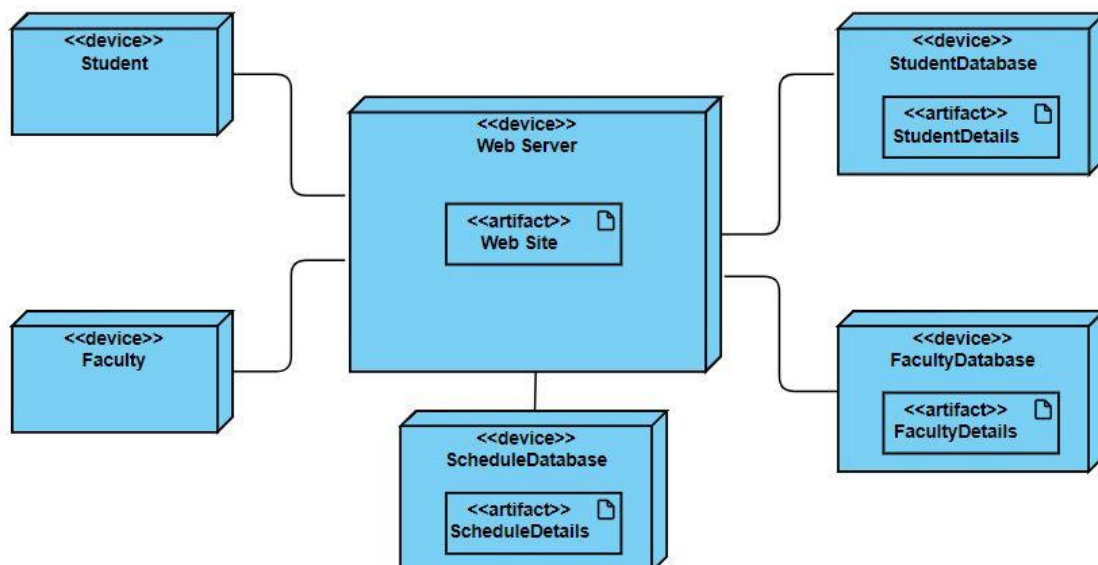
14. Activity Diagram



15. State Diagram



16. Deployment Diagram



17. CRC Card

Student	
Access Own Student Data Edit Own Profile Search Faculty Join Virtual Class Join Live Chat Check Booking Table Request Booking Registration	Booking Table Live Chat Virtual Class

Faculty	
Access Own Faculty Data Check own Booking Table Confirm Booking Join Virtual Class Join Live Chat Access Private Storage Edit Own Booking Schedule	Booking Table Live Chat Virtual Class Private Storage

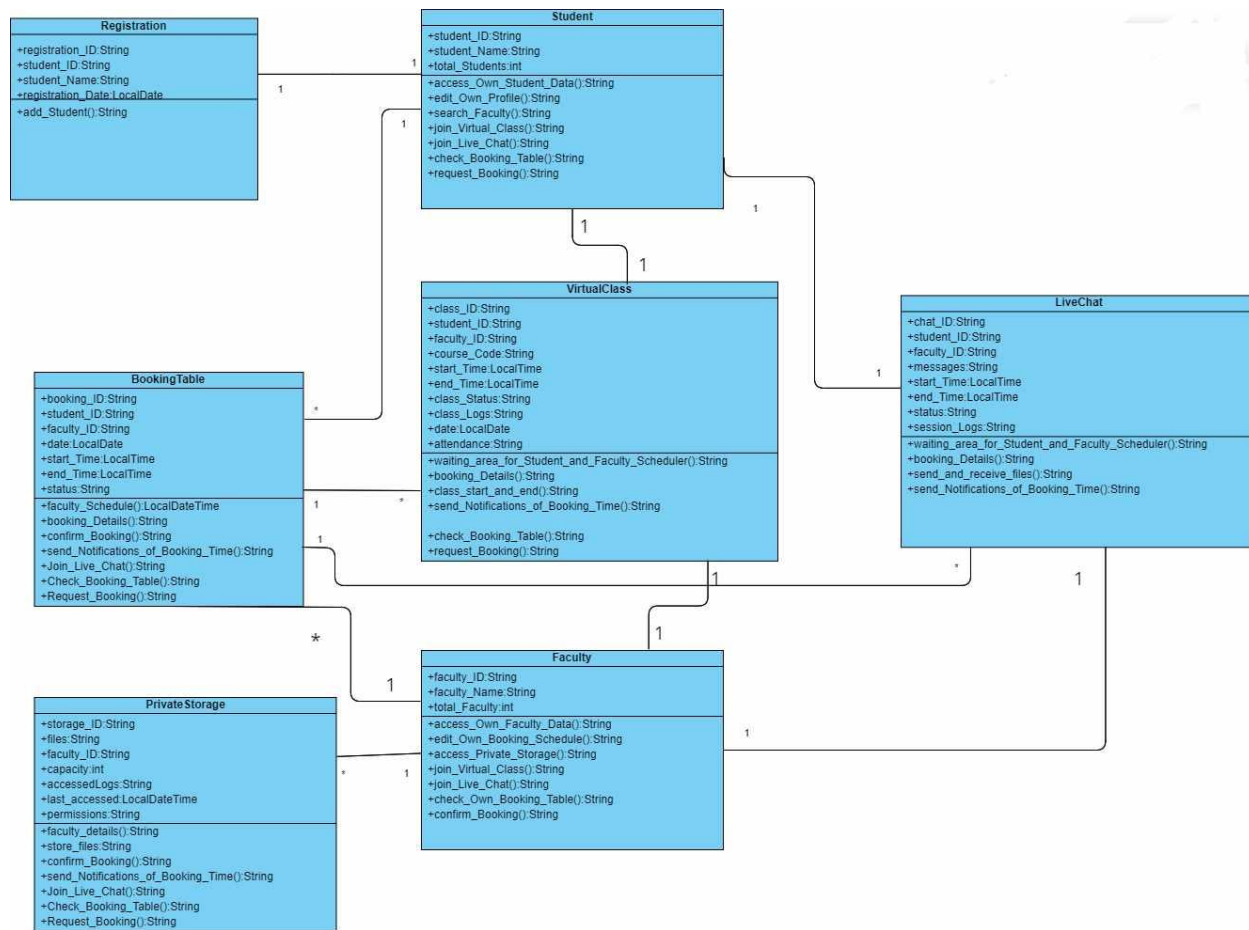
Registration	
Add Student	Student

Virtual Class	
Booking Details Waiting area for Student and Faculty Scheduler Class start and End Send and Receive Files Chat	Student Faculty Booking Table

Private Storage	
Faculty Details Store Files	Faculty


Live Chat	
Booking Details Waiting area for Student and Faculty Scheduler Send and receive Files	Student Faculty Booking Table

18. Class Diagram




19. UI Design

Student Homepage:


[HOME](#)
[VIRTUAL CLASS](#)
[LIVE CHAT](#)
[BOOK SLOT](#)
[LOG OUT](#)

CLASS ROUTINE


Course Code	Course name	Day	Time
CSE 3412	Software Eng (Lab +Theory)	Sat	8:30-11:00 AM, 2:00-3:10pm
CSE 3421	Software Eng	Sun	8:31-9:50AM,12:31-1:50PM,2:00-3:20pm
CSE 3522	Software Eng (Lab + Theory)	Tue	8:30-9:50am,11:11-1:40 PM
CSE 4101	Software Eng	Wed	8:31-9:50AM,12:31-1:50PM,2:00-3:20pm




DEPARTMENT: CSE
STUDENT ID: 01204023
NAME: Abdul Kazi Noor
TRIMESTER: 8th

[UPLOAD FILES](#)

Student Time Booking:


[HOME](#)
[VIRTUAL CLASS](#)
[LIVE CHAT](#)
[BOOK SLOT](#)
[LOG OUT](#)




Mr.Kazi Noor
CSE
Lecturer

[COUNSELLING TIME](#)

DATE	TIME	TYPE	STATUS
22-01-23	2.20 PM	<input type="radio"/> Virtual Class <input type="radio"/> Live Chat <input checked="" type="radio"/> Face to Face <input type="radio"/> Choose Later	CONFIRM CANCEL
23-01-23	2.20 PM	<input type="radio"/> Virtual Class <input type="radio"/> Live Chat <input checked="" type="radio"/> Face to Face <input type="radio"/> Choose Later	CONFIRM CANCEL


Faculty Homepage:



HOME VIRTUAL CLASS LIVE CHAT BOOK SLOT LOG OUT

CLASS ROUTINE


Course Code	Course name	Day	Time
CSE 3412	Software Eng (Lab + Theory)	Sat	8:30-11:00 AM, 2:00-3:10pm
CSE 3421	Software Eng	Sun	8:31-9:50AM,12:31-1:50PM,2:00-3:20pm
CSE 3522	Software Eng (Lab + Theory)	Tue	8:30-9:50am,11:11-1:40 PM
CSE 4101	Software Eng	Wed	8:31-9:50AM,12:31-1:50PM,2:00-3:20pm



DEPARTMENT: CSE
FACULTY ID: 01203023
NAME: Mr.Kazi Noor
DESIGNATION: Lecturer


UPLOAD FILES



Faculty Confirm Booking:

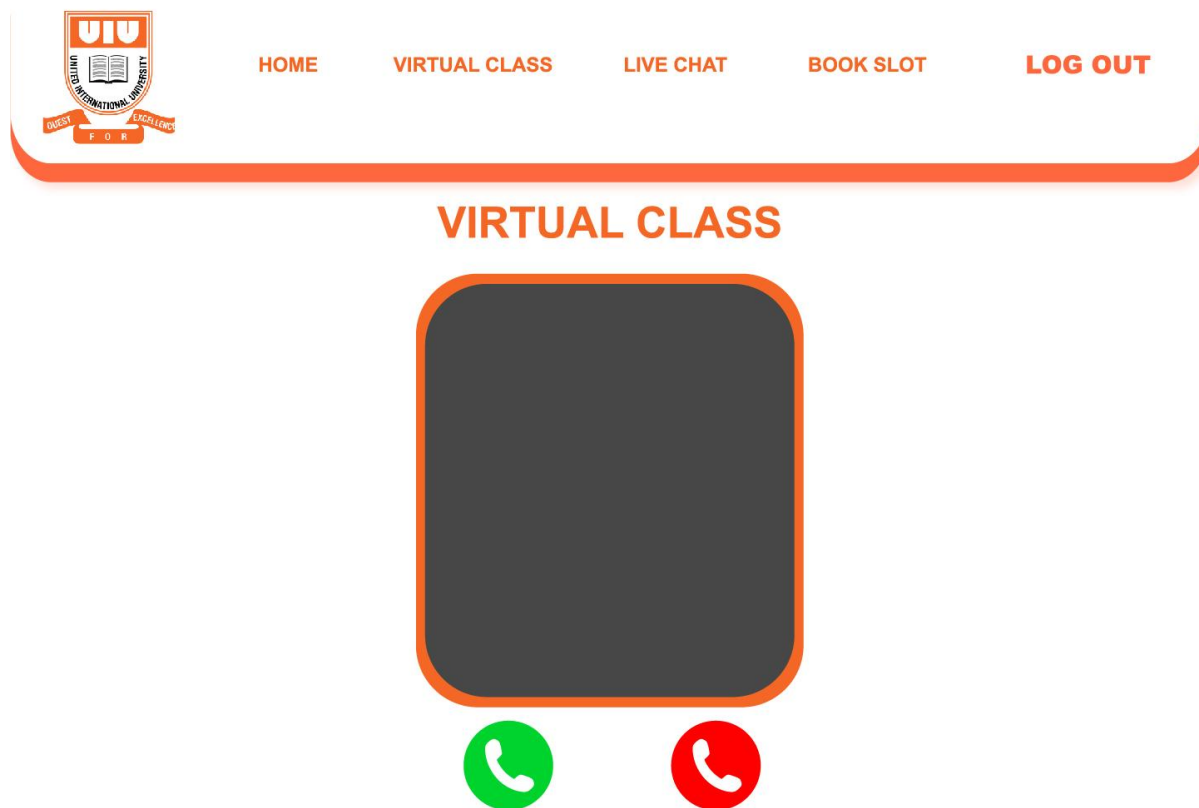
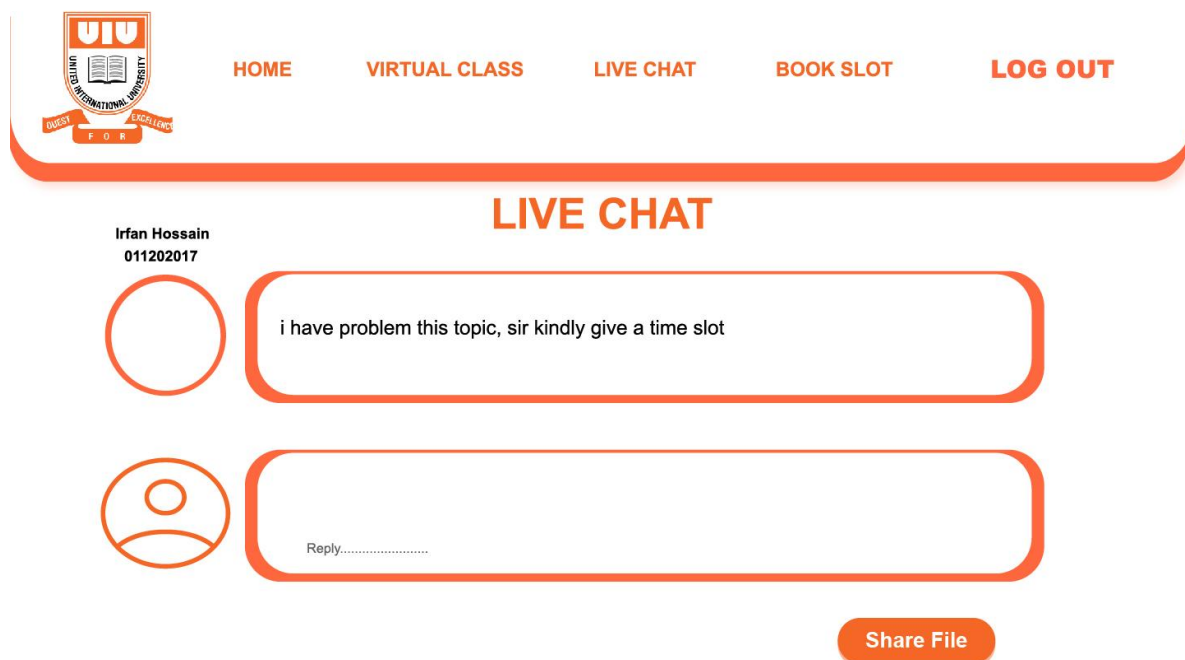


HOME VIRTUAL CLASS LIVE CHAT BOOK SLOT LOG OUT

CONFIRM BOOKING

Student	Type	Date	Time
	Face To Face	22-01-23	2.20 PM

Virtual Class:**Live Chat:**

20. Conclusion

The UIU Counseling Hour Management System emerges as a comprehensive solution to address existing challenges in the university's counseling framework. Through extensive research, user engagement, and feasibility assessments, this system offers a streamlined platform to enhance student-faculty interaction, scheduling efficiency, and counseling accessibility.

Driven by identified issues and user needs, this system introduces pivotal features like Booking Table, Confirm Booking, Faculty Search, Live Chat, Virtual Class, and a Private Storage System. These functionalities aim to improve communication, facilitate easier scheduling, and create diverse avenues for support.

Feasibility analysis indicates strong potential for economic sustainability, technical compatibility, and user acceptance. The project exhibits strengths in administrative support and resource access while acknowledging areas for improvement, such as coordination and system scope.

In summary, the UIU Counseling Hour Management System holds promise in elevating counseling services by providing an efficient, user-friendly platform. Its success will rely on collaborative efforts, ongoing support, and adaptation to changing technological landscapes.