

ASE



COLLEGE ENQUIRY CHAT BOT



PROJECT REPORT

1. Introduction:

My project was to develop a college enquiry chat bot which answers any queries posed by students like professor's contact details, course related questions and location of University buildings, book an appointment with professors etc. The chat bot application helps the students to access the university related information from anywhere with internet connection. This automatic answering system reduces burden on University officials providing information to students and also reduces the dependency on humans to answer the queries.

The system also has frequently asked questions which will be added by admin for user's convenience. The chat bot also provides a link to the user if the user wants to book an appointment with Professors. The appointment booking page helps students book an appointment with the professor in convenient time slots. We have developed this application using NodeJS, AngularJS, HTML and Java.

2. Project Proposal:

2.1 Motivation:

To make an enquiry regarding college activities students have to make a call to the college and make ask the queries to university help center. The proposed system (Chat bot) answers to the queries by the students instantly from anywhere with an internet connection. The user can put the query in any format to the system. The system will respond to the questions. Since the system is automated, the labor can also be reduced.

2.2 Significance / Uniqueness:

The system answers to the queries by using artificial intelligence in the speech and text formats.

2.3 Objective:

Queries of the students College Enquiry Chat Bot system is application that provide answer.

3. Features:

- > The user must register to access the system and then login to the system.
- > The user can chat and talk to the system regarding the queries which acts as a human.
- > The system answers the queries in the form of speech and text.
- > The user can enquire college related activities such as details of professors and maps to various locations.
- > If the user finds the answer by bot as invalid, the user can submit the answer as invalid to the admin.
- > The system can re-direct the call to the customer care if the user asks to make a call.
- > The system retrieves the information from the UMKC websites.
- > Admin can login to the system and view the questions asked by students to the bot.
- > Admin can view the invalid questions and answers submitted by users.

4. Technologies Used and Internal Flow of System:

4.1 System Requirements:

Chat bot is an application which uses WebStorm / Brackets / Eclipse as IDE. The front end of the application is developed using HTML, CSS, JSP and Java Script. The backend logic of the application is handled in Node.js and Java servlets. Firebase is used to manage user details such as registration, validating user login details.

Front End : HTML , JSP, CSS , Java Script

Back End : Java Servlets , Node.js

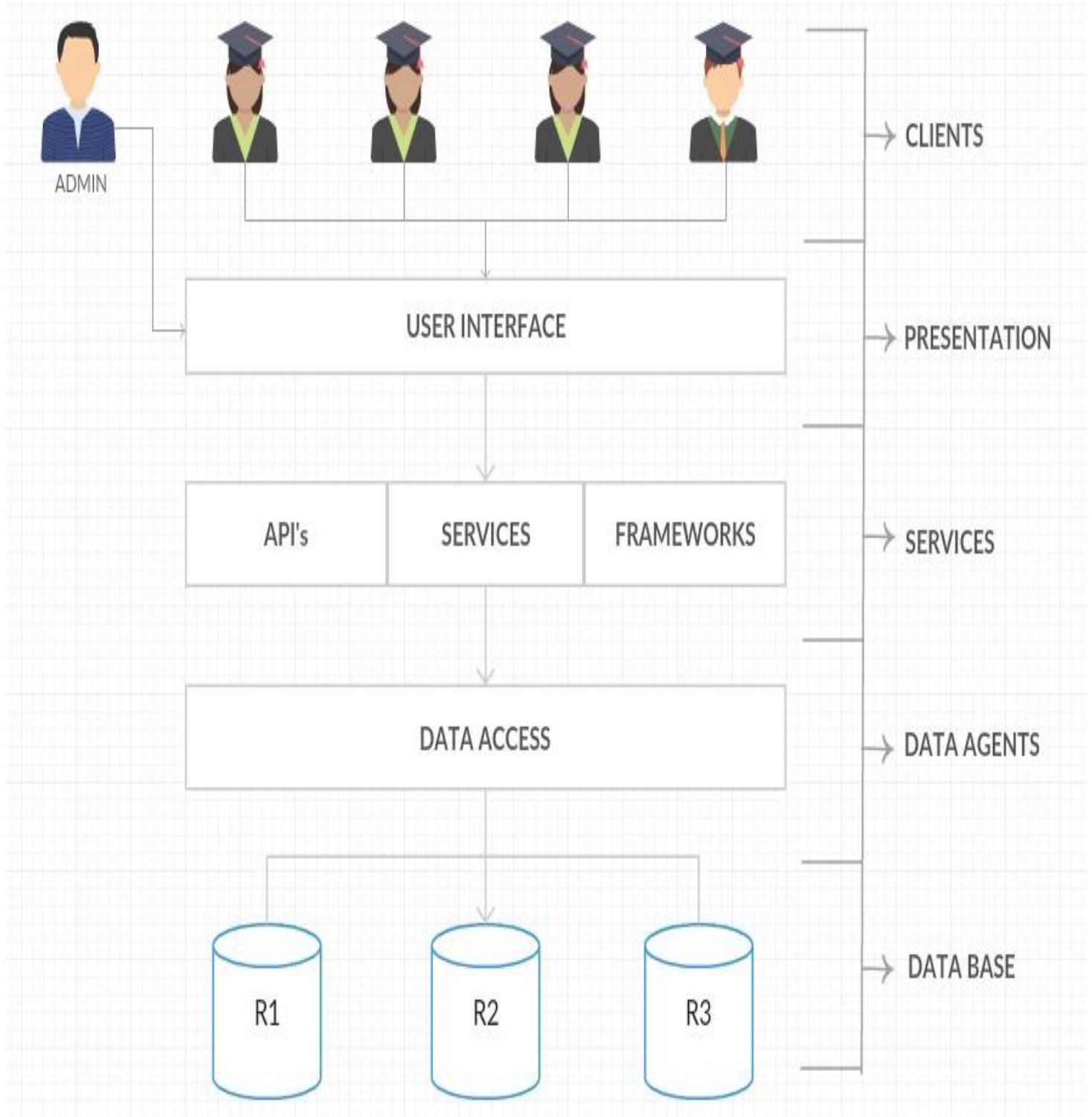
Database : MySQL , Firebase

Tools : Eclipse, Web Storm , Brackets

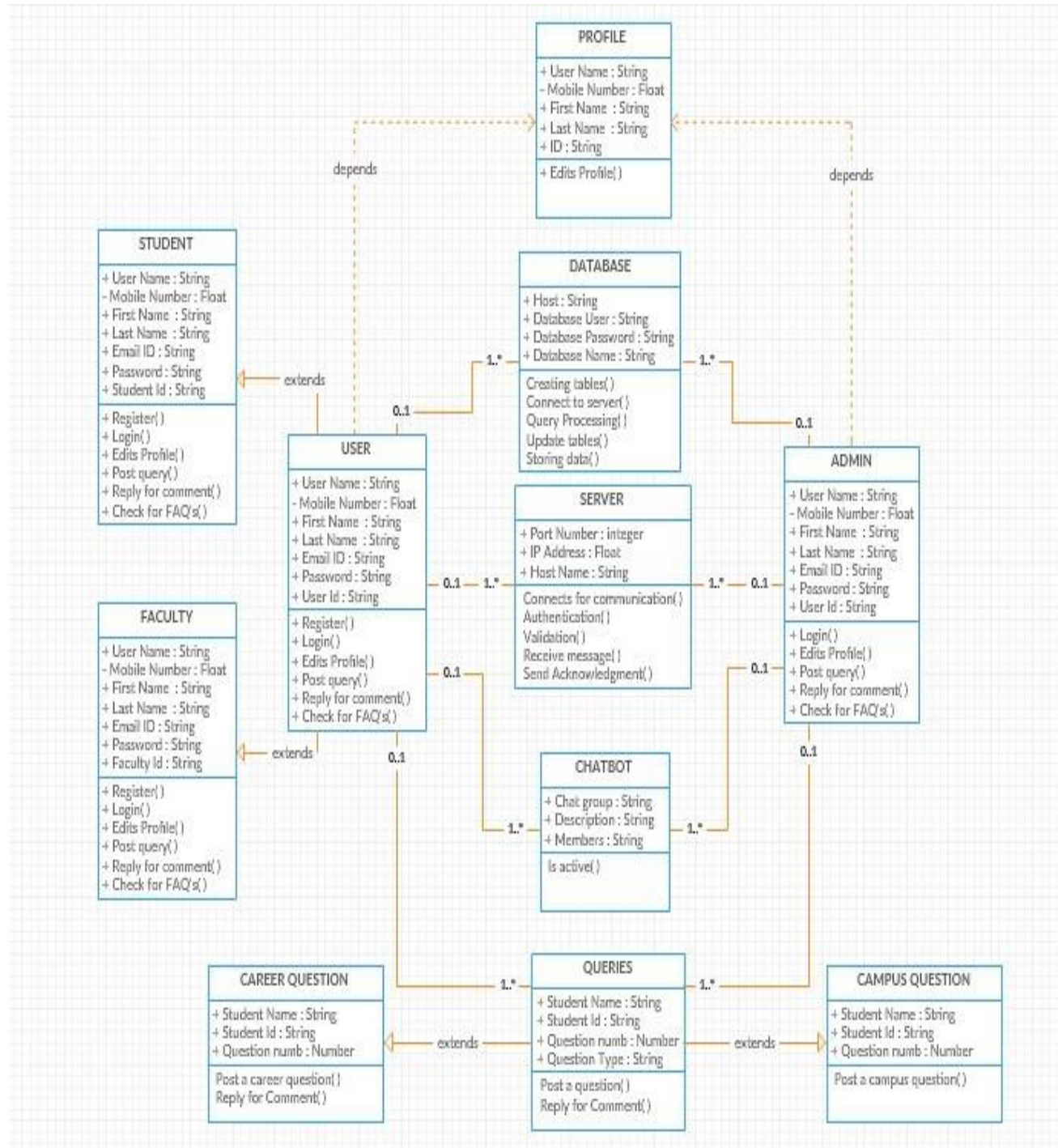
API's used : Watson Conversation API , speech-to-text API

Operating System : Windows 7 or more

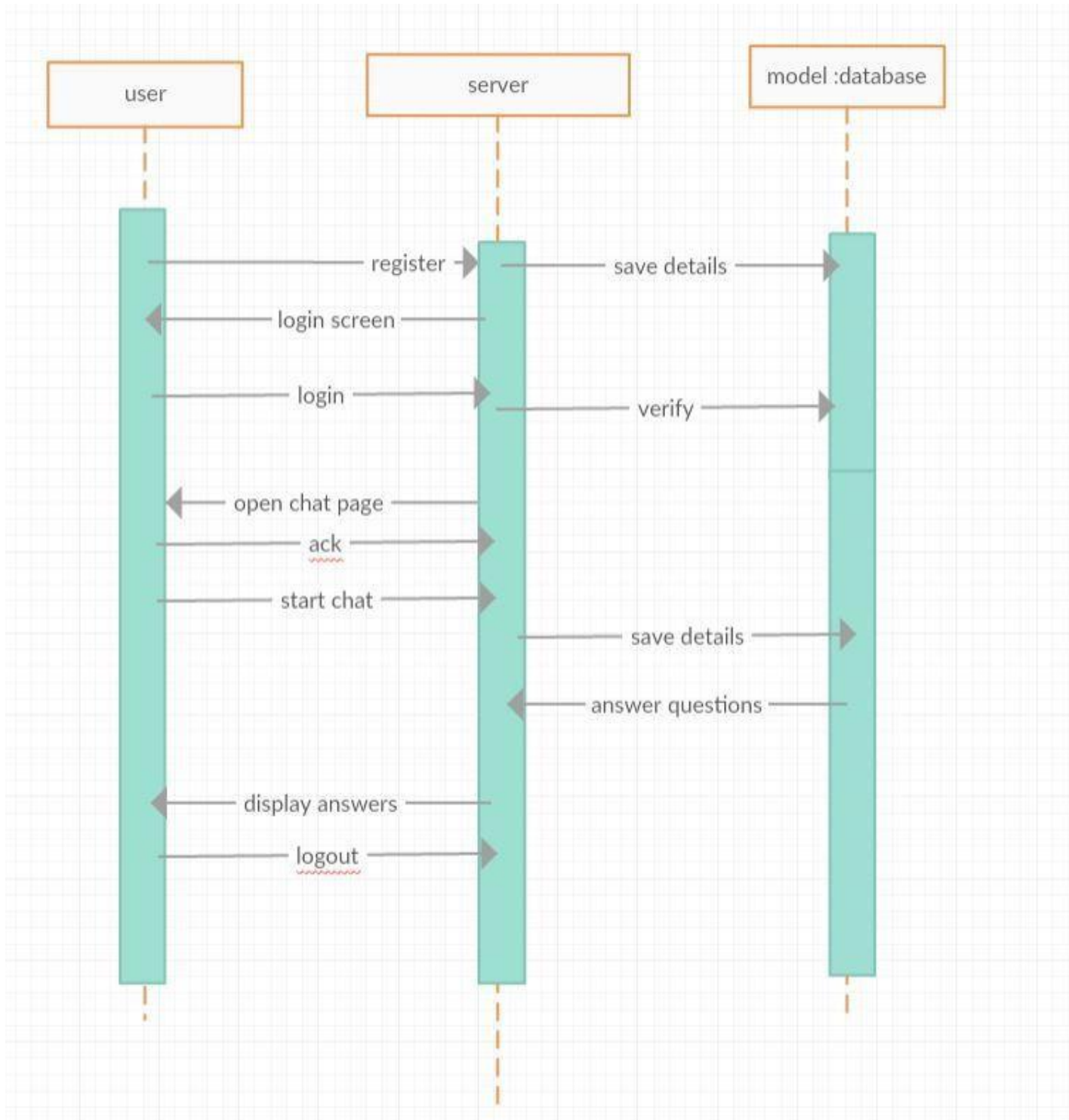
4.2 System Architecture:



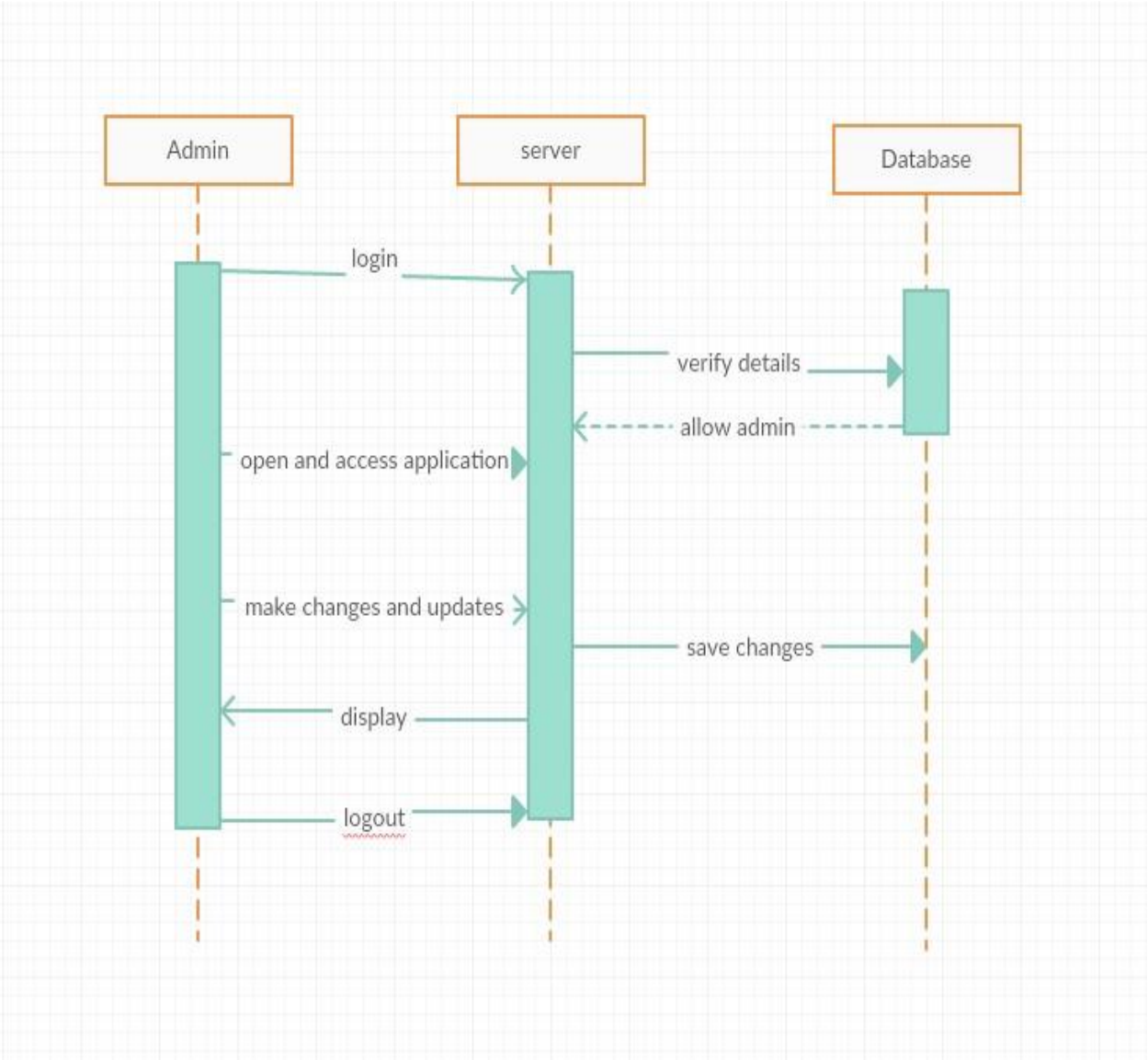
4.3 Class Diagram:



4.4 Sequence Diagram: For User:



For Admin:

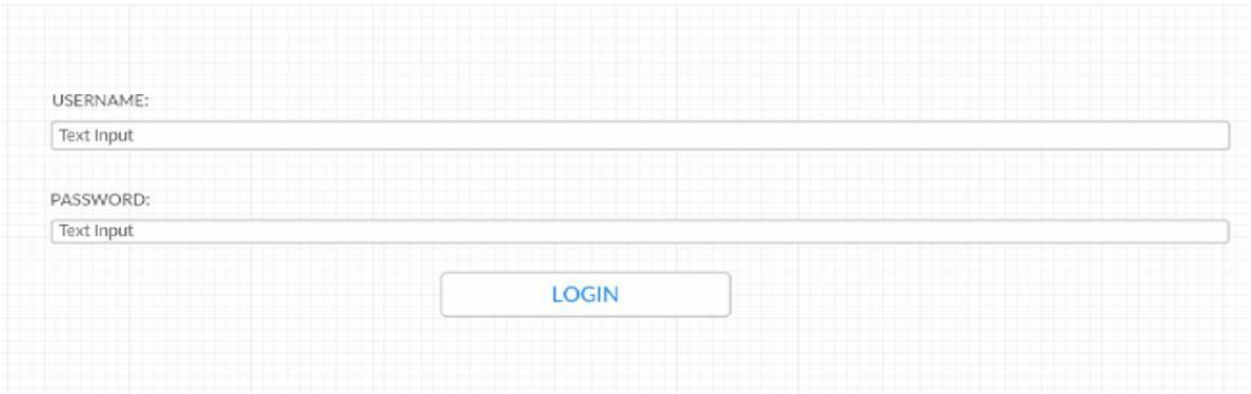


5. Detail Design of Features:
6.1 Wireframes:

Index Page:



Login Page:



A wireframe for a login page. It features a grid background. On the left side, there are two labels: "USERNAME:" and "PASSWORD:". To the right of each label is a long, thin rectangular text input field. Below these two input fields, centered horizontally, is a button labeled "LOGIN".

Register Page:

USERNAME:

Text Input

EMAILID:

Text Input

PASSWORD:

Text Input

RE-ENTER
PASSWORD:

Text Input

REGISTER

Chat Window of Student:

CHATFAQ

HI! HOW MAY I HELP YOU?

HELLO, I AM UMKC STUDENT

Send Message➤

User Screen:

CHAT	FAQ
USER 1 DETAILS OF PARKING AREA	
USER 2 UNABLE TO LOGIN TO BLACKBOARD	
USER 3 WHERE IS ROBOT CAFE ?	

Admin Screen:

USERS_LIST	ADD A QUES
USER 1 DETAILS OF PARKING AREA	
USER 2 UNABLE TO LOGIN TO BLACKBOARD	
USER 3 WHERE IS ROBOT CAFE ?	

Appointment Page:

BOOK YOUR APPOINTMENT

PROFESSOR NAME :
DESIGNATION :
LOCATION :

Dr. Yugyung Lee
Assoc. Professor
560 D R.H Flarsheim hall

ENTER STUDENT DETAILS :

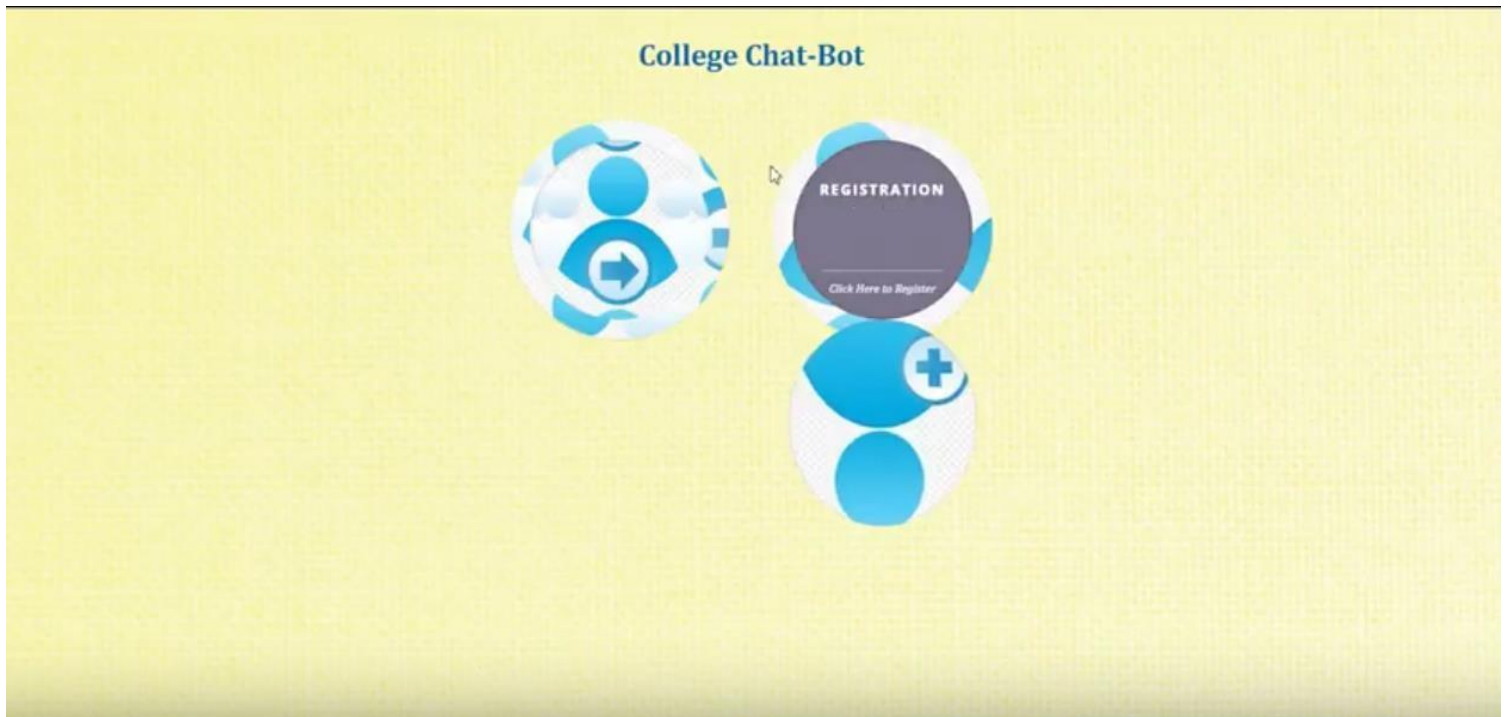
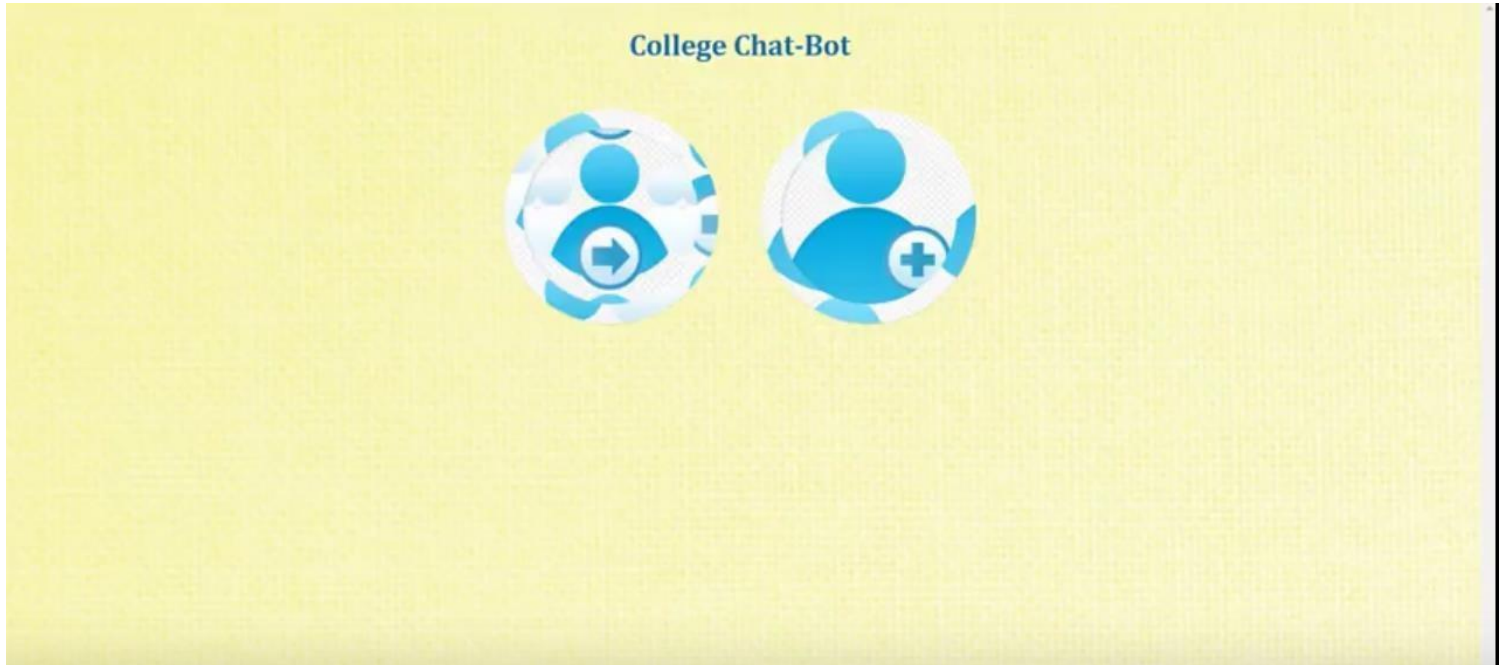
FULL NAME :
EMAIL ID :
STUDENT ID :
RELATED COURSE :
APPOINTMENT :

BOOK NOW

11 | Page

6. How to Use Chat Bot:

The following are the screenshots of our application. The user can be navigated to login page and register page from this page.



Initially new users should create account by giving Name, Email id, Password. If user has not entered all the details validation will be thrown. Also, validation is thrown if the user entered invalid email id.

6.1 Registration Process:

Below is the Registration where a new user must register to use the application. After registering the user will be directed to login page.

The user details entered during registration is stored in Firebase. The details are further used to when user login to application.

REGISTER HERE

First Name

Last Name

Email

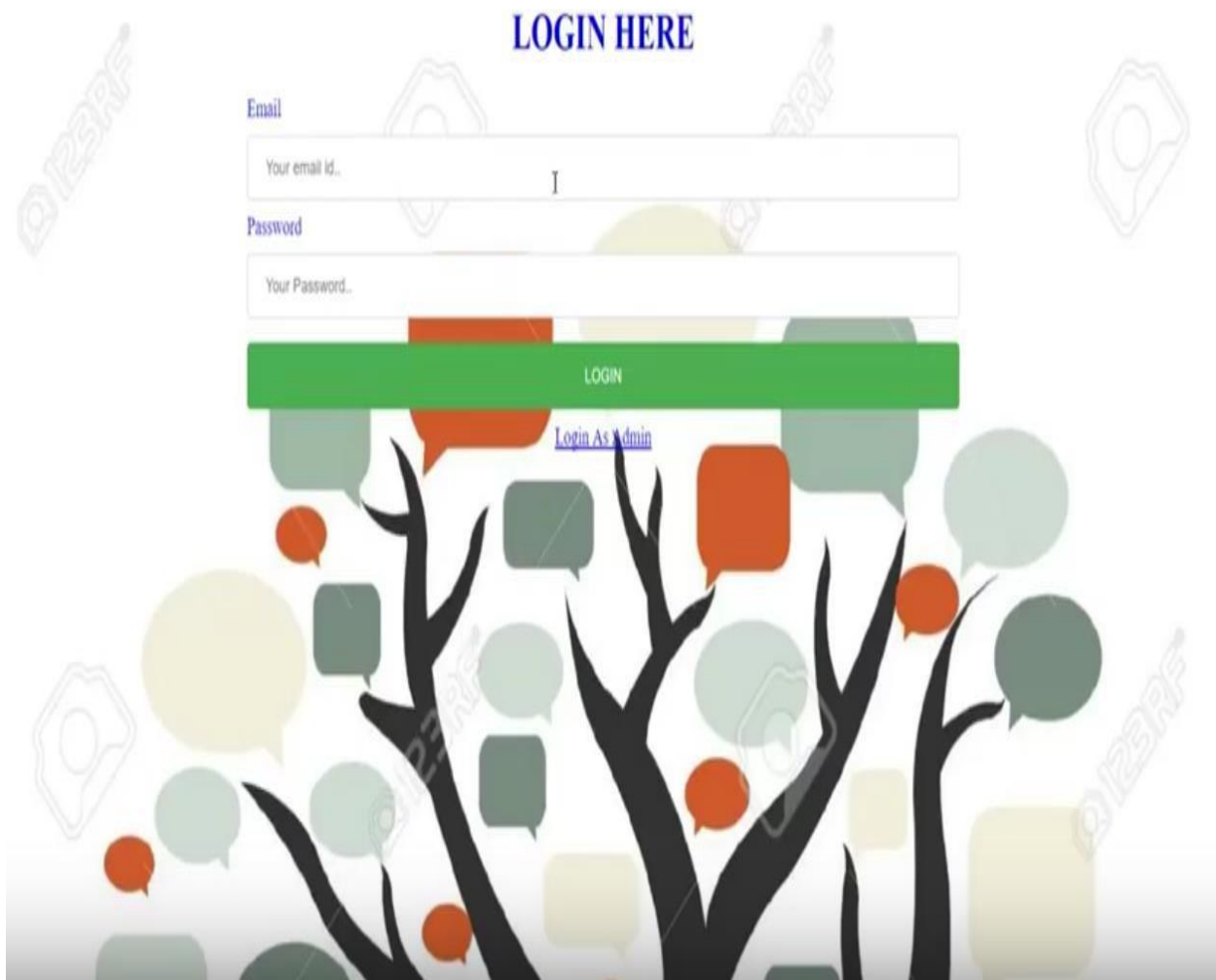
Password

Re-enter Password

REGISTER

6.2 Login Process:

Once the new user is created successfully, login to the application through login page. The below is the Login page where user can login using email id and password. Only the registered user email address is valid (Details stored in Firebase). In our application both user and admin can login through same page. Admin can login to application by clicking “Login as Admin” link present in login page.



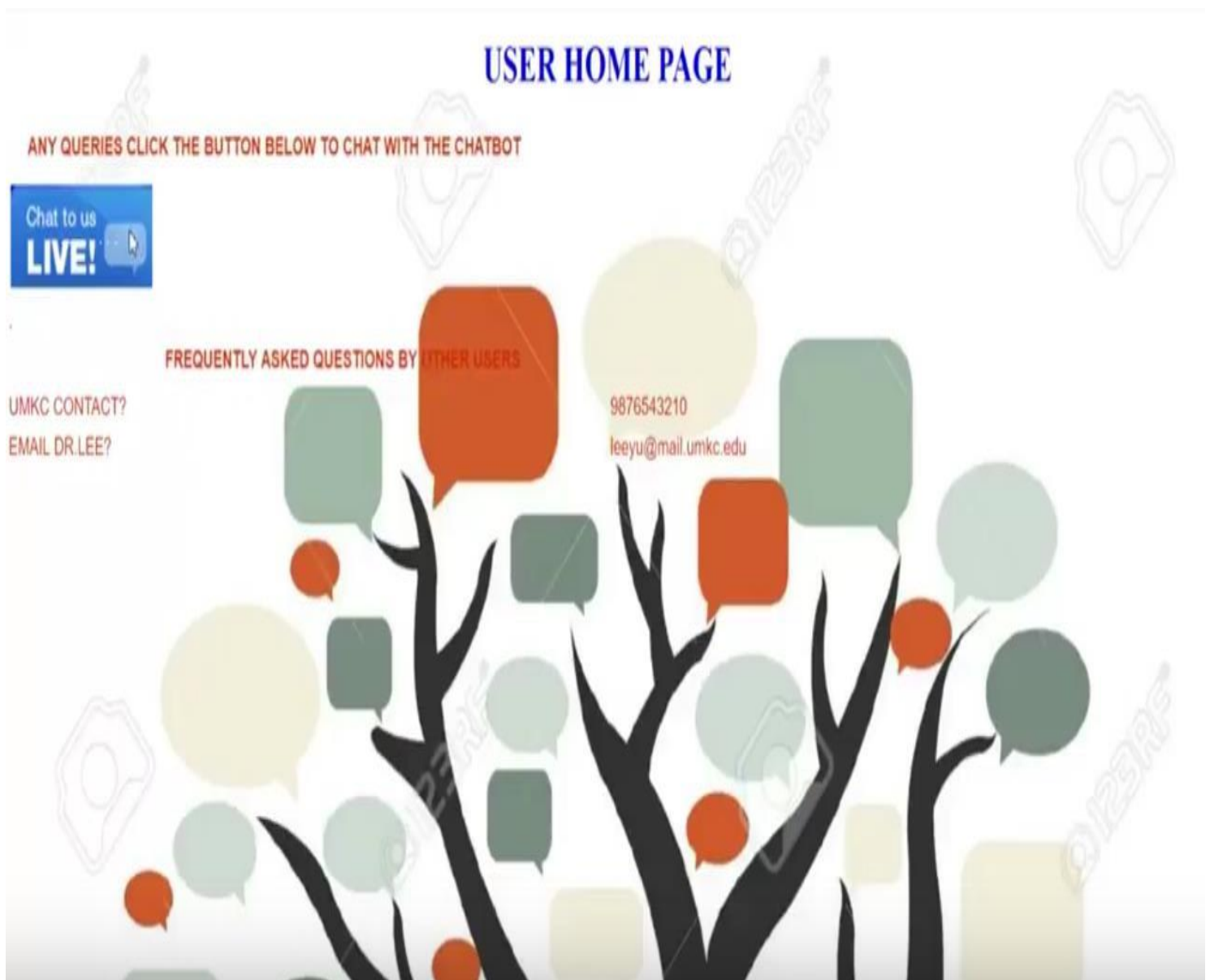
6.3 Chat Bot Home:

Once the user login successfully, the below home page is displayed where user can view a CHAT button.

User can see frequently asked questions of other users.

Below is the home screen where user has various options like chatting with Chatbot and viewing the questions.

After clicking chat button the user is directed to chat screen where he/she can start asking queries.



6.4 Chat Window of a User:

After clicking chat button the below chat window is shown to user.

The default message given to user is “Hi! Nice to meet you. I am your chat bot. How can I help you?”

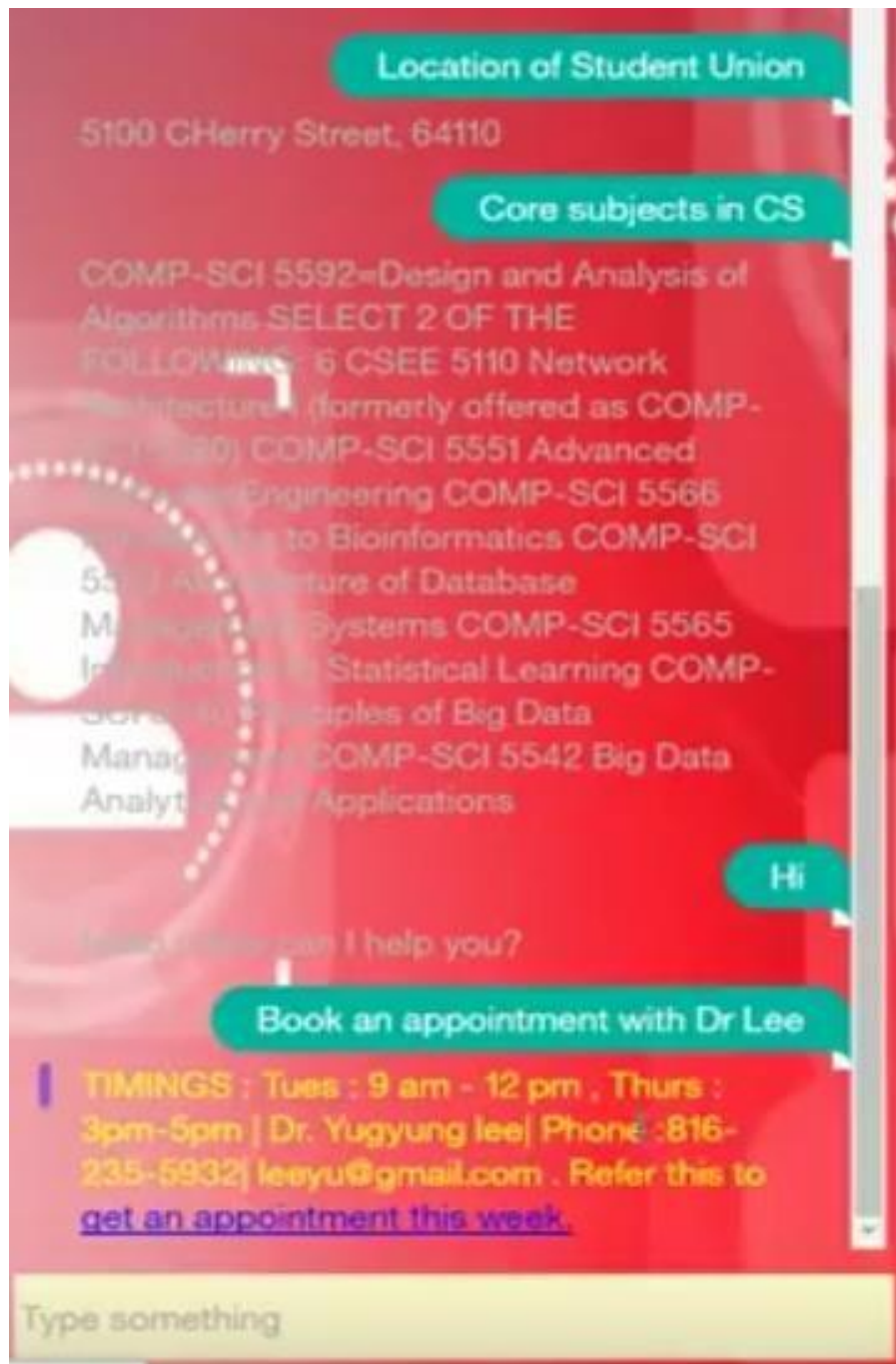


The following screenshot is the conversation between user and chatbot. Chatbot tells the specific and generic details of all the professors. Chatbot also tells what's happening university like UMKC events, UMKC announcement.



If a User wants to book an appointment with professor they can simply type “Book an appointment with Dr.Lee”

The chatbot gives all the details of Lee and provides a link which allows user to book an appointment.



6.5 Appointment booking page:

The below screenshot is the appointment booking page.

Professor details are retrieved from Database where user need to fill his/her details.

User can select the slot and confirm his booking with professor.

BOOK YOUR APPOINTMENT

PROFESSOR NAME : Dr. Yugyung Lee
DESIGNATION : Assoc. Professor
LOCATION : 560D R.H Flarsheim Hall

ENTER STUDENT DETAILS

FULL NAME :
E-MAIL ID :
STUDENT ID :
RELATED COURSE :
APPOINTMENT :

BOOK YOUR APPOINTMENT

PROFESSOR NAME : Dr. Yugyung Lee

DESIGNATION :

LOCATION : YOUR APPOINTMENT HAS BEEN BOOKED

ENTER STUDENT DETAILS

FULL NAME : Pavan

E-MAIL ID : rjhg5@mail.umkc.edu

STUDENT ID : 16232736

RELATED COURSE : Cs

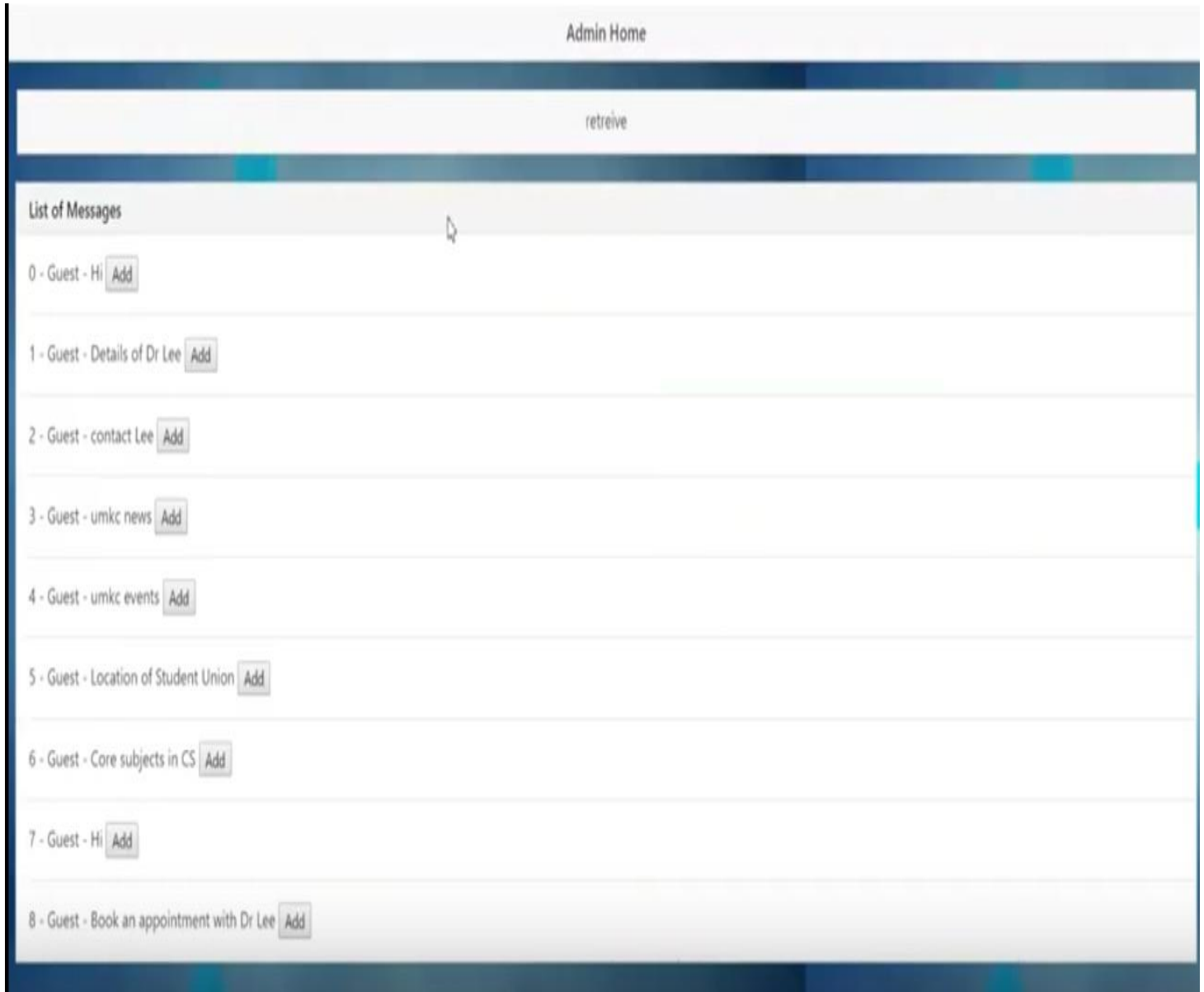
APPOINTMENT : 05/04/2017 Thu 3 PM - 4 PM

BOOK NOW

6.6 Admin home page:

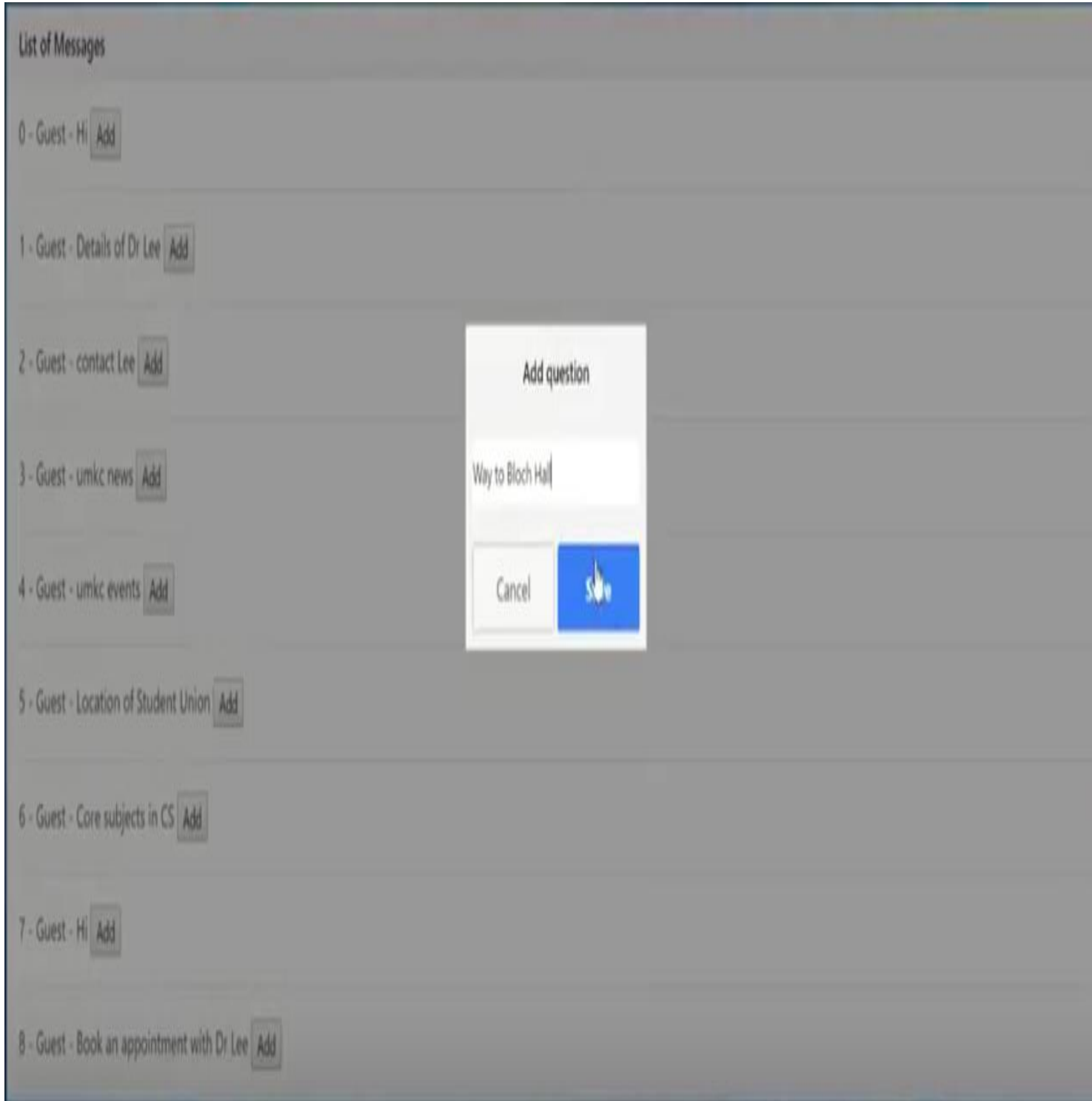
The following screenshot is the home page of Admin.

Admin can view the list of users and their messages which are used in the above chat.



Now the user can select any of the listed messages and edit them.

He can select save after editing the question.



Now the question is added in frequently asked questions and displayed to all other users.

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