

IITB Summer Internship 2014



Project Report Edx Analytics

Principal Investigator:
Prof. D.B. Phatak

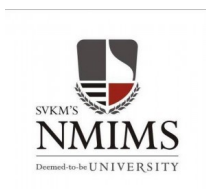
Project In-Charge:
Mr. Parag Tiwari

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1. **Pushpak Burange**
2. **Praveen Pal**
3. **Mitali Nayak**

Project Team Members

1. **Aakansha**
2. **B. Pallavi Reddy**
3. **Oshin Prem**
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5. **Sachin Sable**
6. **Shubham Utwal**



Project Approval Certificate

**Department of Computer Science and Engineering,
Indian Institute of Technology, Bombay**

The project entitled “**edX Analytics**” submitted by Mr. Sachin Sable, Ms. Aakansha , Ms. Pallavi Reddy, Ms. Oshin Prem , Mr. Rounak Nandanwar, and Mr. Shubham Utwal is approved for Summer Internship 2014 programme from 9th May 2014 to 6th July 2014, at Department of Computer Science and Engineering, IIT Bombay.

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Place: IIT Bombay, Mumbai
Date: June 30, 2014

Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/ fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Aakansha

B. Pallavi Reddy

Oshin Prem

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Sachin Sable

Shubham Utwal

Acknowledgement

We, the summer interns of Development on Aakash Platform, consider it our privilege to undertake the project of 'i-class' Android Application. The success and final outcome of this project required the assistance of many people without whom we could not have materialized our vision for the application. We are deeply indebted to Dr. **D.B.Phatak** for giving us the opportunity to be a part of this esteemed project, for giving us inspiration to pursue the project and guiding us in this endeavor. He has been a constant source of motivation and encouragement for us.

Our profound sense of gratitude is due to our Project Manager **Mr.Parag Tiwari** for constant encouragement and valuable guidance. We thank him for all the initiative and zeal he has filled us with throughout the course of this project.

Furthermore, we heartily thank our mentors **Mr. NinadChilap,Mr. Arun Nair and Mr. Ajay Babar** with whom the exchange of knowledge and skills helped in making this an enriching experience for us all.

We extend a warm thanks you to **Mr. MayankPaliwal** and **Mr. Rahul Kharat** for making our stay here as summer interns comfortable and for all their administrative help. Finally, we would

also like to thank the support staff at the institute who have directly or indirectly helped us in the completion of the project.

Team Members:

1. KaushikBhagwatkar

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6. Adil Hussain

Abstract

The **i-Class** application package, true to its name is developed as a digital equivalent of a real time interaction between the professor and the student in a classroom. The application caters to be useful in a classroom which consists of a large number of students(approx. 200).The application mainly consists of three parts, the i-class Client, i-class server and the i-class forum which is a website consisting of all the text doubts asked during a particular lecture session. The application caters to all high school and college students.

1. The i-class Client:

The Audio Doubt:

Instead of raising a hand in the classroom, the users can directly send an audio request to the lecturer by clicking on the audio icon in the main screen of the i-Class Application built specially for Aakash tablets.

The Text Doubt:

If a user wants to ask a question without speaking, he can do so by typing into the text doubt topic field and the main subject field of the text doubt in the main screen of the **I-Class** Application built for Aakash tablets.

2. The i-class Server:

The i-class server serves as the receiving end for audio as well as text doubts. The lecturer can any time give permission for audio doubts to those present in the waiting queue. The lecturer can also view all the received text doubts and can answer to any of the text doubt he wishes to.

3.The i-class Forum:

An **I-Class** forum has been built up alongside with the application. This forum is basically a website which will contain all the text doubts asked by all the students in the class for a particular lecture session. The lecturer can answer to the questions which were left un-answered in the class due to

lack of time. The lecturer can also edit/delete his answered questions in the forum.

1. Introduction:

1. a. Purpose:

The **I-Class** application is an Android Application that enhances the communication between a professor and the students in a classroom.

Basically, this application acts both as a microphone and a messaging system, for sending audio doubts and text doubts respectively. This application is open source and designed to be preferably used on tablets.

1. b. Scope:

The dual feature of this application enables it to be used flawlessly by high school and college students alike. Users can implement both audio and text doubts to give an elaborate description of any topic. In addition to ease of use, it is

eco-friendly and timesaving. This application is unique owing to its dual feature property. It not only gives comfort but also prevents unwanted chaos in a class.

Software **Requirements** **Specification**

i-class Client

2.1 Introduction:

The document aims at defining the overall software requirements for I-Class Application. Efforts have been made to define the requirements exhaustively and accurately. The final product contains only those features/functionalities mentioned in this document. Assumption for any additional functionality/feature should not be made by any of the parties involved in developing /testing/implementing the product. In case it is

required to have some additional features, a formal change request will need to be raised and subsequently a new release of this document and/or product will be produced.

Document Purpose

The purpose of this document is to present a detailed description of the **I-Class** Application. It will explain the purpose and features of the application and what the application will do. This document is intended for developers, testers and users.

Product Scope

“**I-Class** Application” is an Open source software product. The main goal of this Android application is to facilitate the communication between teacher and the students. I-Class Application is going to be freely available for anyone to download. It is intended to be used on mobiles and tablets that run on Android only.

Intended Audience

Our application's target audience includes:

- High School Students
- College students
- Teachers and Professors

Note: This Application is dependent on a local server. A server has also been developed which accepts the user's requests regarding the kind of doubts they will pose. The users of the application will send their audio and text doubts to this server computer, which will be available to the teacher in a classroom.

Glossary:

Term	Definition
Android	Linux based operating system mainly for smartphones and tablets.
Server Program	It is a java program which is built alongside the i-class android Application. The application and the server program will be

working together in order to fully implement the main purpose of the Software, Interactive Classroom.

Software Requirements Specification

A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document.

References:

- developer.android.com
- IEEE STD 830-1998. (Revision of. IEEE STD 830-1993). IEEE Recommended Practice for Software Requirements.
- docs.oracle.com

2.2. Overall Description:

2.2. a. Product Perspective:

This product is developed keeping in mind the problems faced in a large strength classroom, such as transferring a single microphone from one corner to another one, or using a large number of costly mics, also it helps to those students who are quite shy in standing up and asking a question in a

class. i-class android application for Aakash tablet is a highly cost-effective solution which will resolve all the above mentioned class problems.

2.2. b. Product Functions:

The **i-Class** contains both Audio and Text doubt functionality. And they can be used concurrently. The application output is either the live audio streaming to the server (Lecturer's computer), or text message sending to the server, which will be visible in the lecturer's computer. It is designed primarily for the Aakash tablet but can be downloaded onto any Android device.

Note: Along with the application's apk file, one has to also download the server program and install it on any PC for running the application.

2.2. c. User Characteristics:

The intended users will be high school students, college students and Professors. Users are not expected to have a very high level of technical expertise to use the application.

2.2. d. Constraints:

The user will not be able to use the application as a standalone product. The application is fully dependent on a server program as well as high bandwidth wifi network connection in order to work through its expectations. The product is developed only for devices that support Android and cannot be used on any other platform.

2.2. e. Assumptions and Dependencies:

The only assumption in this application is that the user should be well versed with the android operating system. The major dependency of this application is that it needs a server program to connect to in order to share informations(particularly the messages related to

their doubts). Also there should be high bandwidth wifi network connection.

2. **i-Class Forum**

Software Requirement Specification

The document aims at defining the overall software requirements for I-Class package. Efforts have been made to define the requirements exhaustively and accurately. The final product contains only those features/functionalities mentioned in this document. Assumption for any additional functionality/feature should not be made by any of the parties involved in developing /testing/implementing the product. In case it is required to have some additional features, a formal change request will need to be raised and subsequently a new release of this document and/or product will be produced.

Document Purpose

The purpose of this document is to present a detailed description of the I-Class package. It will explain the purpose and features of the I-Class Forum and what the web application will do. This document is intended for developers, testers and users.

Product Scope

“I-Class Forum” is an Open source software product. The main goal of this Web application is to learn, raise Doubts and increase curiosity among the youth. I-Class Forum website is going to be freely available for access to anyone . It is intended to be used on mobiles or Tablet or Laptop.

References:

IEEE STD 830-1998. (Revision of. IEEE STD 830-1993).

IEEE Recommended Practice for Software Requirements.

Bootstrap.com

2.2. Overall Description:

2.2. a. Product Perspective:

I-Class Forum is developed to enhance or spread Knowledge beyond boundaries.

It aims at revolutionizing Education in terms of Technology.

2.2. b. Product Functions:

I-Class Forum has functions that have privileges according to user. Student or any Viewer can watch various doubt sessions in the Forum while the Editing Authority and giving solution to a doubt will be handled by professor only.

2.2. c. User Characteristics:

The intended users will be students, people around world and Professors. Users are not expected to have a very high level of technical expertise to use this package .They are user friendly and easy to access.

2.2. d. Constraints:

I-Class Forum will not be accessed without Internet.

Its usage is online. In case of any technical constraints, user can complain Admin.

2.2. e. Assumptions and Dependencies:

Assumptions for I-Class Forum will be a proper Internet connection with latest browser.Its assumed that professor will first request for login details to admin,then he will get his login credentials.

Software Design

Description

Section 1 :

i- Class Client Application

3. Software Design Description:

3.1. External Interface Requirements:

The application is not a stand-alone, single-user system. The application demands a server program. The application can run on any Android mobile device and tablets. A wifi router with high bandwidth and connection capacity.

3.1.a. User Interfaces:

- Inputs:
The user generates his/her doubt request for text/audio doubt.
- Outputs:
The application responds by forwarding the request to the server and displaying the position of the user in the waiting queue.
- Operating Systems:
Android

3.1. b. Hardware Interfaces:

- ↯ Any android operating system supported device.
- ↯ High bandwidth router with large connection capacity.

3.1. c. Software Interfaces:

- ↯ Eclipse IDE shall be used as development environment for implementing the modules
- ↯ Designing of modules and diagrams is done in UML using MS word and creately.com website.

3.2. Functional requirements

3.2.1 Audio doubt

3.2.2 Text doubt

Audio doubt

3.2.1.1. Audio topic:

Before raising hand (sending request for audio doubt) the user has to specify a topic about which the user intends to ask a specific doubt. This will be

helpful for the lecturer to decide, whether to allow or not ,that particular person to ask question.

3.2.1.2. Disconnect

If the user thinks that his/her doubt has already been solved then he/she can directly tap on disconnect button to pull himself out of the queue and thus give others chance to ask their own doubts.

3.2.1.3. Emergency Text Doubt

If a user is waiting in the queue for audio doubt and he has another question in mind which he can simply ask by sending text then he need not to withdraw his audio doubt request. He can simply press emergency text doubt icon and send that doubt while still being in the queue.

3.2.1.4. Position/Status Field

This field constantly shows the current position of the user in queue and also updates in real time as more and more users in queue withdraw. If the lecturer gives permission then a button of 'Start Speaking' appears in that field.

Text doubt

3.2.1.4. Subject :

Fill the subject field with the topic that your doubts belongs to.

3.2.1.4. Doubt:

The doubt field is to be filled with the elaborate description of the topic which the user has entered in the subject field.

3.2.1.4. Doubt Remaining Field :

You are allowed to ask 5 doubts per session. This field shows the number of doubts remaining for that particular session.

3.2.1.4. View history button :

Users can view their text doubt history by clicking on the view history button provided. They can also withdraw their request if they think that they already got their answer or they just don't want to ask that doubt anymore.

3.3 Non-functional requirements

3.3.1 **Performance Requirements:**

The application will need to provide a responsive interface. There should be minimal delay in sending doubts as well as audio streaming should be as clear and fast as possible.

3.3.1.1. **Maintainability:**

Software needs to be upgraded if required in future.

3.3.1.2. Reliability:

System must be reliable and data should persist even after suffering some system crashes or booting of some Android devices. Also the server and client should remain independent of each other when it comes to crashing and exception handling.

3.3.2 Safety Requirements

There is no safety requirements associated with this application.

3.3.3 Security Requirements

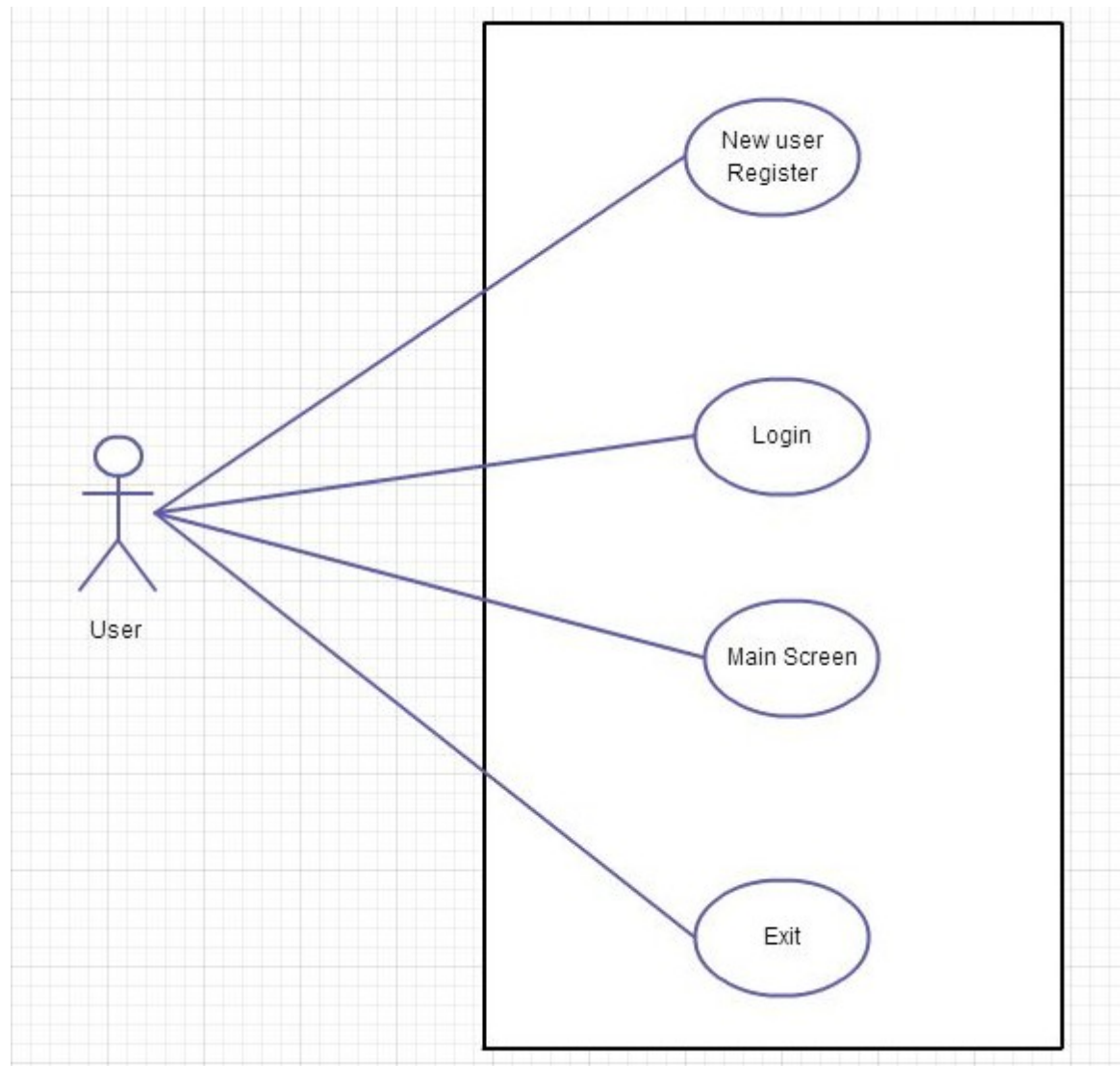
The password should be kept secret as anybody else can login with your account and ask anything vulgar/unacceptable.

3.3.4 Software Quality Attributes

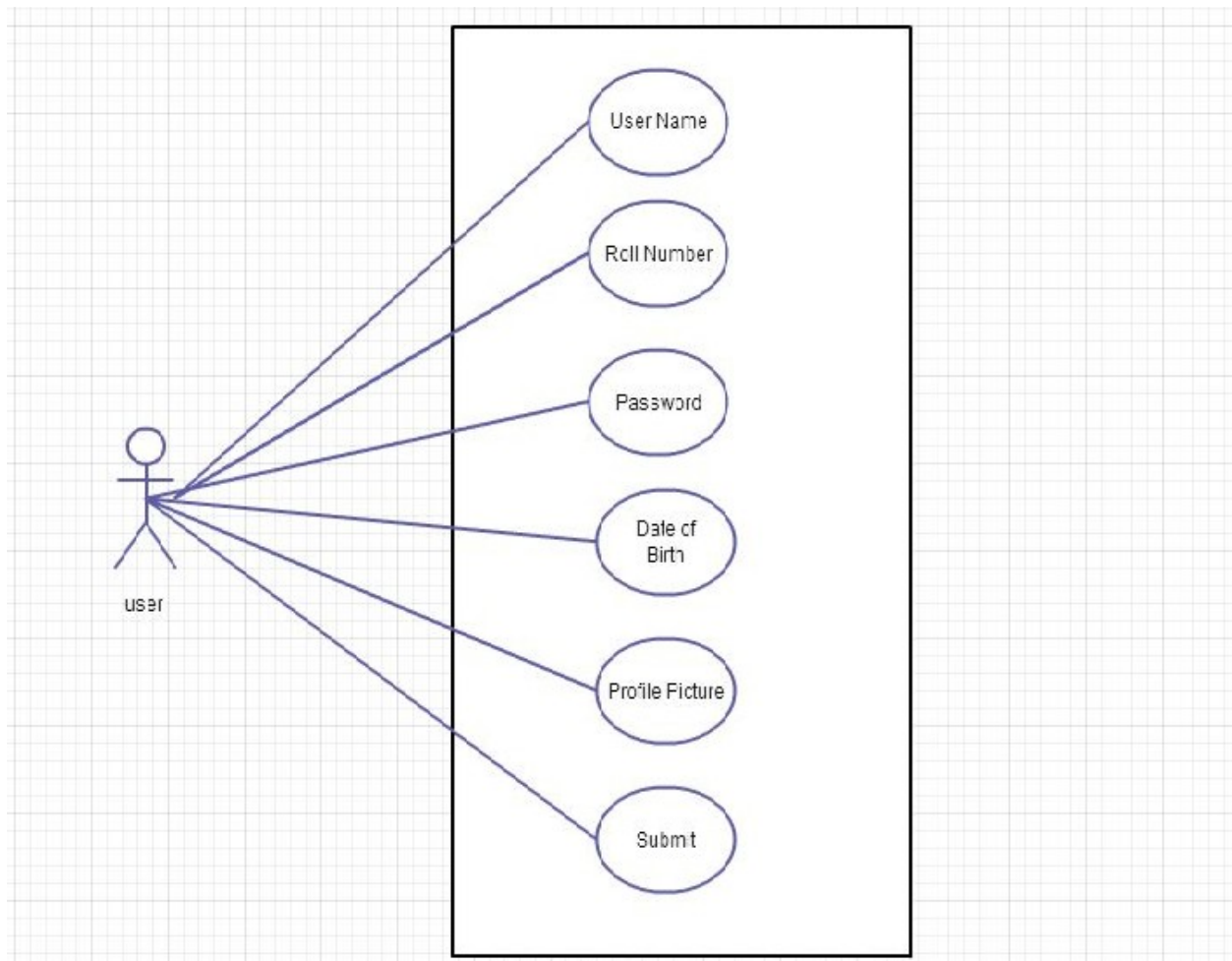
The software is planned to be robust and complete. Also the user interface is kept as simple as possible in order to let it be used by even users with minimal tablet knowledge.

3.4 Behavioral Requirements

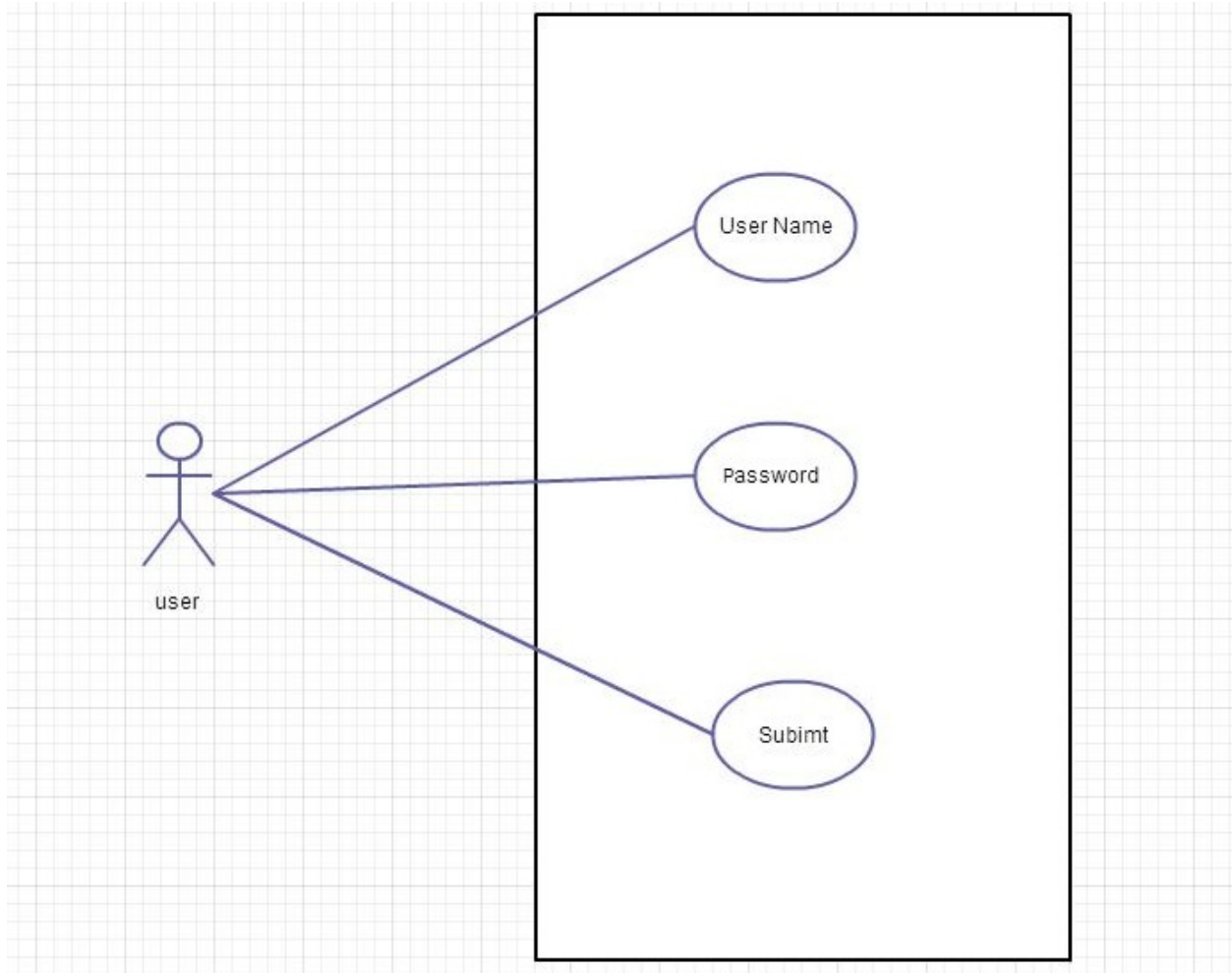
Use case Diagram:



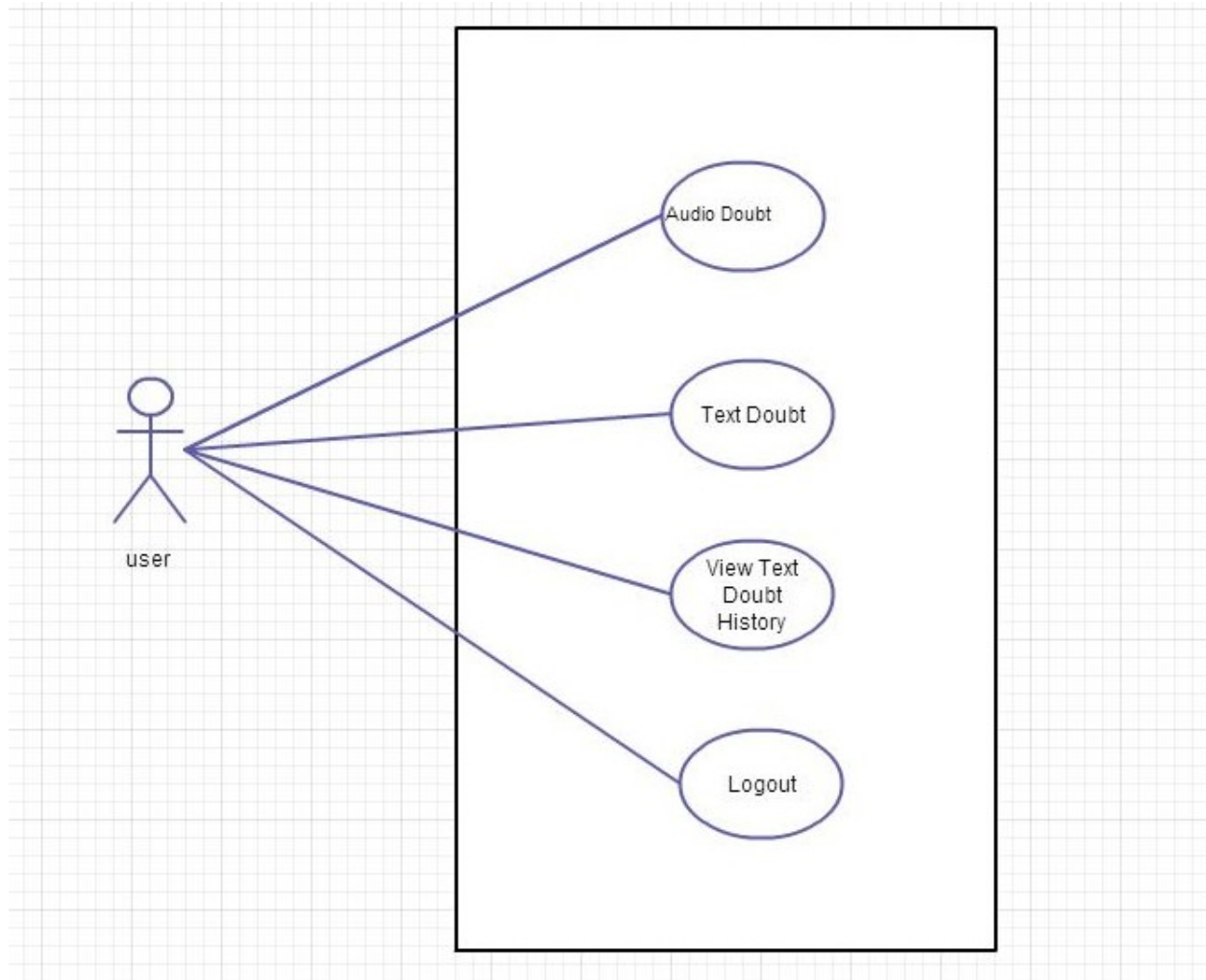
Use Case Diagram for i-Class Client application



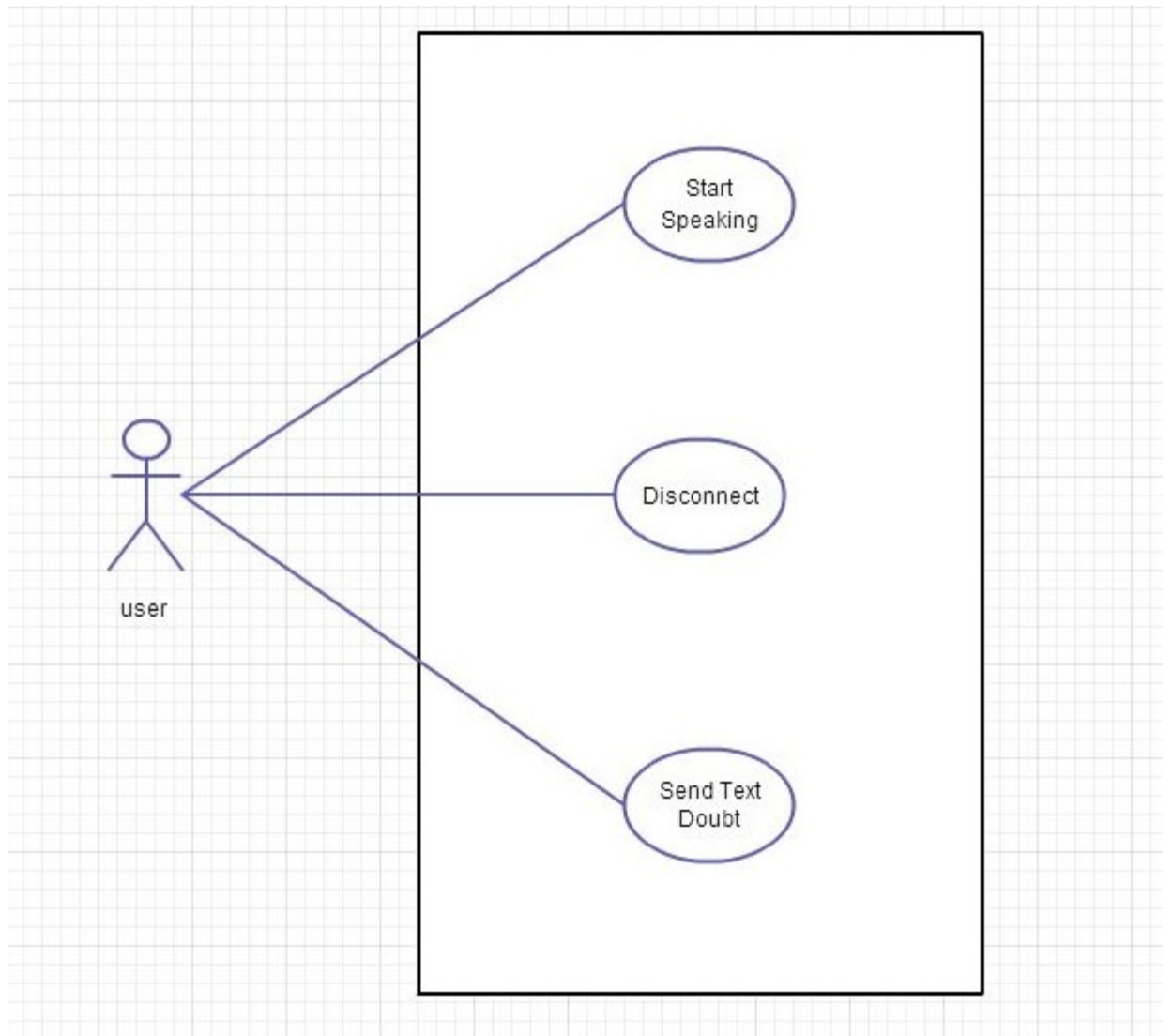
Use Case Diagram for new user registration



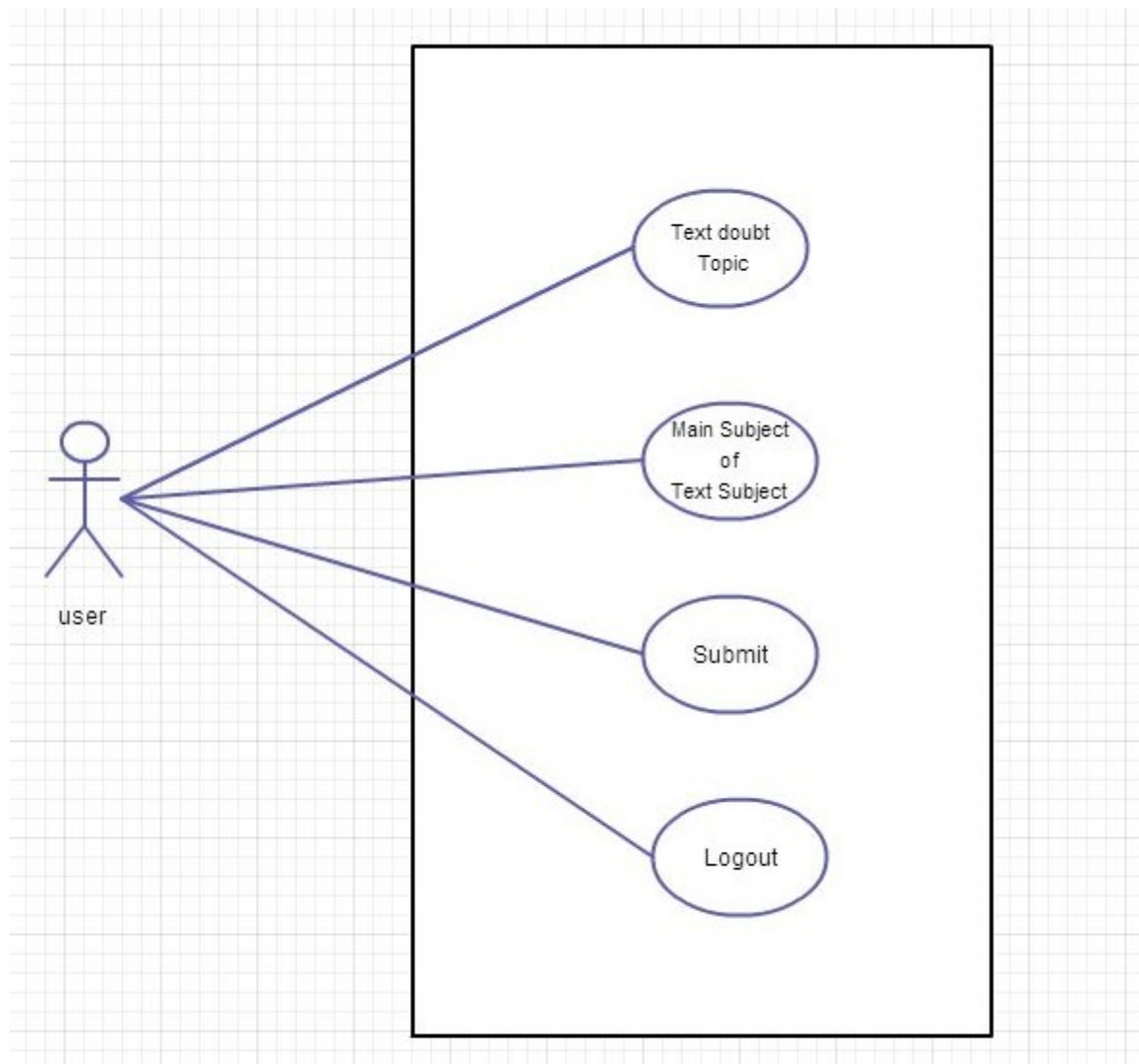
Use Case Diagram for registered user login



Use Case Diagram for main screen

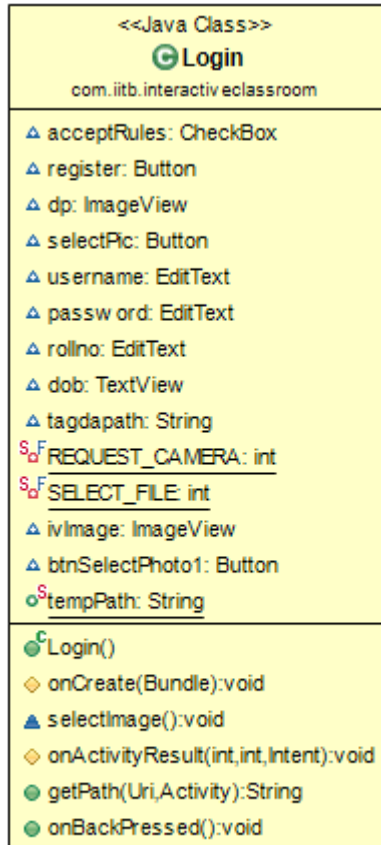


Use Case Diagram for Audio Doubt

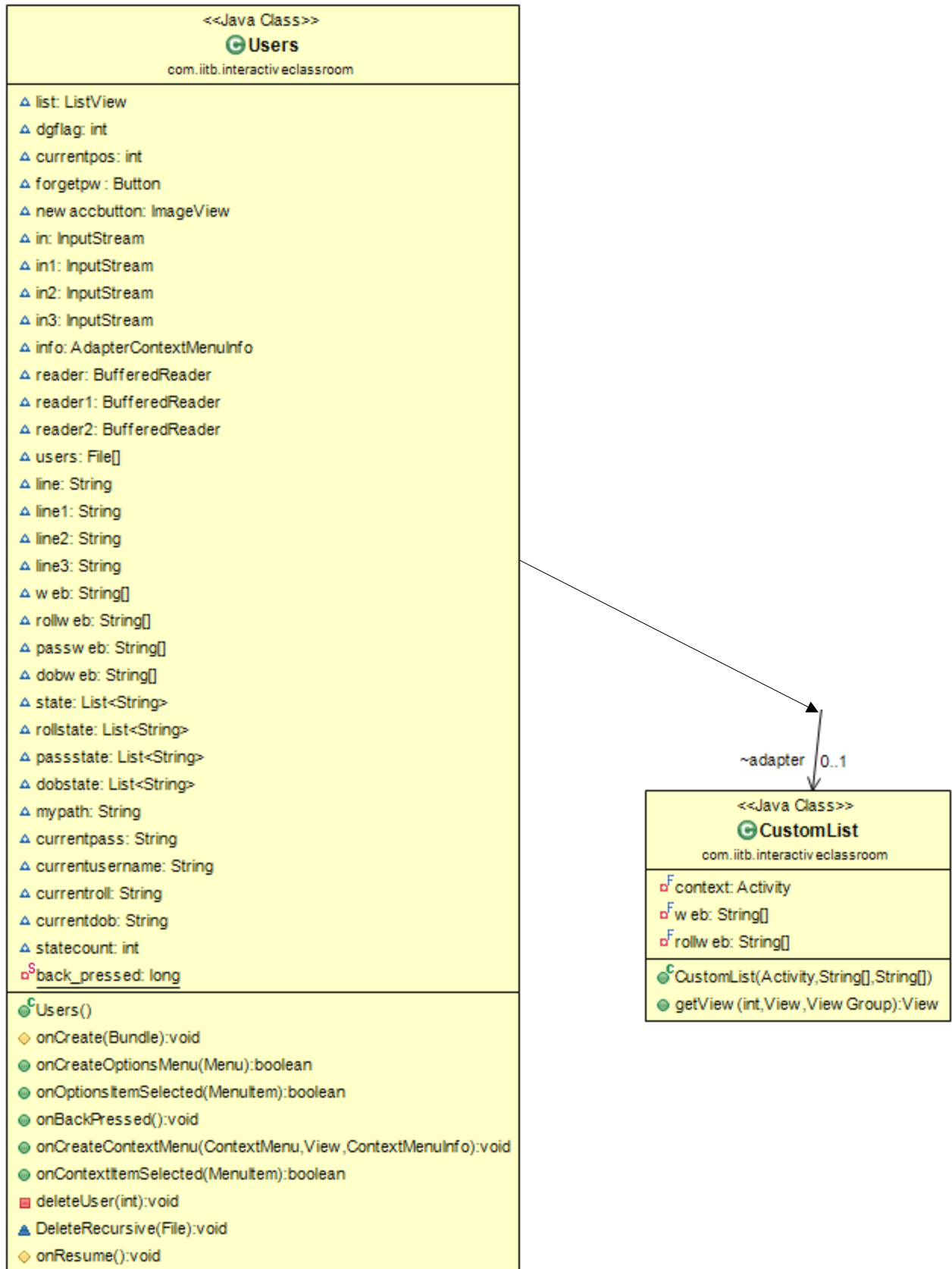


Use Case Diagram for Text Doubt

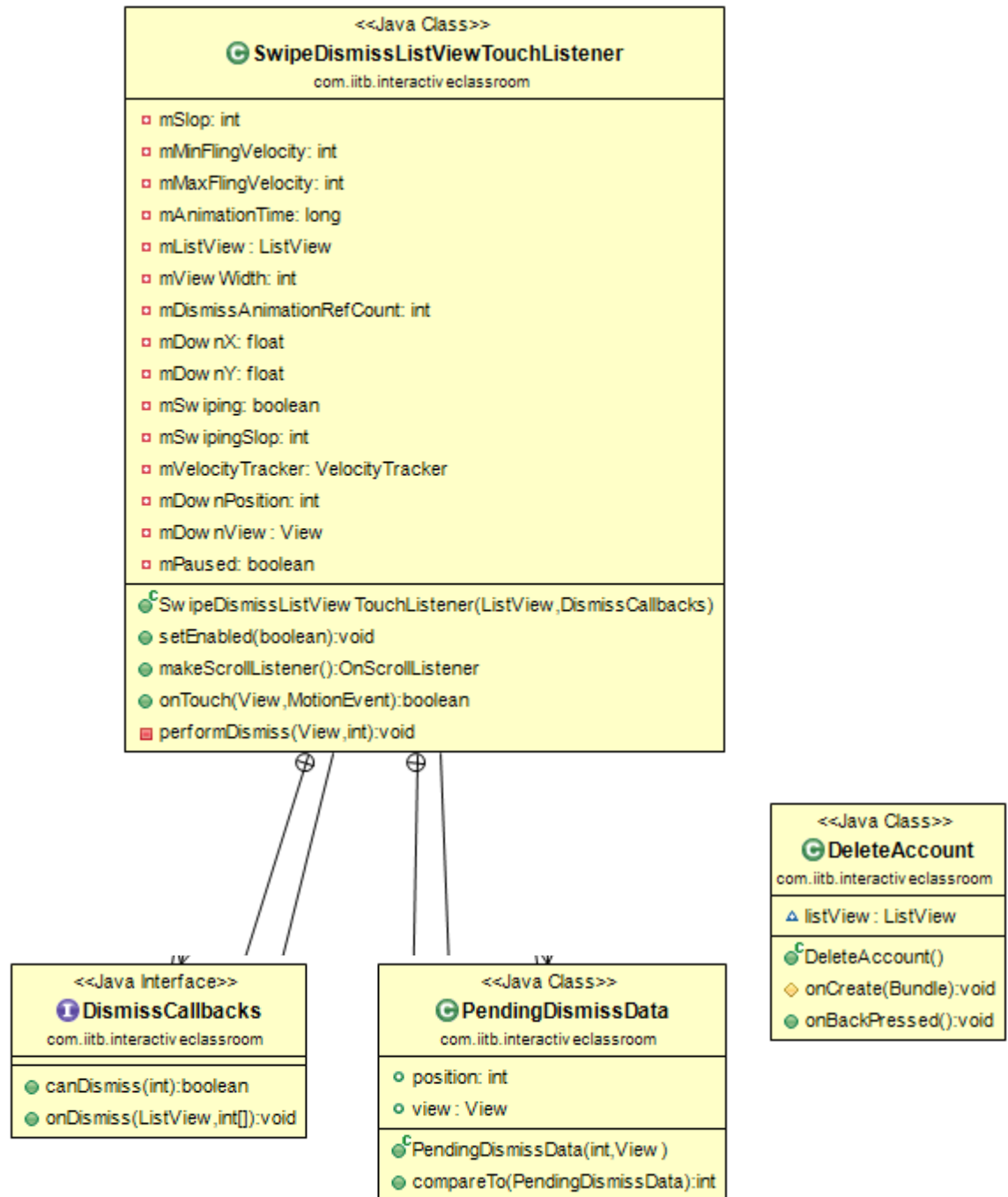
Class Diagrams



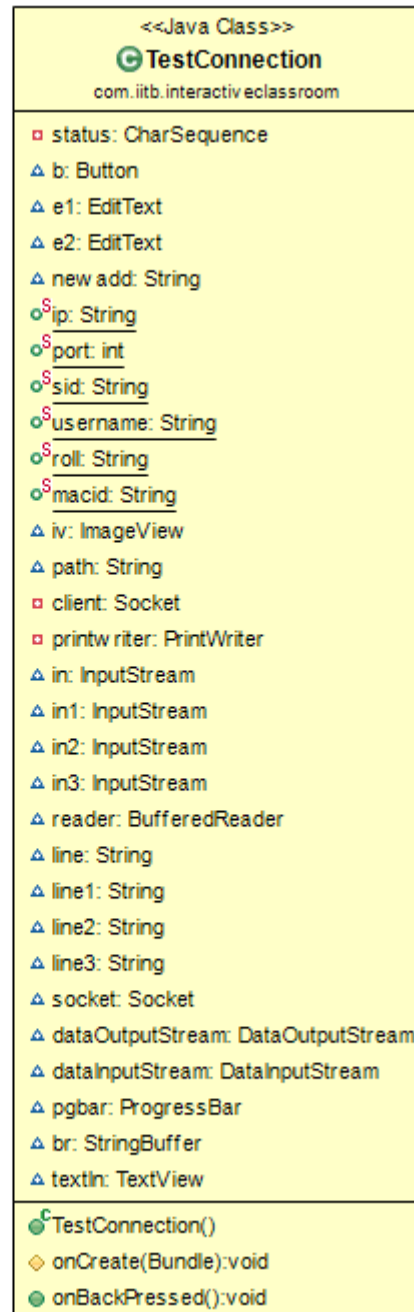
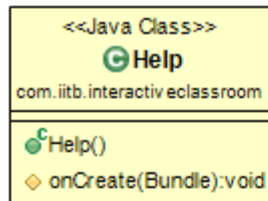
Class Diagrams for SignUp Page And Splash



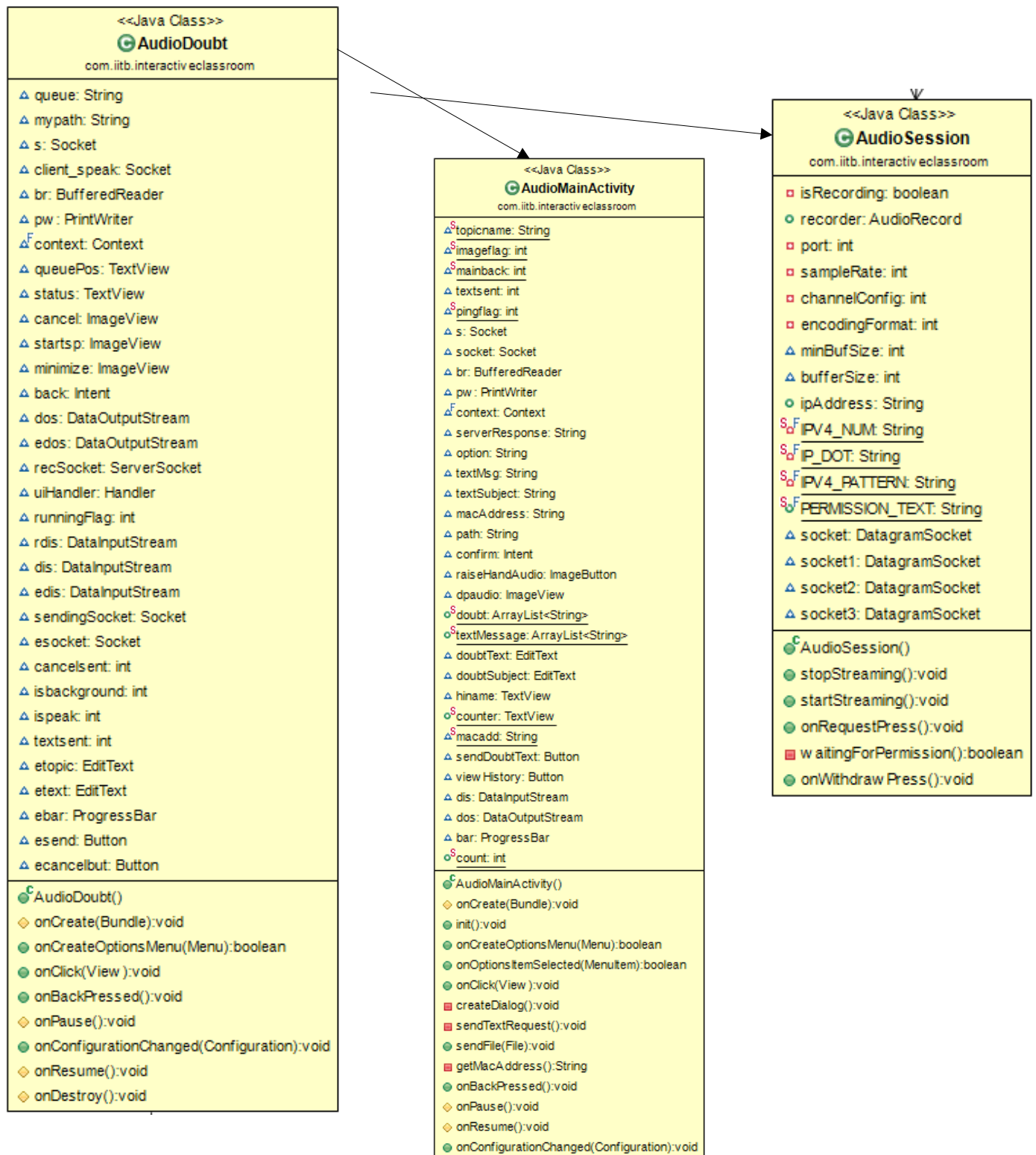
Class Diagram for Login page



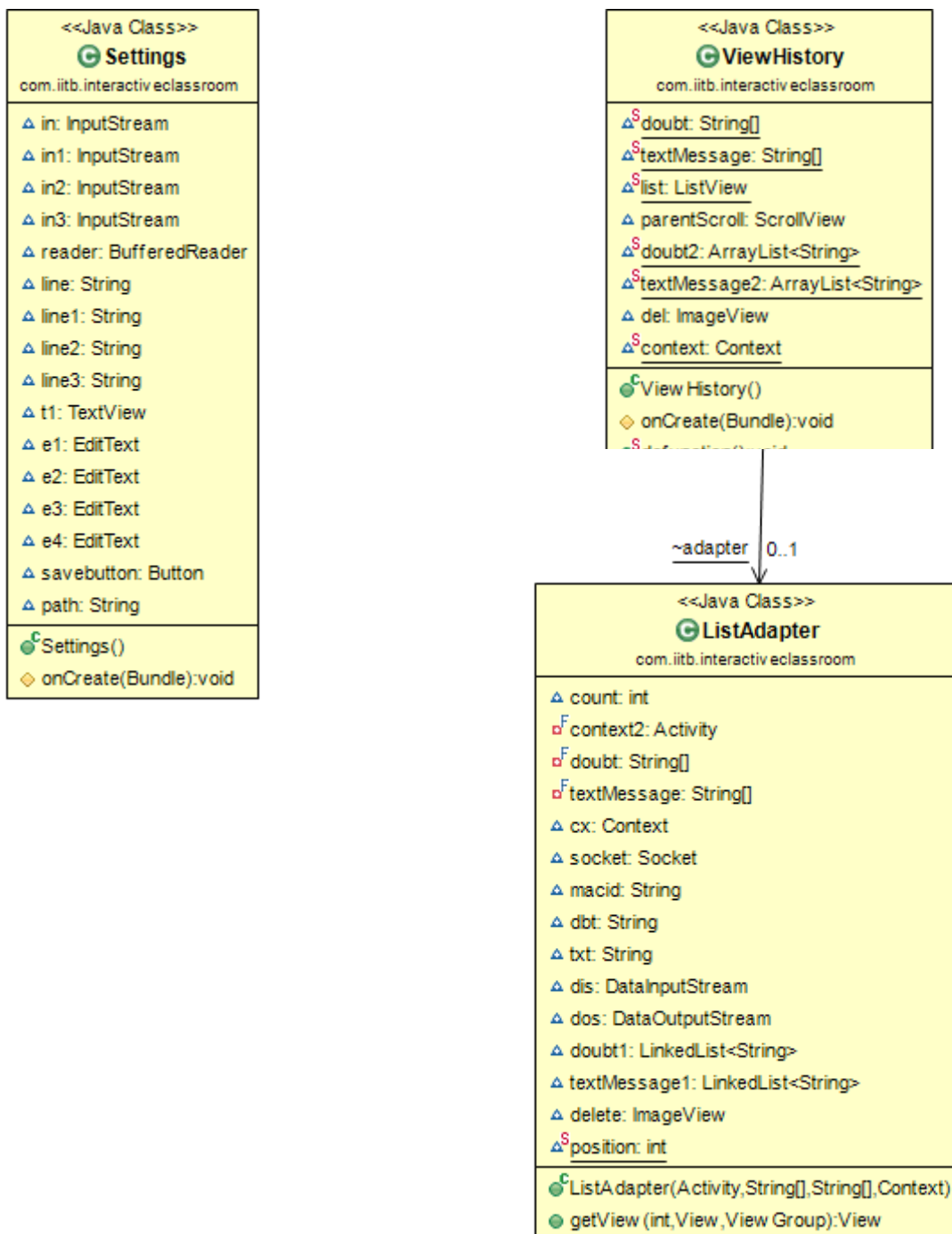
Class Diagram for Swipe to delete



Class Diagrams for TestConnection,Notification,Help

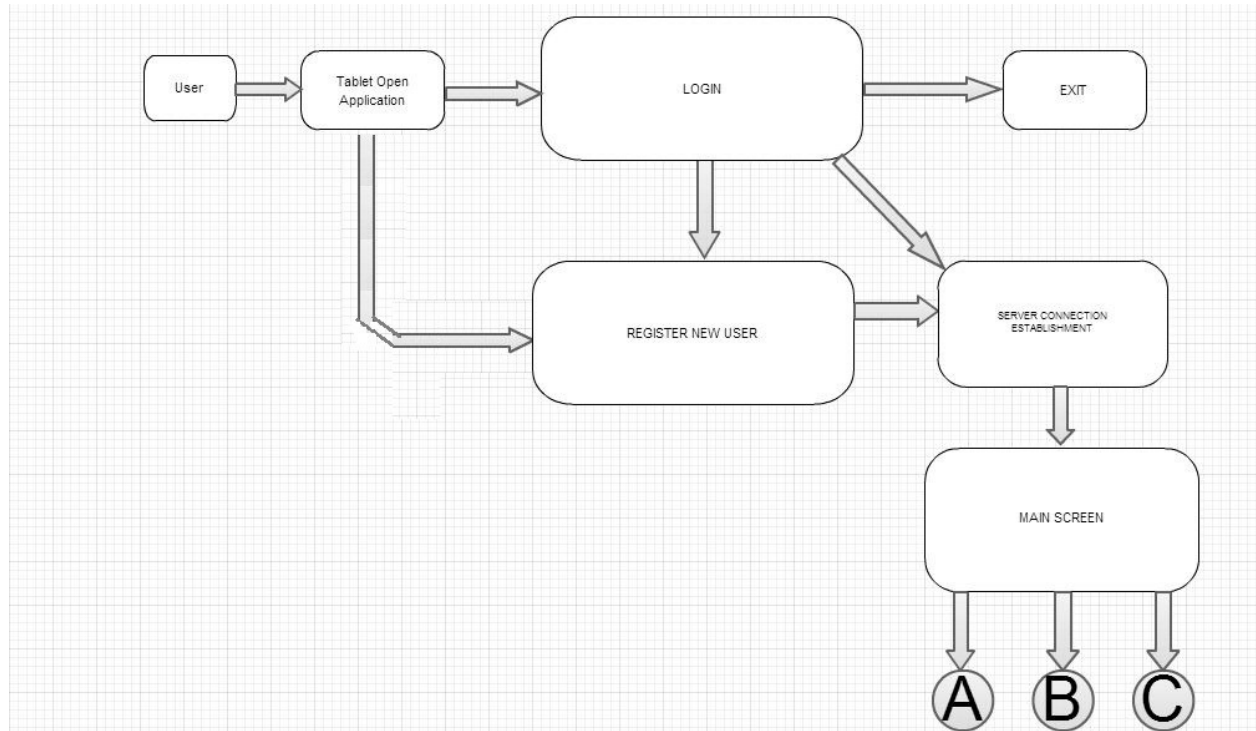


Class Diagrams for Audio doubt screen

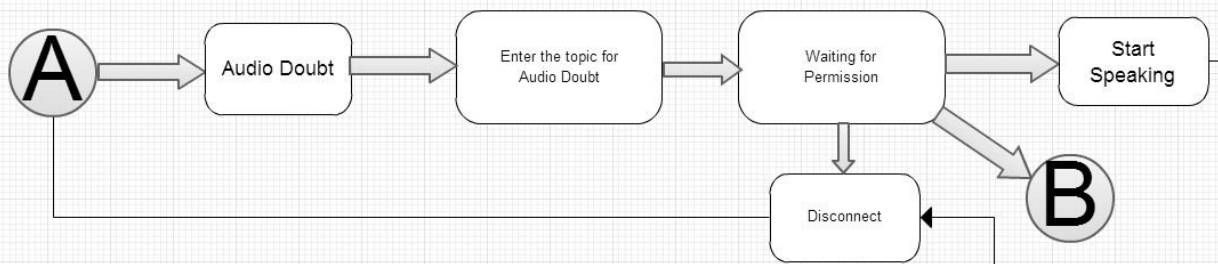


Class Diagrams for settings and view history

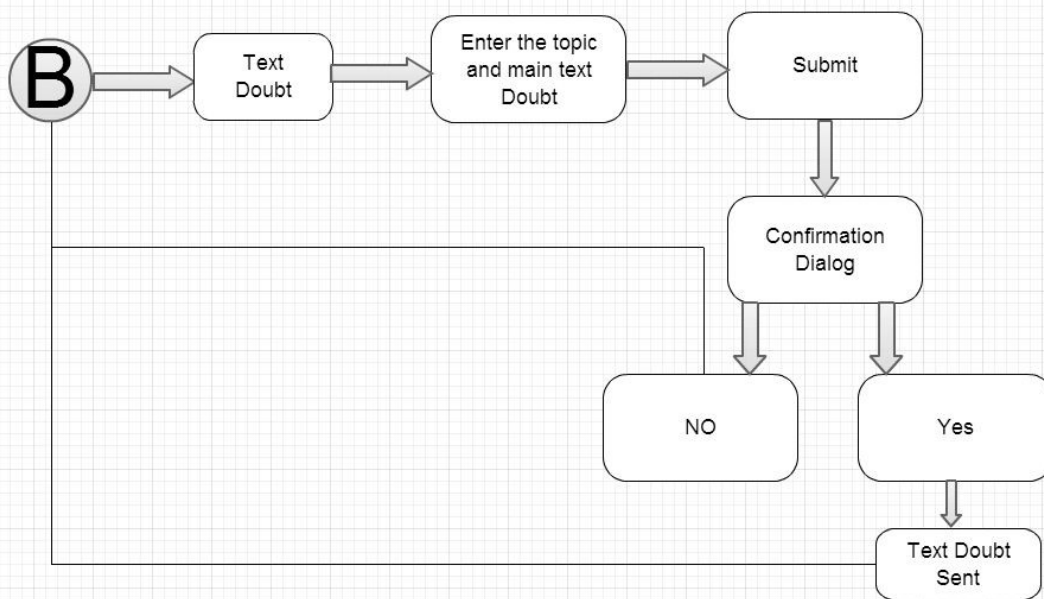
Data Flow Diagrams



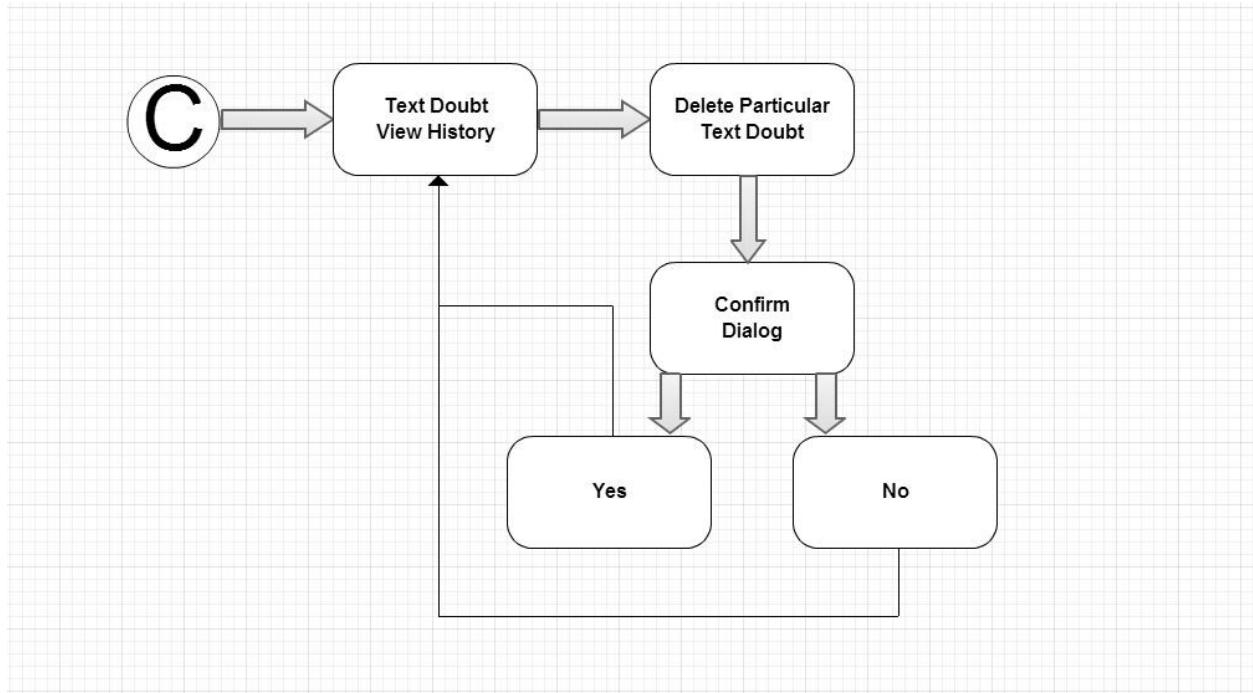
Data flow diagram for login screen



Data flow diagram for Audio Doubt

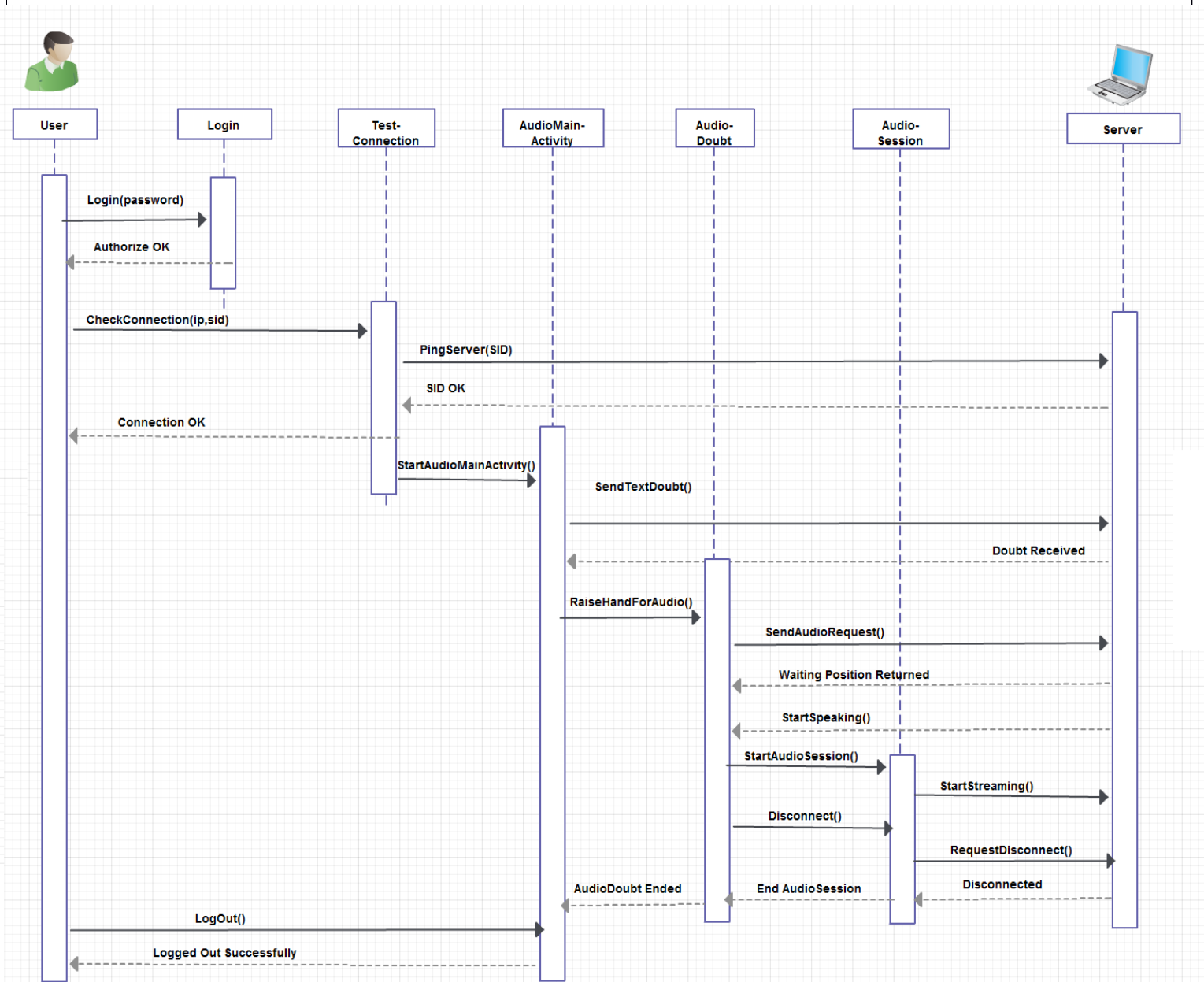


Data flow diagram for Text Doubt



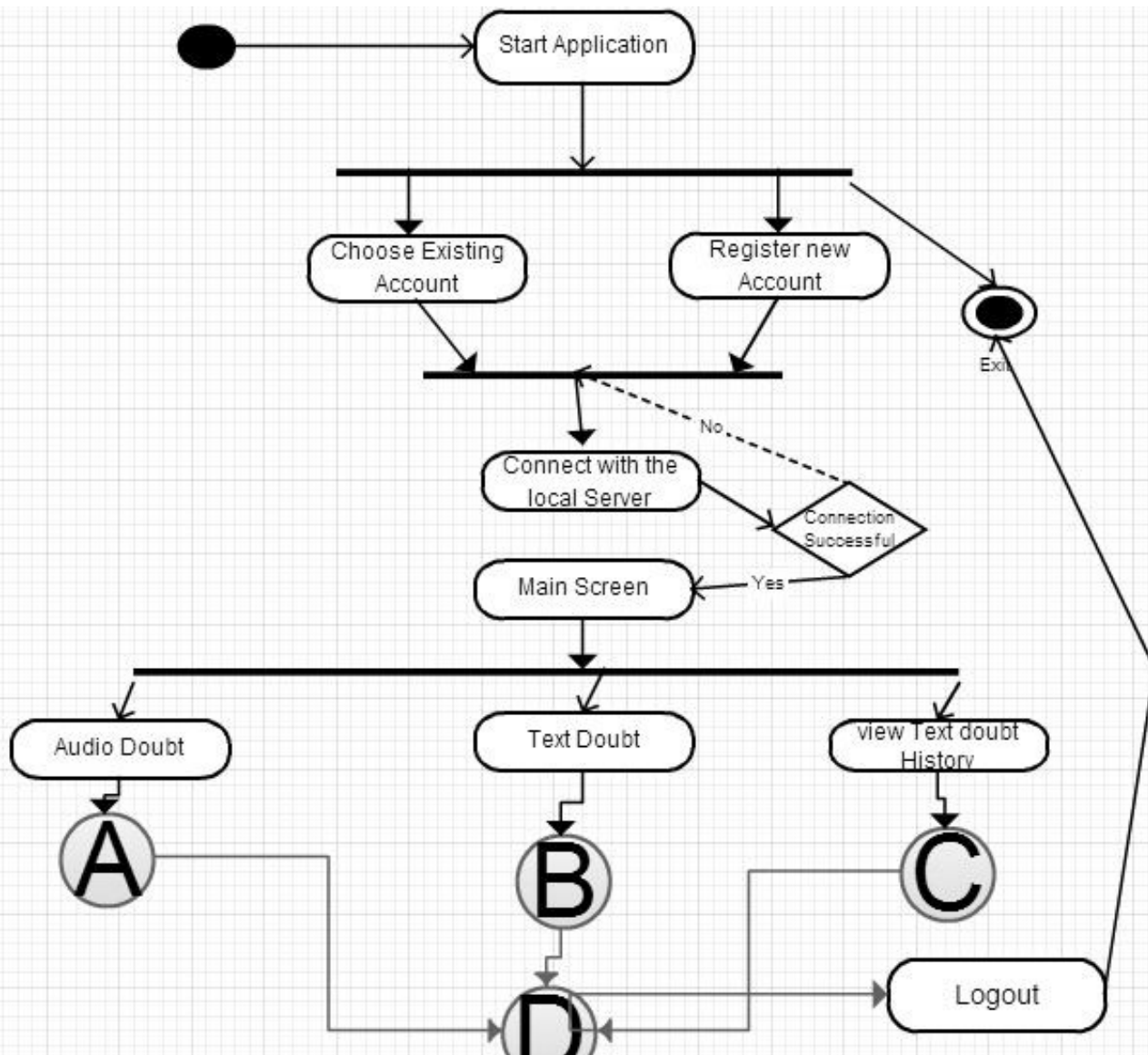
Data flow diagram for View History

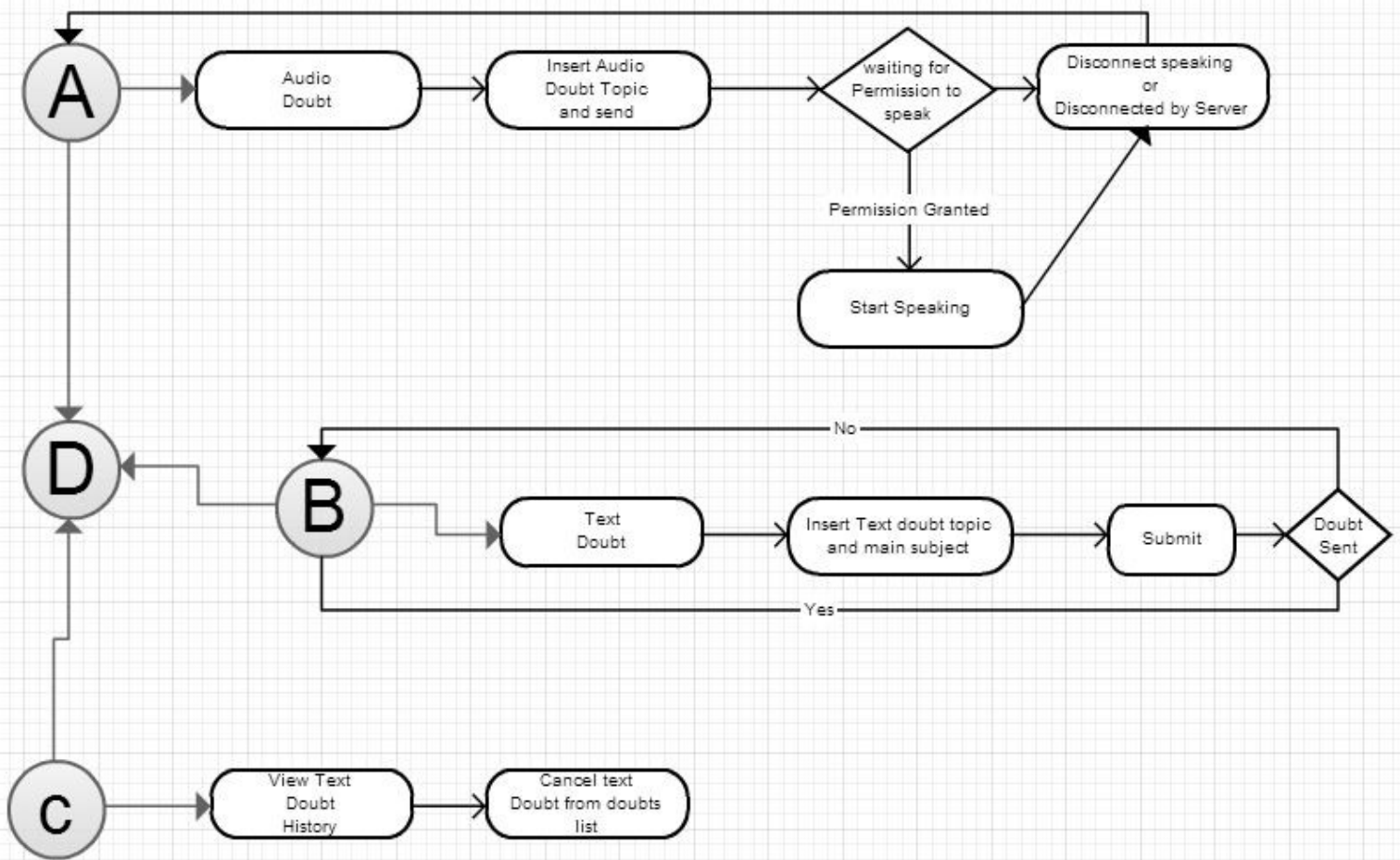
Sequence Diagram



Sequence Diagram for Logging in, Sending Text Doubt and Audio Doubt and Logout

Activity Diagram





Activity Diagrams for i-Class client Application

Section 2: i-Class Forum

Software Design Description:

3.1. External Interface Requirements:

I-Class Forum will depend on External interface I-Class Application and I-Class Server. Doubts discussed through I-Class Application will be uploaded by Professor via I-Class Server in the Forum.

3. 1.a. User Interfaces:

● **Inputs**: The user need not give any input except choosing a department and professor of his choice. Professor needs to Input his login details to access the contents and he needs to input solutions of unanswered doubts.

● **Outputs**: The Forum responds to the input by displaying the list of desired Department ,Professor or lecture.

● **Operating Systems** : Any O.S which supports web browser.

3.1. b. Hardware Interfaces:

Any System with minimum RAM 256 MB and web browser.

3.1. c. Software Interfaces:

NetBeans IDE, Apache Server and MySQL shall be used as development environment for implementing the modules of I-Class Forum.

Designing of modules and diagrams is done in UML using MS word and creately.com

3.2. Functional requirements

I-Class Forum

3.2.1.1. Login Tab

The user i.e. Professor can click this tab and fill in his details to log in.

3.2.1.2. Contact Us Tab

New Professor who hasn't been registered in I-Class Forum can send Request to admin via Contact Us Tab.

3.2.1.3. Home Tab

To Return back to home screen.

3.2.1.4. Department Panel:

A list which displays list of department.

3.2.1.5. Professor Panel:

A list which displays list of Professor.

3.2.1.6. Lecture Panel:

A list which displays list of lectures

3.2.1.7. Doubts page:

A page where all the discussions and doubts occurred during class room session is uploaded.

3.2.1.8. Log Out Tab:

Professor can log out by clicking this tab and return back to home screen.

3.3 Non-functional requirements

3.3.1 Performance Requirements:

The forum will need to provide a responsive interface. There should be minimal delay in retrieving any content or associated detail.

3.3.1.1. Maintainability:

forum may be modified to satisfy needs in future.

3.3.1.2. Reliability: Uninterrupted Internet connectivity

3.3.2 Safety Requirements

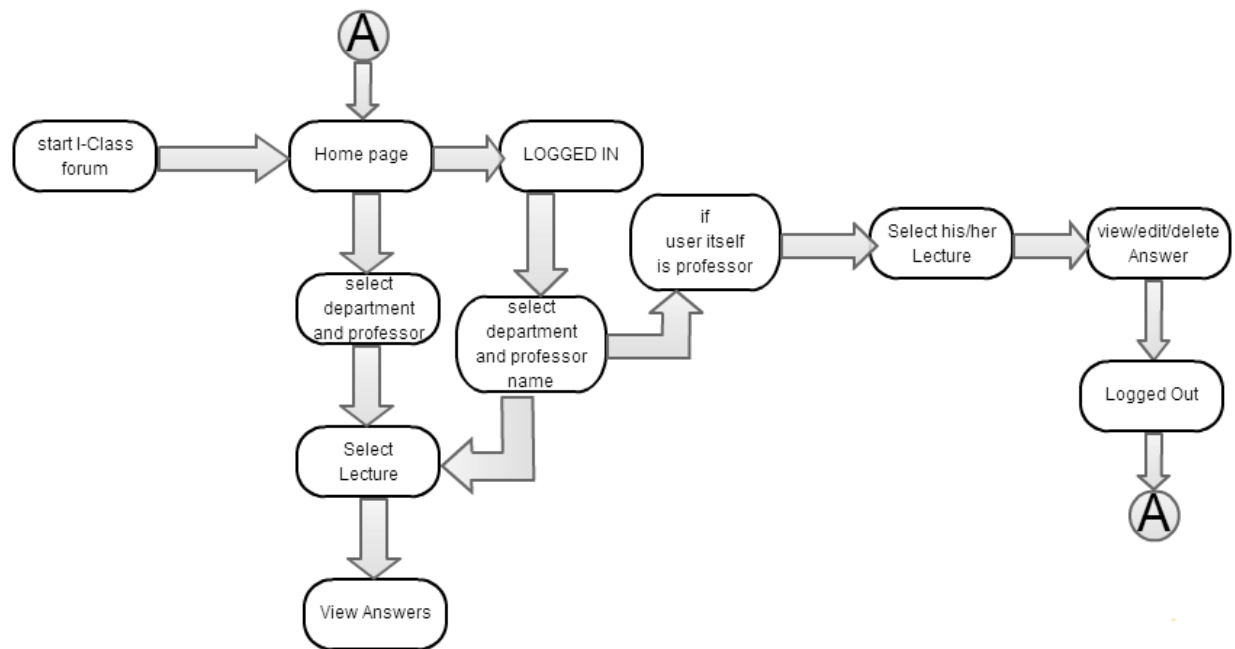
There is no safety requirements associated with this application.

3.3.3 Security Requirements

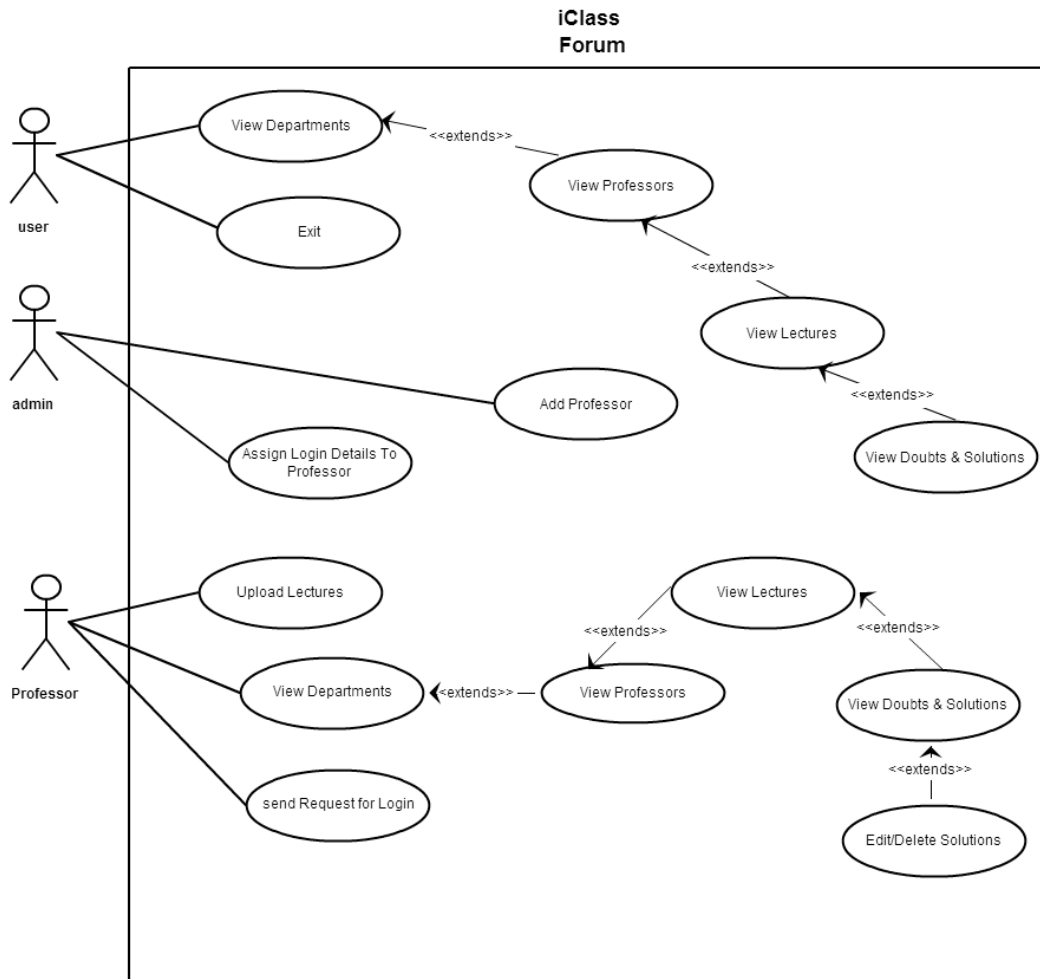
There is no security requirements associated with this application.

Behavioural Requirements:

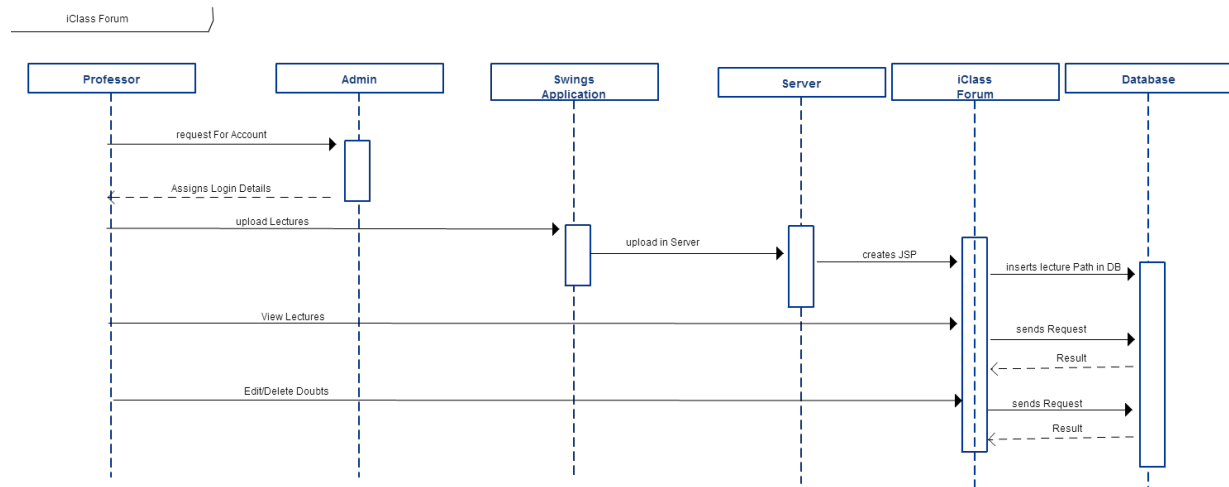
DATA FLOW DIAGRAM



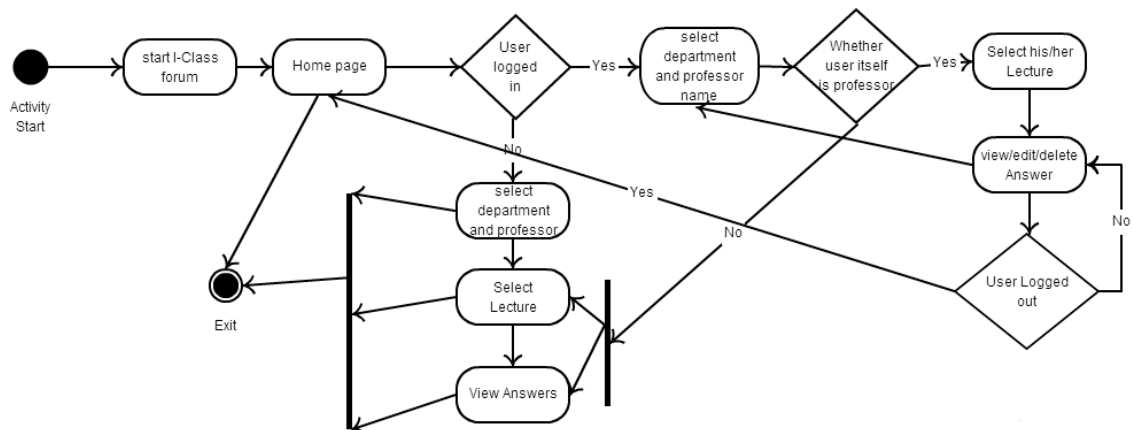
USE CASE DIAGRAM



SEQUENCE DIAGRAM



ACTIVITY DIAGRAM



User Manual

Section 1 :

i-Class Client Application

User Manual

Section 1:

i-class client

i-CLASS

Interactive Classroom Live Audio Streaming System

USER MANUAL

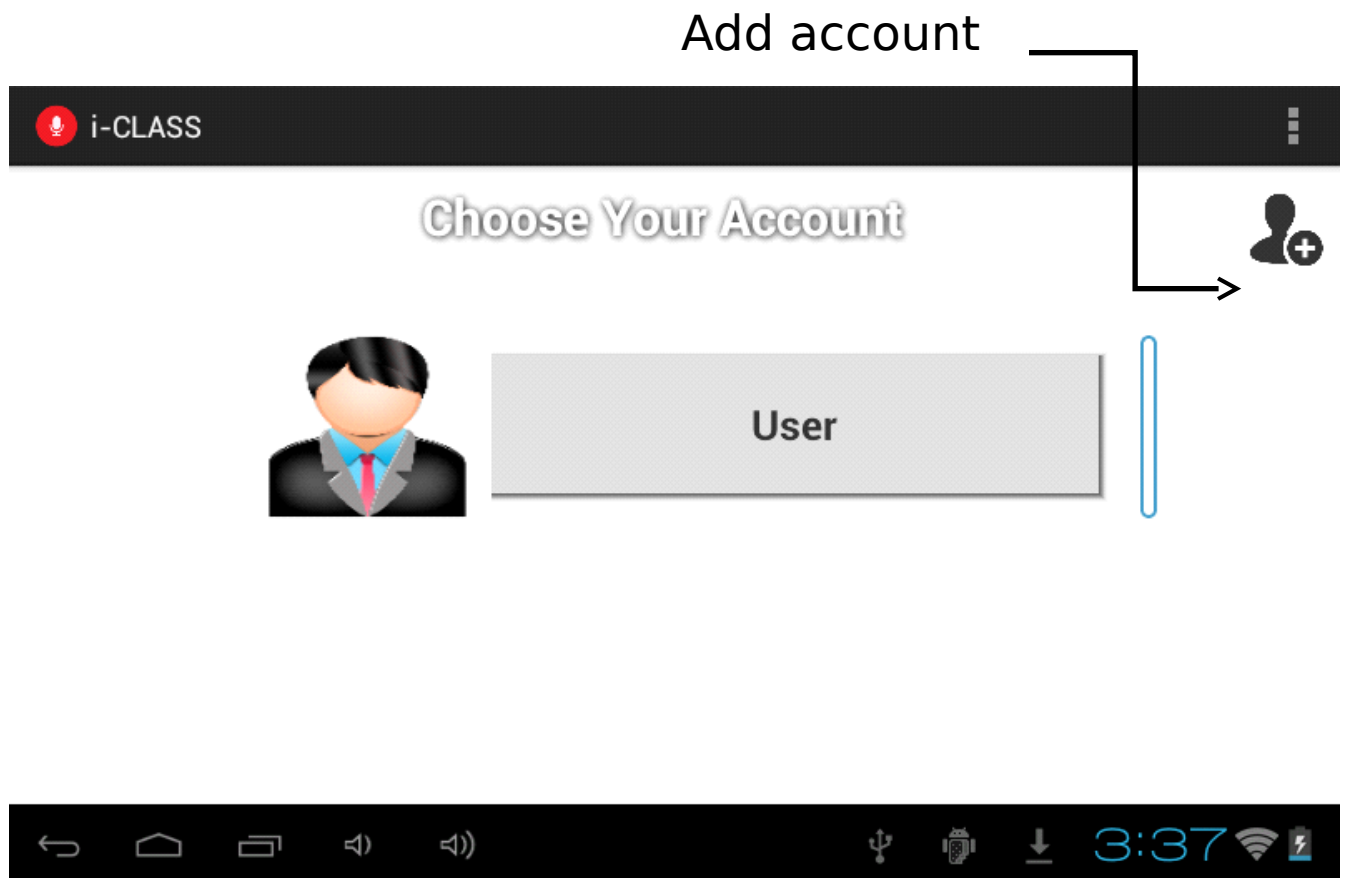
*REVOLUTIONIZING THE EDUCATION
SYSTEM IN INDIA*

SECTION 1

Account Management t

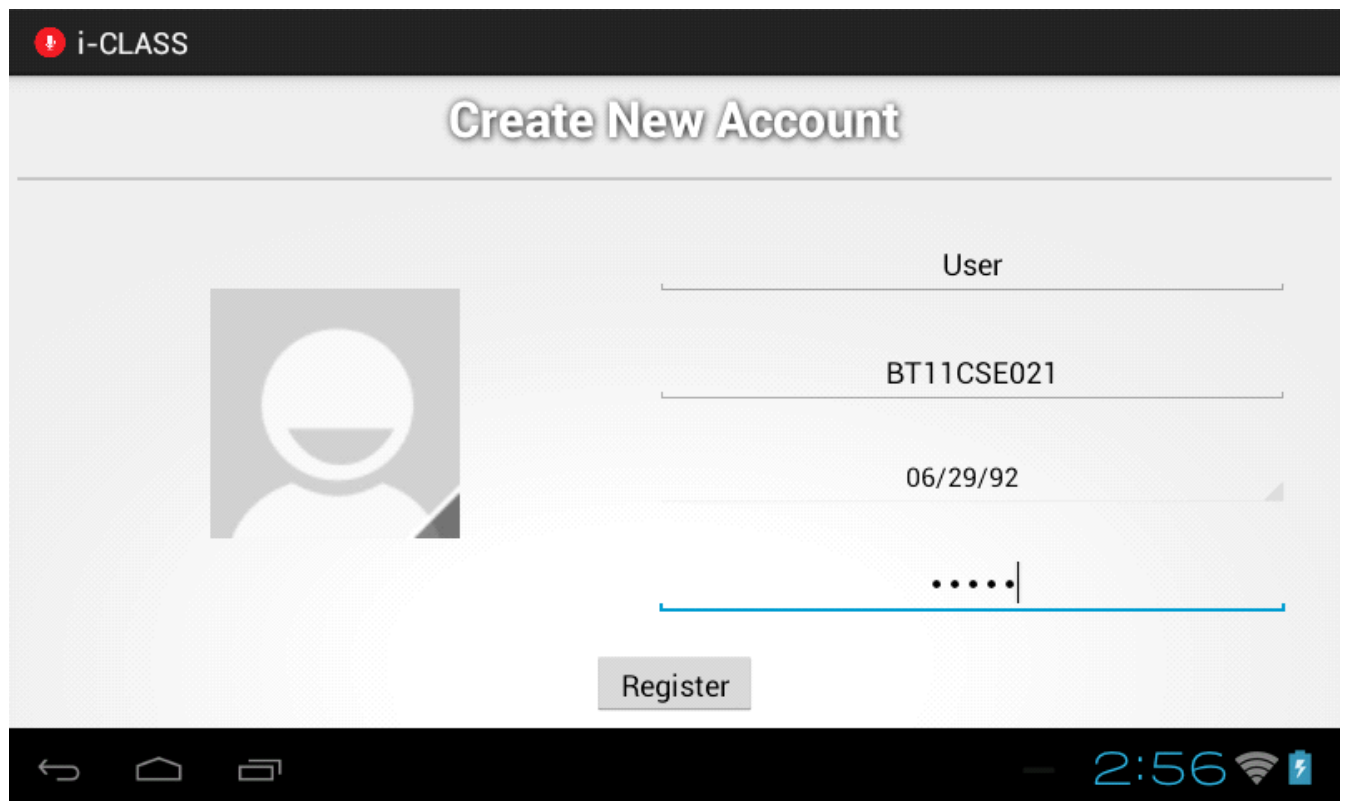
Creating An Account

If there is no account present in the tab then you will be, by default, redirected to the 'Create Account' page. Otherwise, you can also click on the 'Add Account' icon on the 'Login' page to go to the 'Create Account' page.



The 'Create Account' Page has the following fields:-

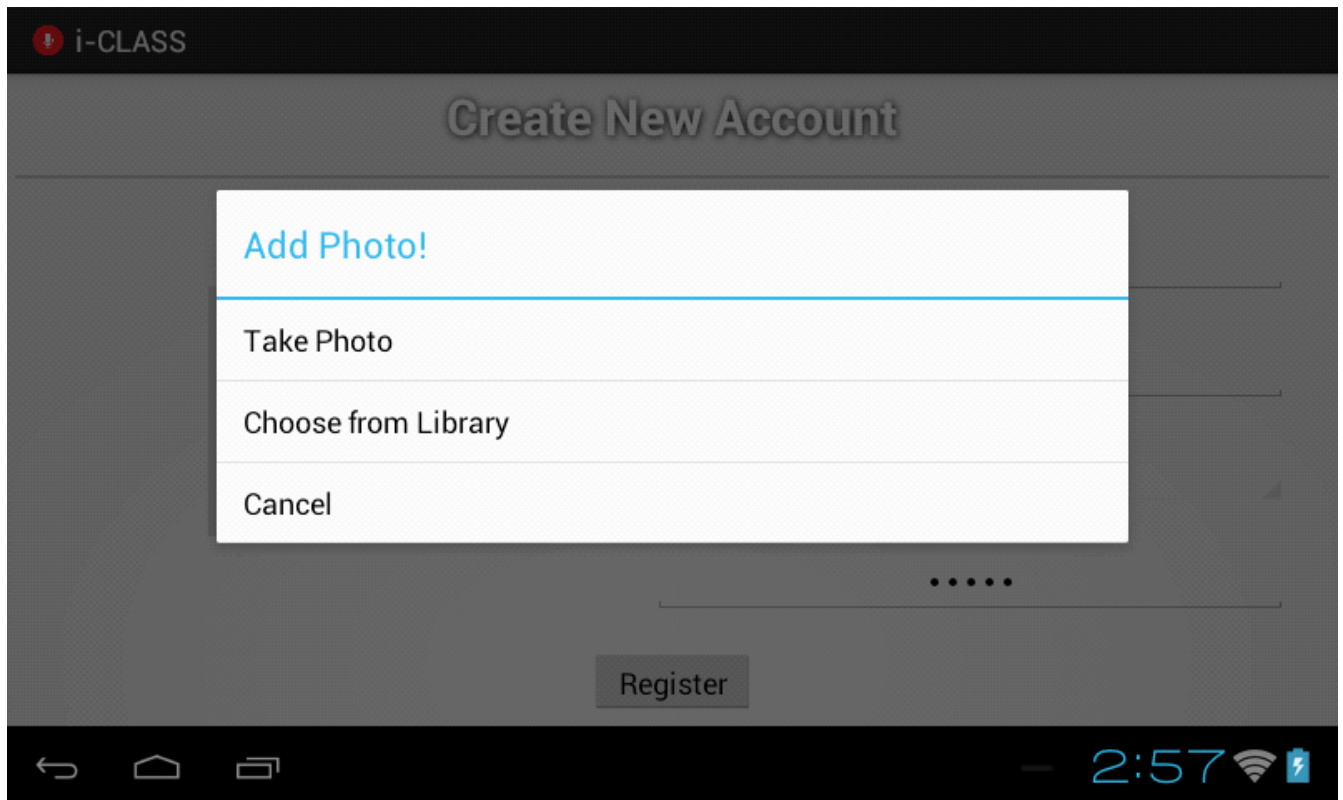
- Name
- Roll Number
- Date Of Birth
- Password



The screenshot shows the 'Create New Account' page of the i-CLASS app. At the top, there is a black header with a red 'i' icon and the text 'i-CLASS'. Below the header, the title 'Create New Account' is displayed in a bold, grey font. The main content area is light grey and contains a large, faint watermark of a person's profile. On the left side of this area is a square icon for a profile picture. To the right of the icon are four input fields: the first is labeled 'User' and contains the text 'BT11CSE021'; the second contains the date '06/29/92'; the third is for a password, indicated by four dots and a cursor; and the fourth is empty. Below these fields is a grey button labeled 'Register'. At the bottom of the screen is a black navigation bar with three icons on the left (back, home, recent apps) and a status bar on the right showing the time '2:56', signal strength, and battery level.

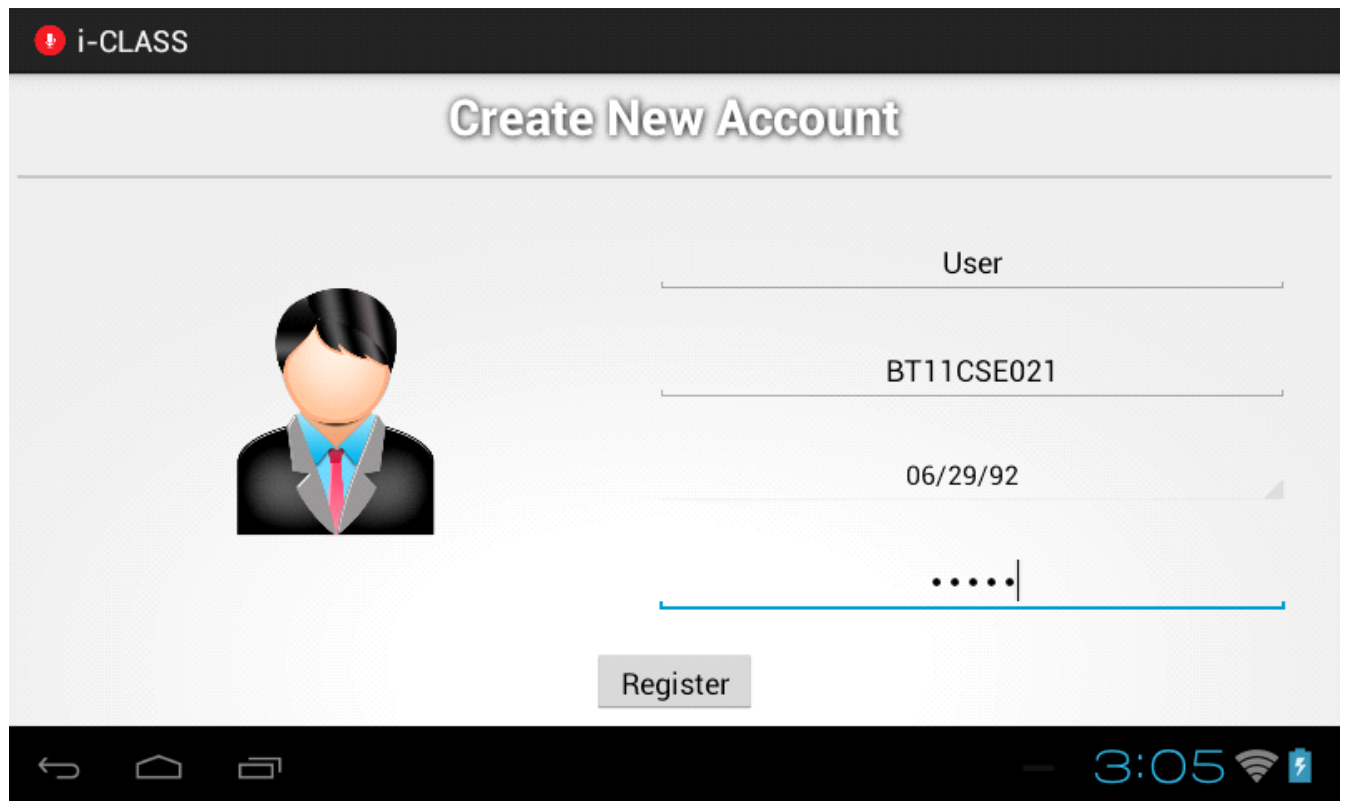
Click on the profile picture icon to select one.

Once you click on it, you will be presented with options as follows:-



You can directly take the photo using camera of tablet or choose one from gallery if the lighting conditions are not good.

Once you select your photo the page will look like this:-



The screenshot shows a mobile application interface for 'i-CLASS'. At the top, there is a black header with a red circular icon containing a white 'i' and the text 'i-CLASS'. Below the header, the title 'Create New Account' is displayed in a bold, grey font. The main area has a light grey background. On the left, there is a placeholder for a profile picture, showing a generic male figure in a suit. To the right of the profile picture, there are four input fields: the first is labeled 'User' and contains the text 'BT11CSE021'; the second contains the date '06/29/92'; the third is a password field with four dots and a cursor; and the fourth is a 'Register' button. At the bottom of the screen, there is a black navigation bar with three icons on the left (back, home, recent apps) and a status bar on the right showing the time '3:05', signal strength, and battery level.

Now click on the 'Register' button to create your account.

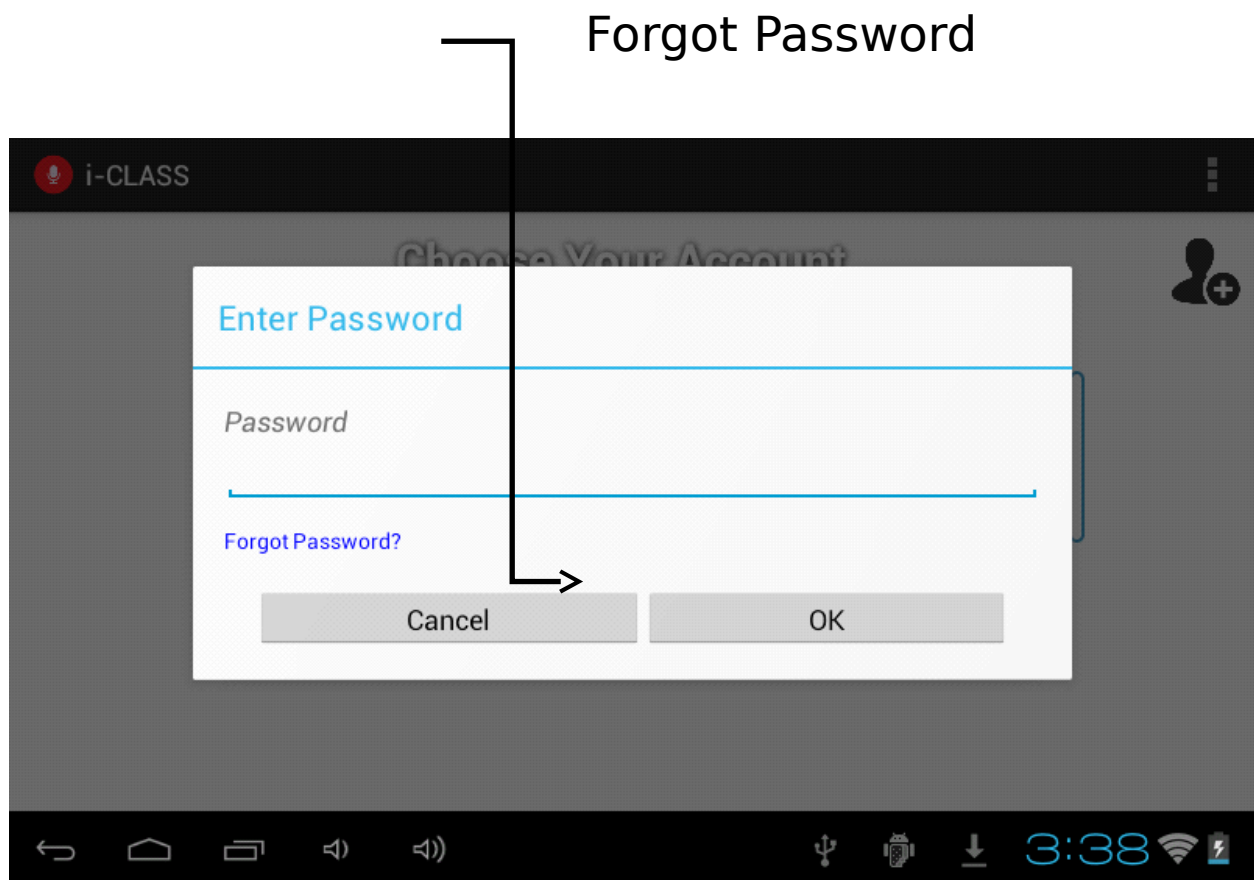
Congratulations!!! You have just successfully created your first account.

Changing Password of an Existing Account

What if you forgot your password?

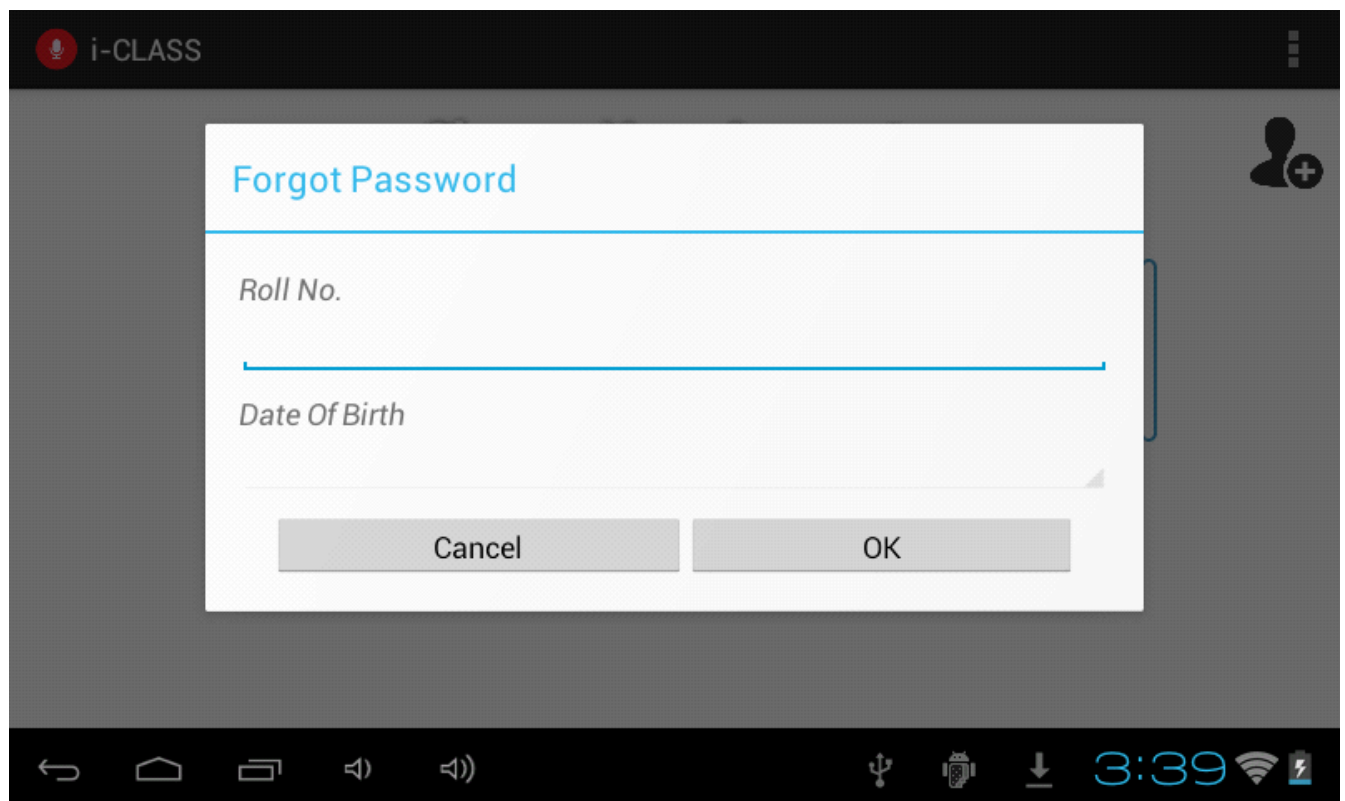
What if any of your friends get to know about your current password?

Don't worry. Here we are with an easy solution for you



To change the password of an existing account just click on the account. You will see following Dialog Box.

Simply click on 'Forgot Password' link.

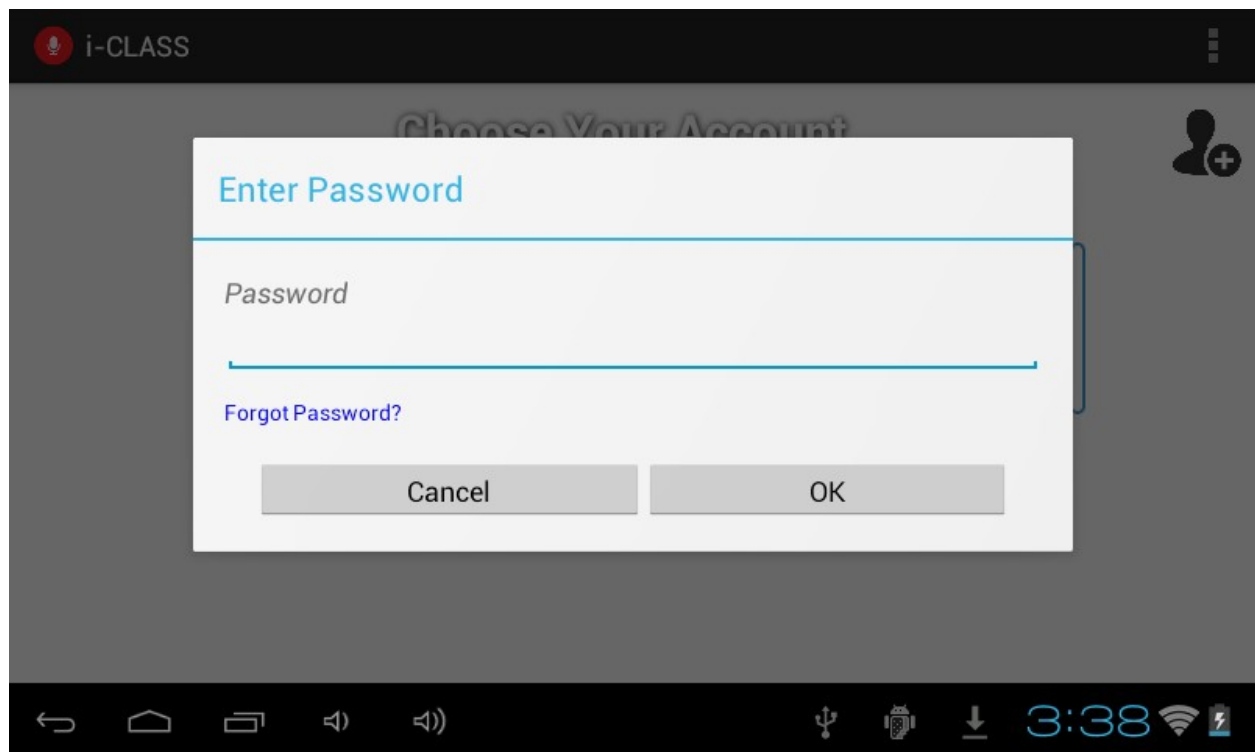
A screenshot of a mobile application interface. At the top, a black header bar contains a red circular icon with a white microphone and the text 'i-CLASS'. Below the header, a grey sidebar is visible on the right, featuring a user profile icon with a plus sign. The main content area is a light grey background. In the center, a white dialog box titled 'Forgot Password' in blue text is displayed. The dialog box contains two input fields: the first is labeled 'Roll No.' and the second is labeled 'Date Of Birth'. Below these fields are two grey buttons: 'Cancel' and 'OK'. At the bottom of the screen, a black navigation bar contains several icons: a back arrow, a home icon, a document icon, a speaker icon, a volume icon, a USB icon, a mobile phone icon, a download icon, the time '3:39', a Wi-Fi signal icon, and a battery icon.

Enter the Roll Number and Date of Birth provided during the time of creation of account for verification.

Once you enter the correct credentials, you will get a dialog box to enter a new password.

Logging In Using an Existing Account

To log in, just click on that particular account and you will be prompted for password.
Enter the correct password.

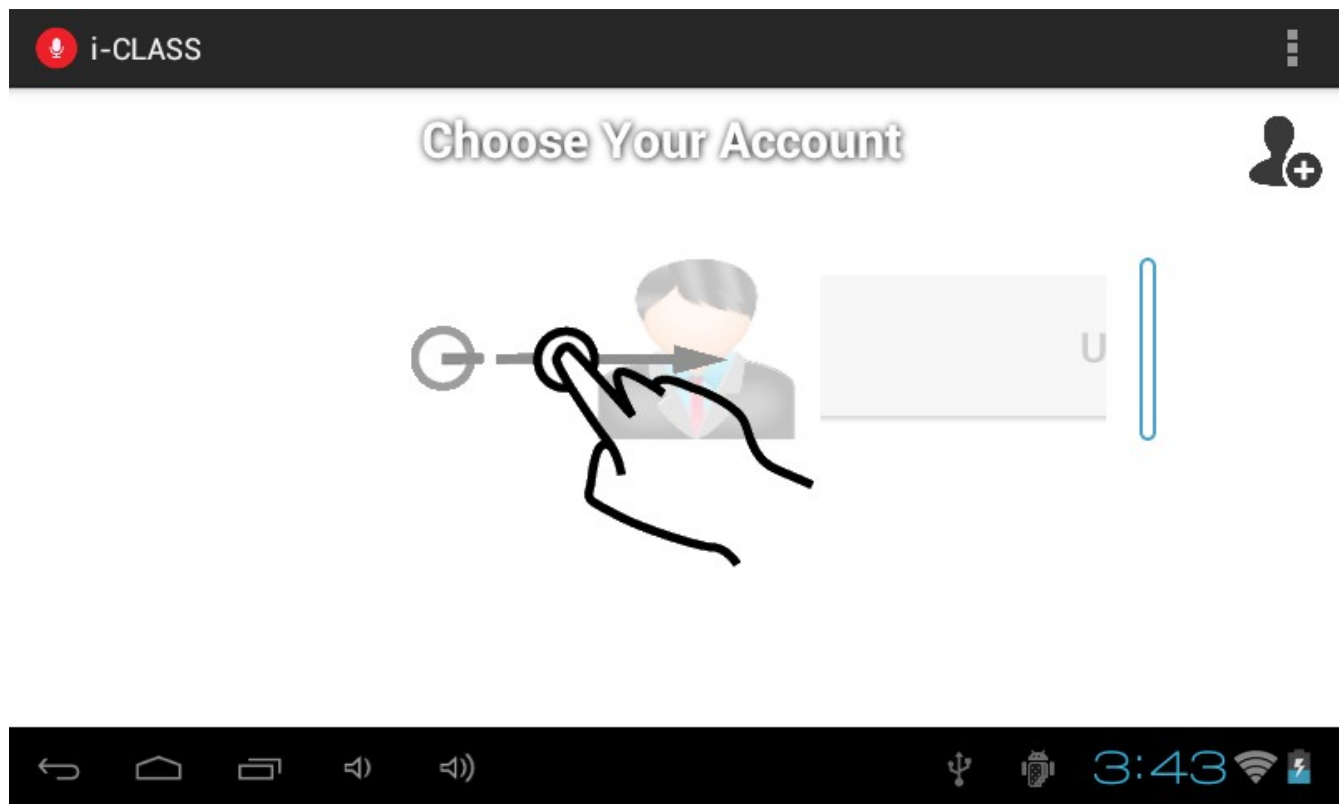


After entering password click on Ok. You will be redirected to nextpage with a notification of successful login as follows:

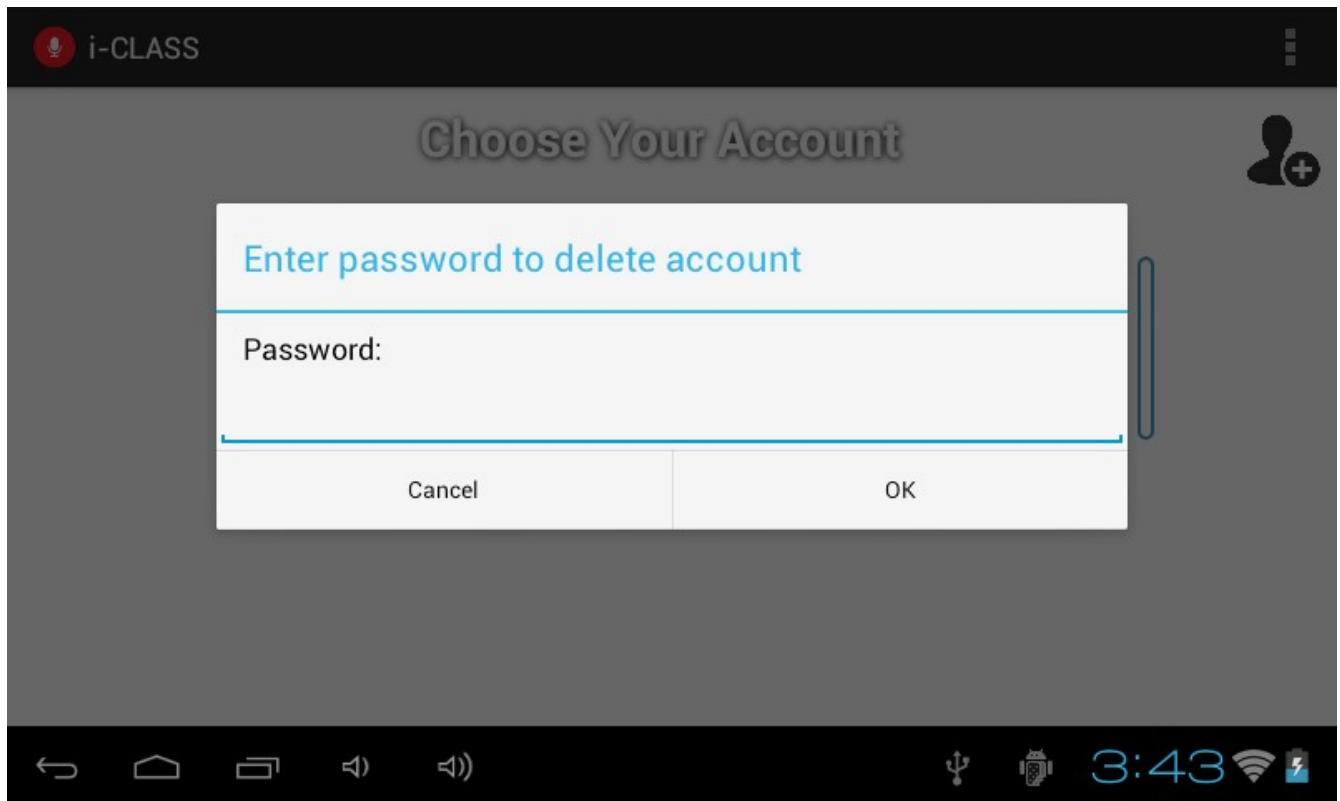


Deleting An Account

For deleting an existing account, simply swipe the particular account tab to either side to delete it.



Once you swipe it to either side, you will get a prompt asking for password authorization in order to delete the account.



If you provide the password correctly, the account will be deleted successfully and toast will be shown.

SECTION 2

Establishing Connection

Connecting with the local
server(Lecturer's computer)

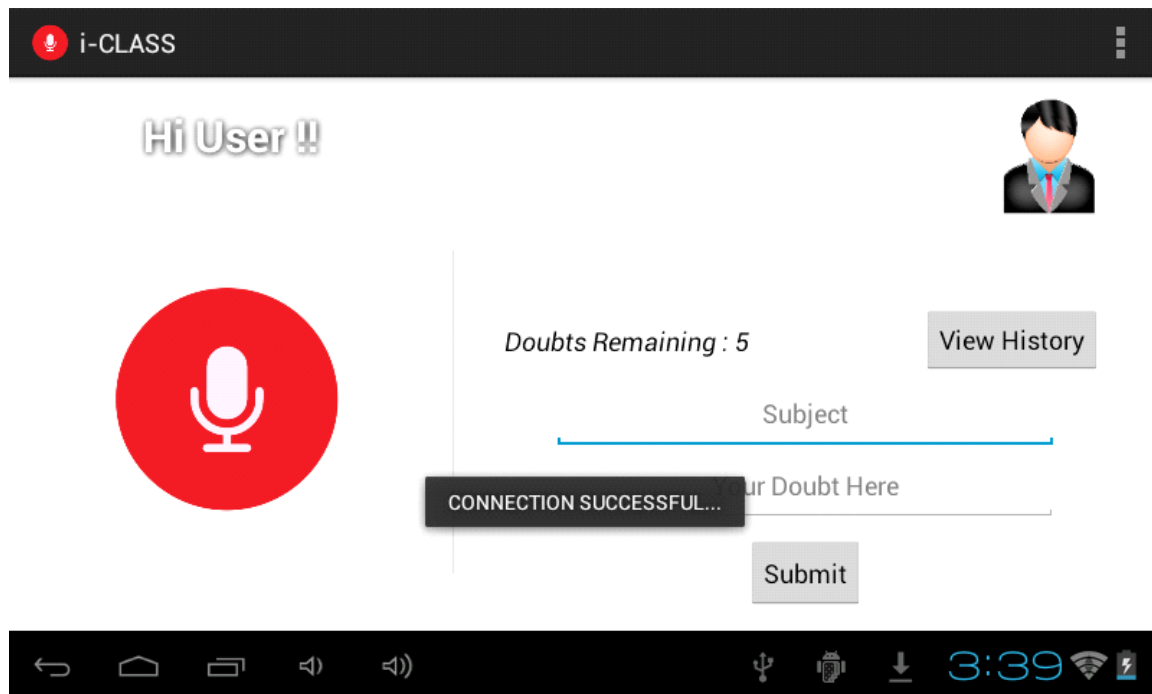
The user has to connect to the local server in order to send his doubts(Audio and text) to the professor.

He does so by filling in the IP Address field and the session id field of the below shown activity screen.

Then click on the connect button.



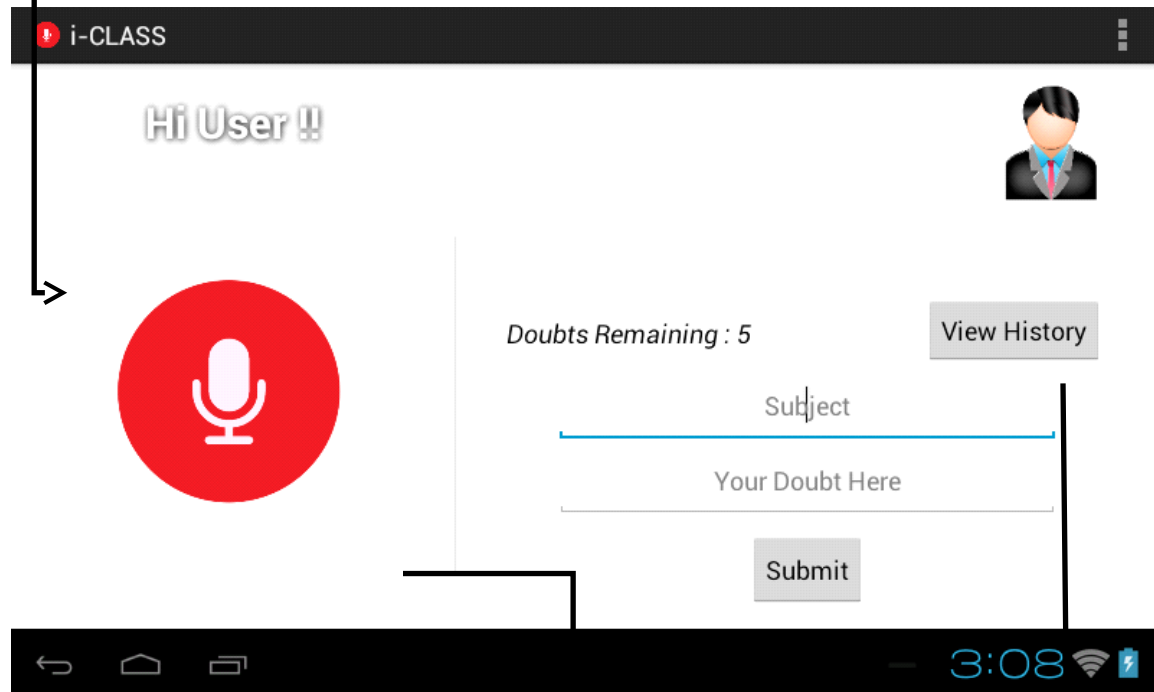
If the connection is successful, then a message will appear on the screen showing that the user's device is successfully connected to the server.



After successful connection with the server, the user is brought to the main screen of the application.

Here the user has got two choices, either he/she can go for a text doubt , or can press the microphone icon in the left, in order to ask a question live through audio streaming.

Request Audio Doubt
Settings



Send Text Doubt
doubts

Check sent text

The Main Activity

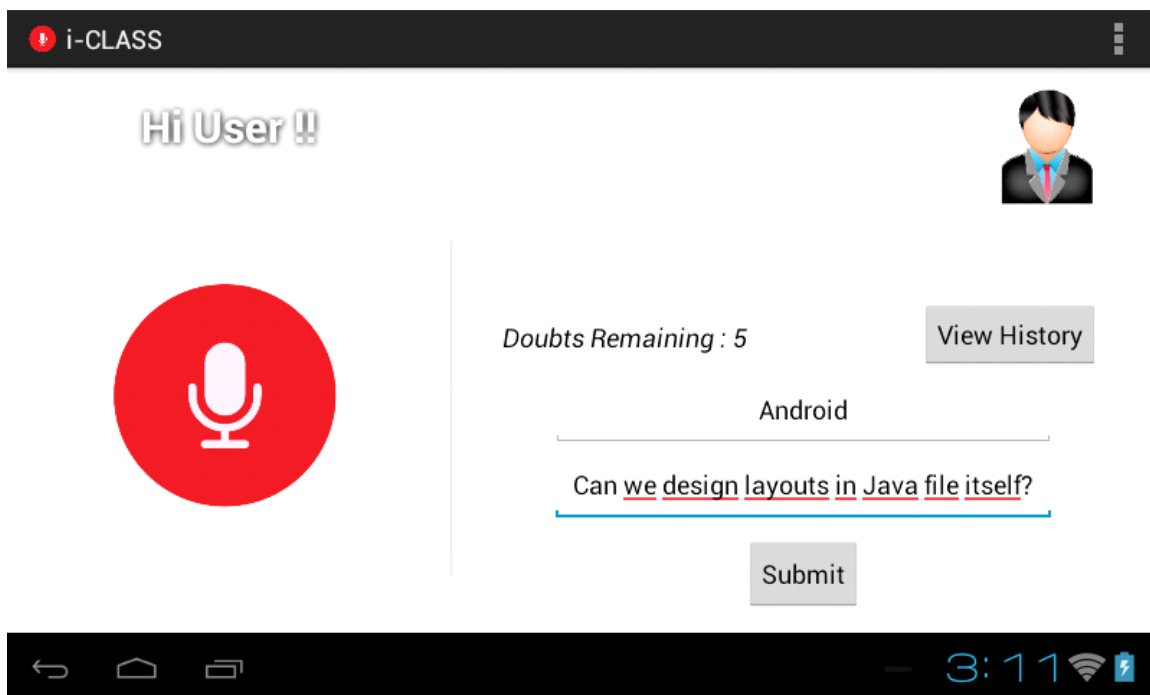
SECTION 3

Sending Text Doubt

Sending a Text Doubt

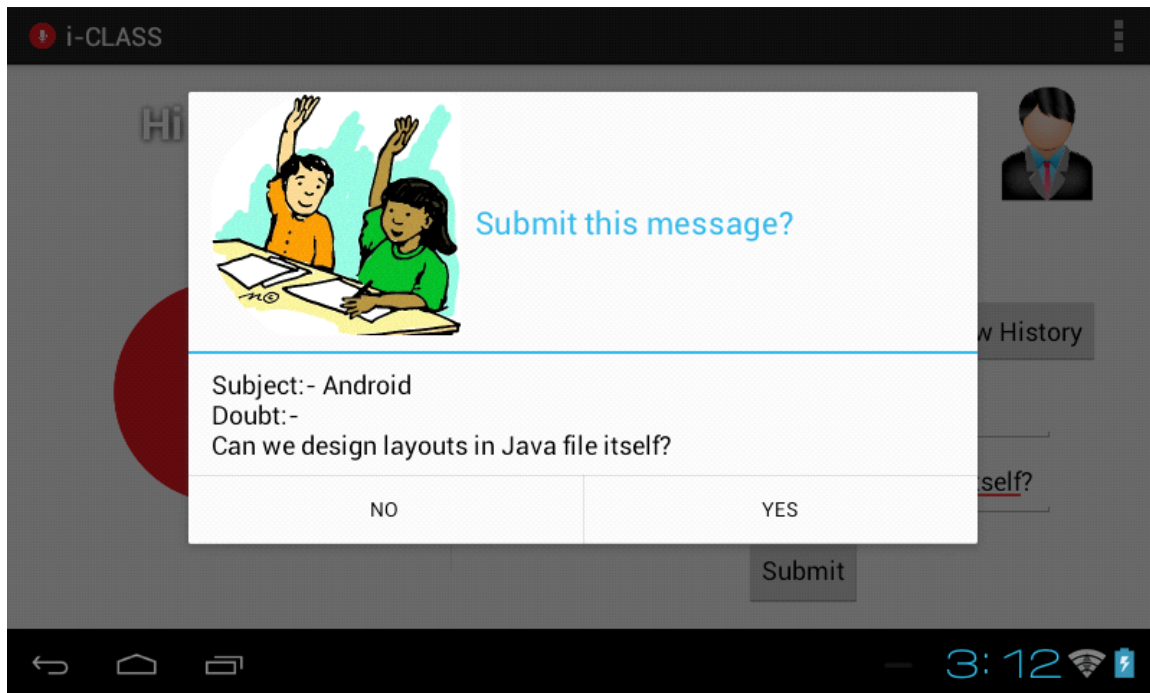
In order to send a doubt in the text form, the user has to first fill in the topic(subject) of the doubt and then the main doubt in the next field.

After filling in both the fields, click the 'Submit' button to send the text message.



The screenshot displays the i-CLASS application interface. At the top, a black header bar contains the text 'i-CLASS' and a menu icon. Below the header, the text 'Hi User !!' is displayed next to a male user avatar. On the left side, there is a large red circular button with a white microphone icon. To the right of this button, the text 'Doubts Remaining : 5' is shown above a 'View History' button. Below this, a text input field contains the word 'Android'. Underneath the input field, a text area contains the question 'Can we design layouts in Java file itself?' with several words underlined in red. A 'Submit' button is located below the text area. At the bottom of the screen, a black navigation bar shows standard Android icons (back, home, recent apps) and the time '3:11' along with status icons for Wi-Fi and battery.

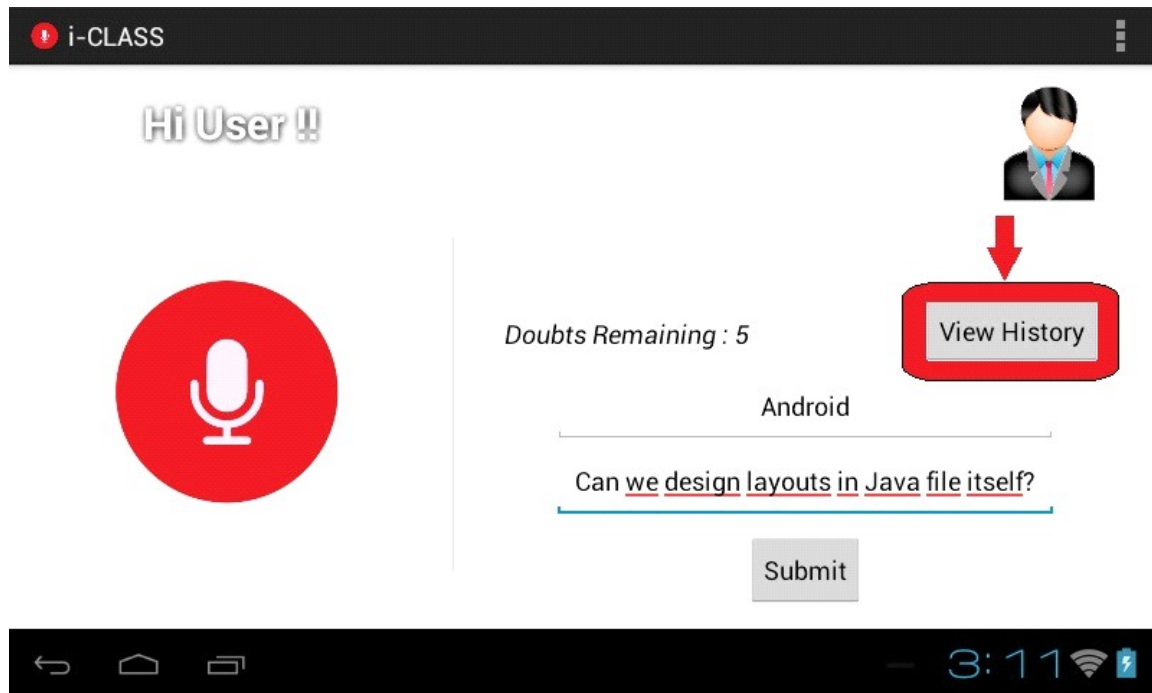
A confirmation dialog box will appear to the user regarding whether he/she really wants to send the doubt as shown below...



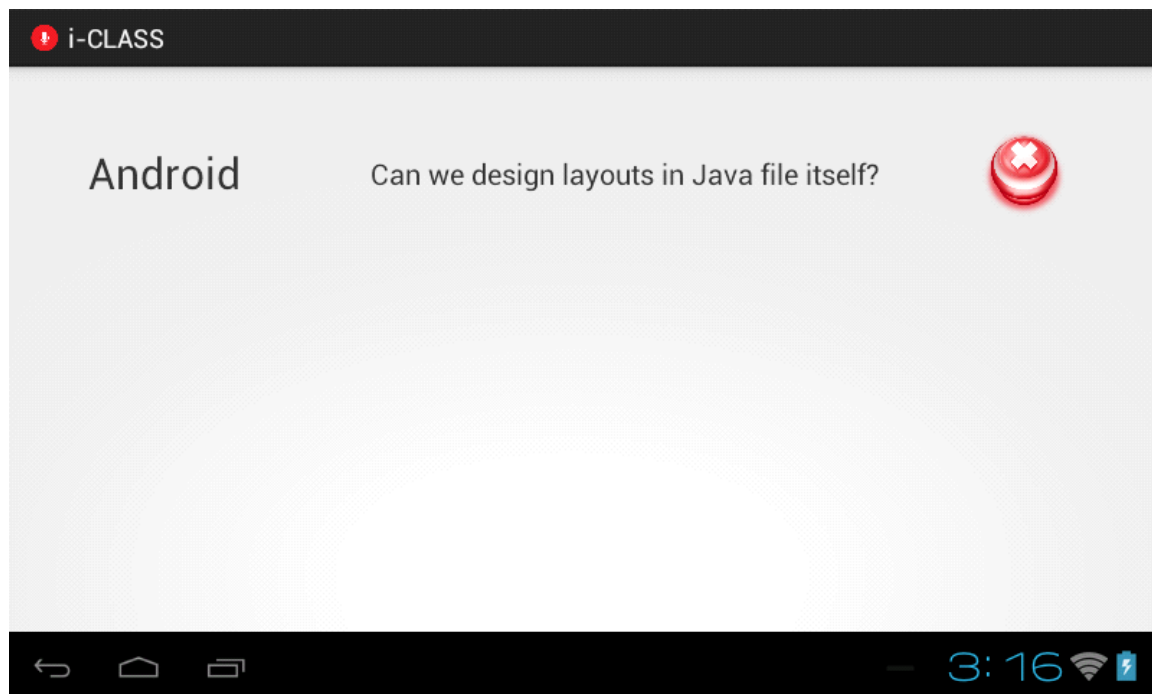
After confirmation, the text doubt will go into the waiting queue in the Lecturer's server.

Depending on the state of the lecturer in the Server's side, the professor may or maynot reply to the text doubt. It is totally on the lecturer whether to accept a doubt waiting in a queue or to simply reject it.

All the text doubts which a user has asked can be seen by clicking the view history tab as shown below:-



After clicking on the view history the following screen will appear.



The user can click on the cross as shown above in order to cancel the text doubt.

It will be removed from the server's list also.

Note: All the text doubts which were asked in a particular server session are being maintained in a forum where anyone can view the questions anytime. The Lecturer or any assistant of him can answer those questions which were not answered in the classroom in this forum.

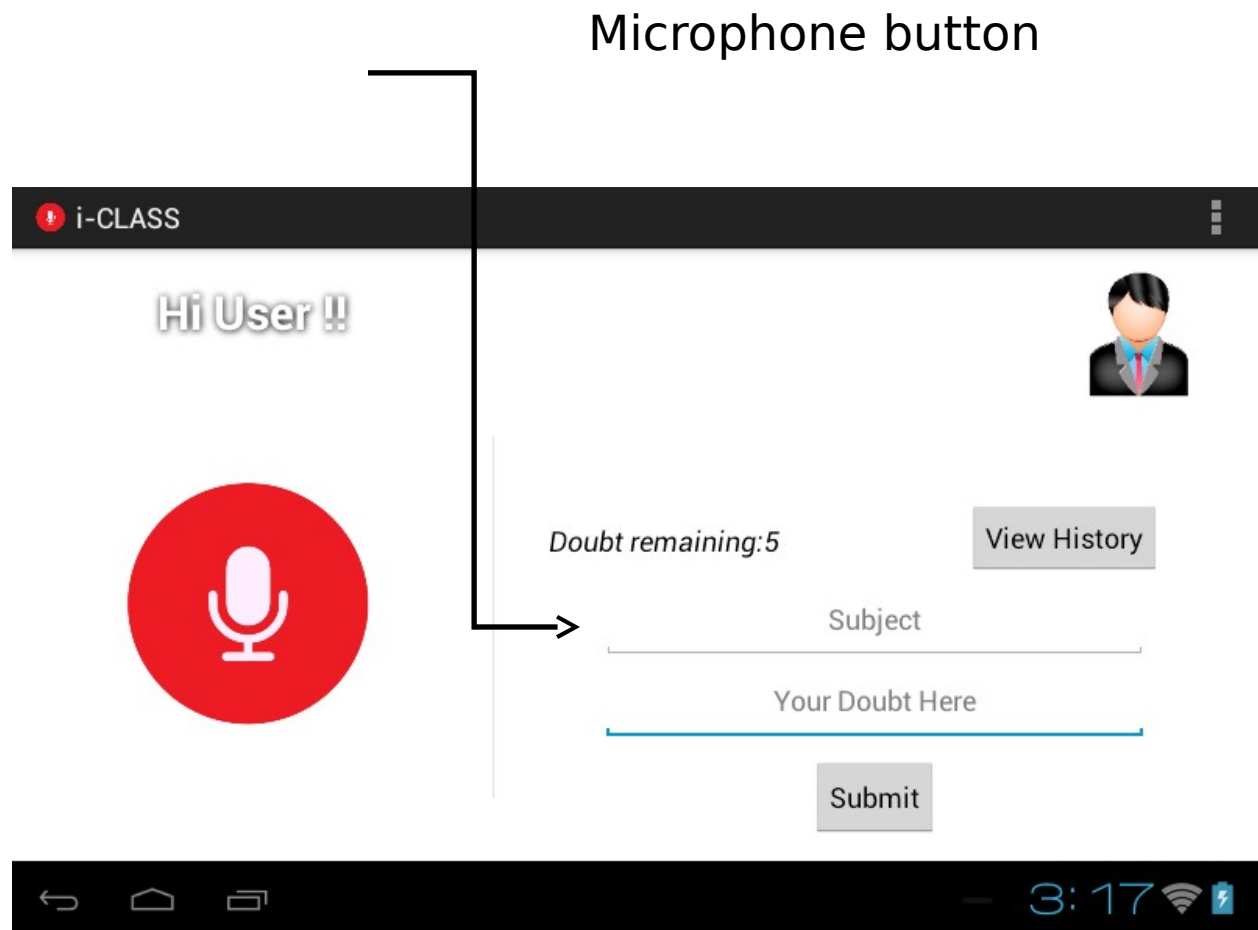
SECTION 4

Sending Audio Doubt

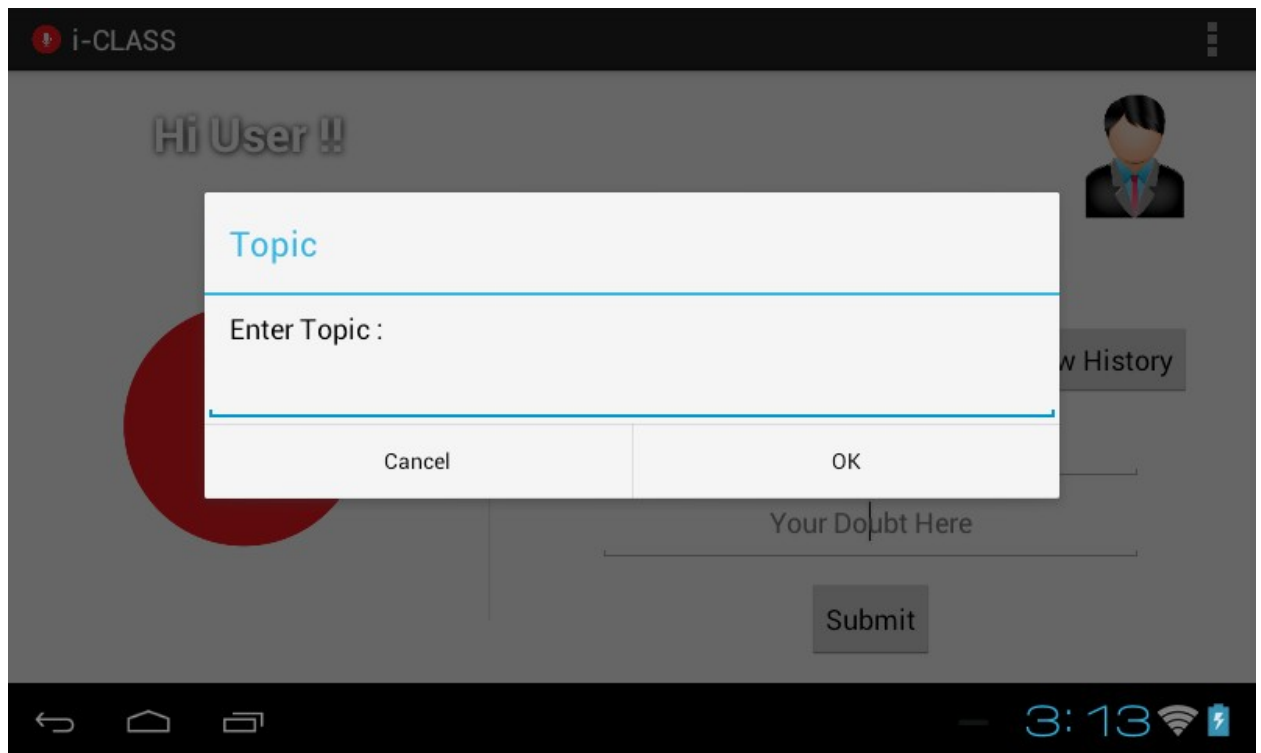
ASKING AN AUDIO DOUBT

To ask an audio doubt,

1. Tap the red 'Microphone' icon on the main screen.

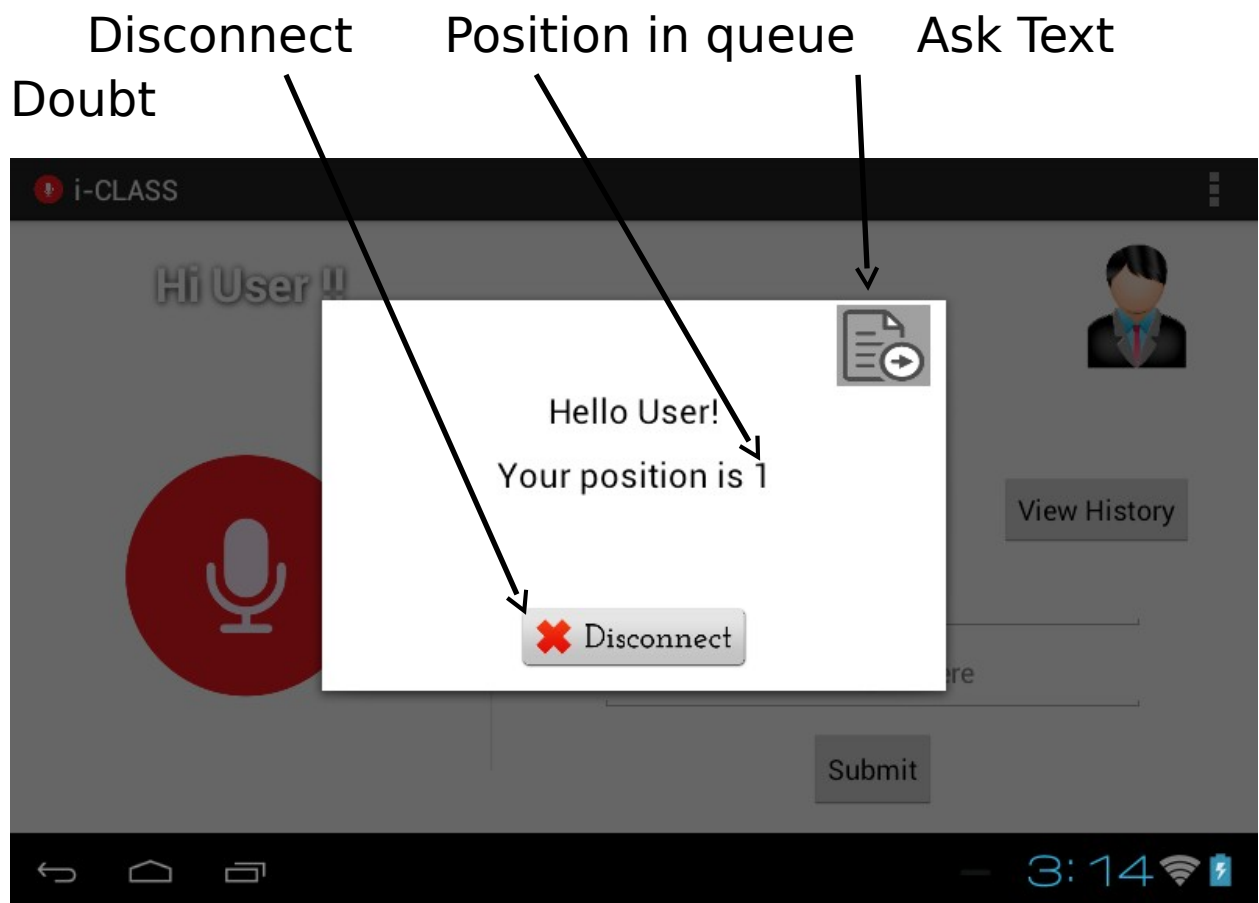


2. Now, the user has to enter the topic to provide the professor a gist of what the doubt might be about.



NOTE: This field is compulsory. Leaving it empty won't allow the user to send the doubt.

3. Then, the following activity appears on the screen.



Here, your position number in the waiting queue is displayed. The waiting queue consists of all the audio requests sent to the server from various users. The professor can select any of the audio requests.

Here, the user has various options.

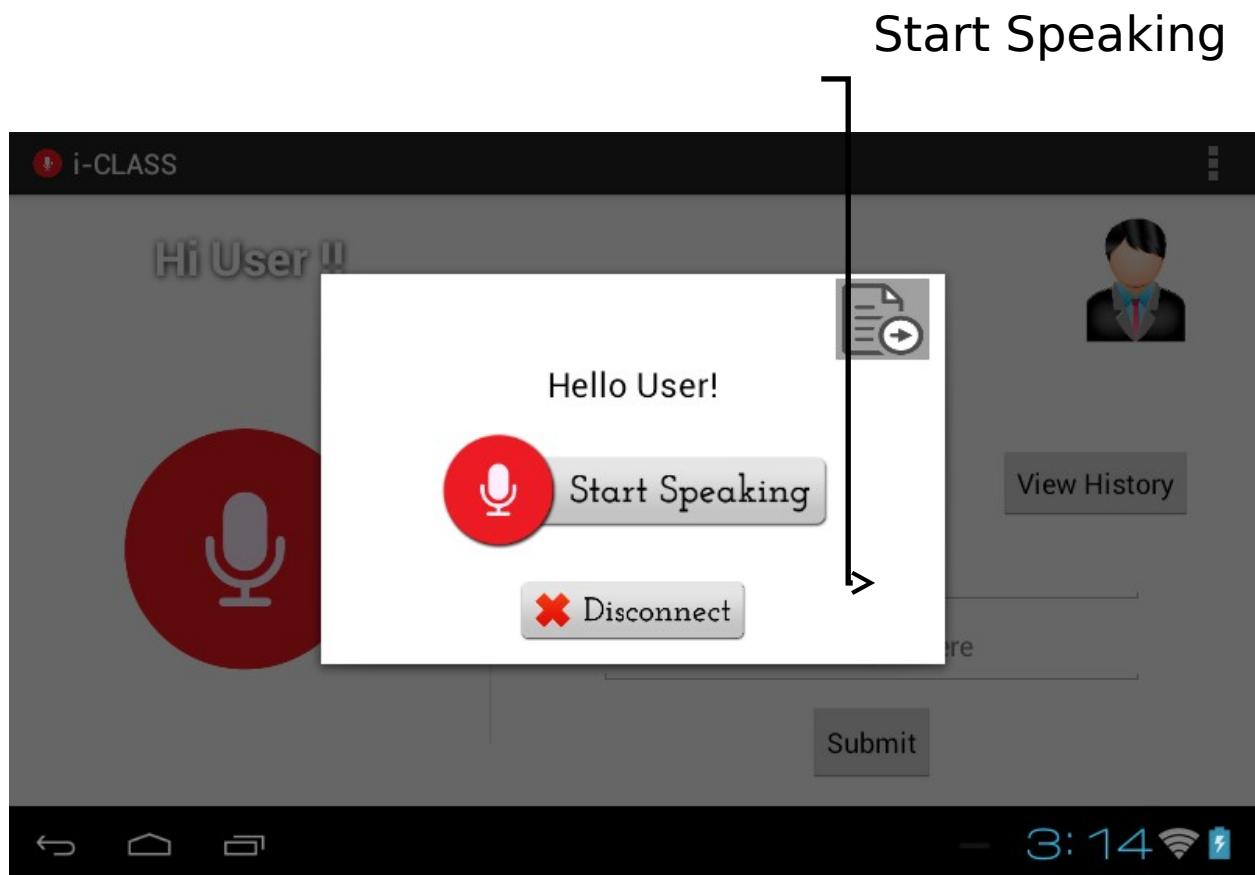
- a. If he wants to discontinue at any point of time during his waiting, he can press the 'Disconnect' button to exit to the main screen.
- b. If he wants to ask a text doubt as well while waiting in the queue, he can press the 'Text Doubt' button, which on result opens the following activity.

Send text doubt

The screenshot shows a mobile application interface for 'i-CLASS'. At the top, there's a header with 'i-CLASS' and a menu icon. Below the header, it says 'Hi User !!' and shows a user profile icon. A modal dialog titled 'Enter Text-Doubt' is open in the center. It has two text input fields: 'Topic:' and 'Doubt:'. Below these fields are two buttons: 'Send' and 'Cancel'. To the right of the modal, there's a 'History' button. At the bottom of the screen, there's a 'Submit' button. The status bar at the very bottom shows the time as 3:14 and battery level.

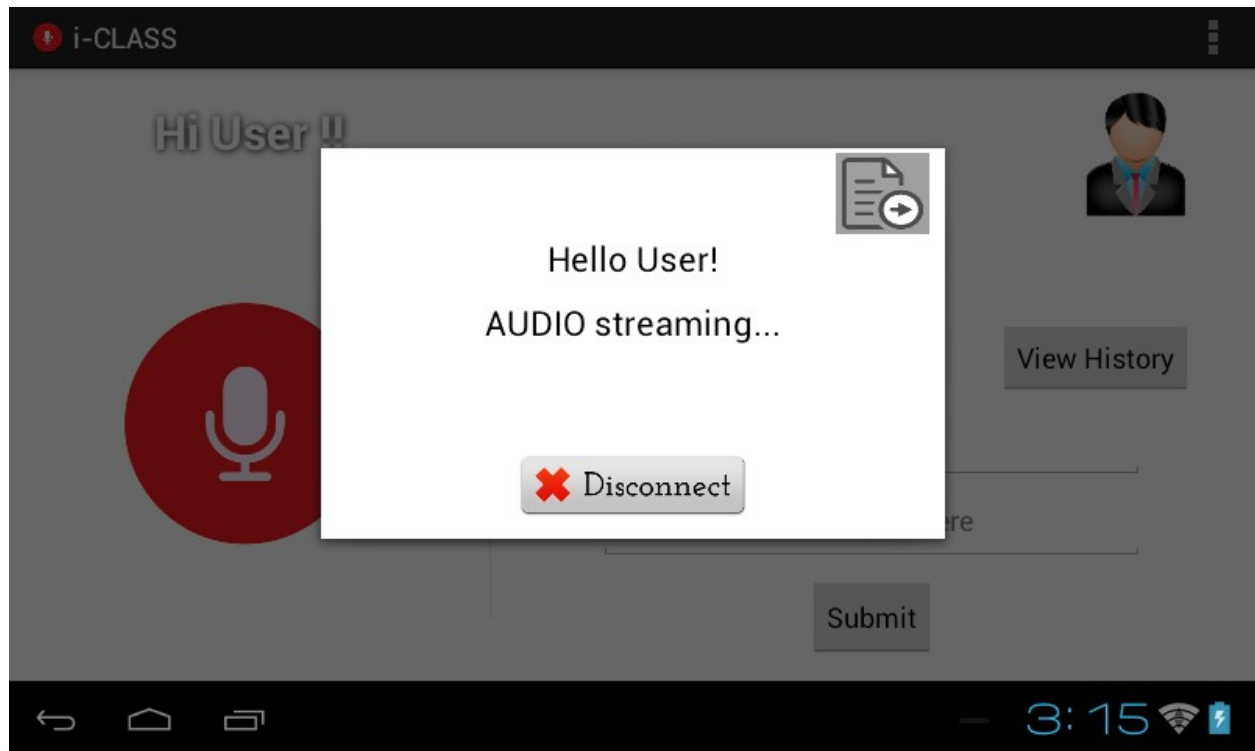
The user should enter the topic and the doubt details in the fields provided and press the 'Send' button to send the doubt.

- c. If the audio doubt request is accepted by the professor, you get a 'Start Speaking' button on your screen, as a confirmation from the professor that your request has been accepted.



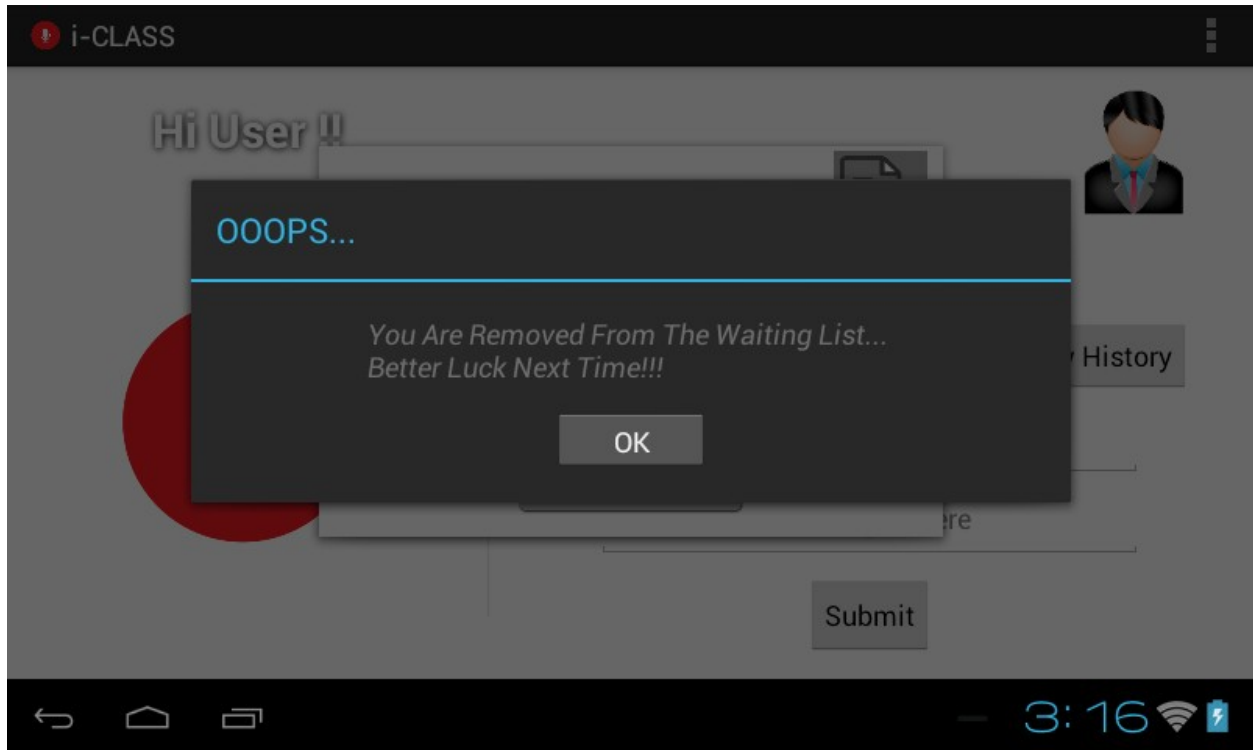
If the user presses this button, his audio streaming starts and he can continue to speak as long as he wishes.

Disconnect



When the user wishes to stop, he can press the
'Disconnect' button and go back to the main screen.

- d. If the professor rejects your request, the following dialog shows up on your screen.



Section 2 :

i-Class Forum

USER MANUAL OF I-Class Forum

Main Page

Components of Home Page are

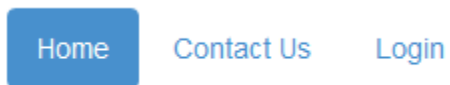
- 1)Contact Us
- 2>Login
- 3)Choose your department

Choose Your Department

Computer Science	13	Civil	0	Environmental Science	0
Mechanical	0	Information Technology	0	Mathematics	0
Aerospace	0	Production	0	Electrical	0
Extc	0	Mettallurgy	0	Textile	0
Electronics	0	BioTechnology	0	Mining	0

Fig 1.1

1)ContactUs:This Tab is used to open Contact Us web page which consist of Admin Details.



2)Login:

This tab is used to open Login Page where any Professor who is registered with iClass Forum can Login

3)Choose Your Department:

Select any department you wish to view.

Computer Science	13	Civil	0
Mechanical	0	Information Technology	0
Aerospace	0	Production	0
Extc	0	Mettallurgy	0
Electronics	0	BioTechnology	0

If a Student or user wish to see all the doubts and their solutions discussed in the classroom, follow these Steps

Step 1.

As Shown in fig given above, user needs to choose any department he wish to see. Then List of Prof will be displayed as shown in next figure.

Computer Science	13	Civil	0
Mechanical	0	Information Technology	0
Aerospace	0	Production	0
Extc	0	Mettallurgy	0
Electronics	0	BioTechnology	0



Choose Your Department

Computer Science	13	Civil	0	Environmental Science	0
Mechanical	0	Information Technology	0	Mathematics	0
Aerospace	0	Production	0	Electrical	0
Extc	0	Mettallurgy	0	Textile	0
Electronics	0	BioTechnology	0	Mining	0

javascript:void(0);



List of Prof. in Department **Computer Science**

Sachdev	1	Ankita	0	Anuresh	0
Bhatia	0	Narayan	0	Anuradha	0
Dayal	0	Bhatia Sir	0	Kalidas	1
Swati	2	Suresh	1	Kaalidas	0
Ankit	0				



localhost:8084/Aakash/index.jsp#

Step 2. Now, next step is, user needs to select a Professor whose lectures he wish to observe. He has an optional back button below The List of Prof if incase he wish to change the department.

He can choose any professor as shown in the below fig.

List of Prof. in Department

Sachdev	1
Bhatia	0
Dayal	0
Swati	2
Ankit	0

After choosing a professor, List of lectures will be displayed as shown in next figure.



List of Prof. in Department **Computer Science**

Sachdev	1	Ankita	0	Anuresh	0
Bhatia	0	Narayan	0	Anuradha	0
Dayal	0	Bhatia Sir	0	Kalidas	1
Swati	2	Suresh	1	Kaalidas	0
Ankit	0				



localhost:8084/Aakash/index.jsp#



List of Lectures by Prof. **Swati**

Java	mon 2/2/3
Android	mon 2/2/5



localhost:8084/Aakash/lec.jsp

Step 3.

As shown in this figure,user can select any lecture.

A new webpage displaying Doubts and solutions will be displayed.

There is an optional back button as shown below if incase user wish to view lectures of another professor.



List of Lectures by Prof. Swati

Java	mon 2/2/3
Android	mon 2/2/5

Step4.Finally,User can View Doubts and their solutions as discussed during the lecture in classroom.

If user wants to switch back to home page by clicking home tab.

Android

Kaushik
What is computer?
<div>hahahahohohohihihi</div>

mohit
What is computer?
<div>asdfsdfsdf</div>

asdf

Procedure for a professor to obtain his Login Details and once he has login details,he can review Doubts and give their solutions or delete unwanted doubts by following steps given below

Step1.

Click on Contact Us Tab to send Request to Admin.

Contact Us



iClass Forum

Home

Contact Us

Login

Choose Your Department

Computer Science	13	Civil	0	Environmental Science	0
Mechanical	0	Information Technology	0	Mathematics	0
Aerospace	0	Production	0	Electrical	0
Extc	0	Metallurgy	0	Textile	0
Electronics	0	BioTechnology	0	Mining	0

javascript:void(0);

Step 2.

Once this New page is opened, Professor can click this “Send Request” Button to send Request to Admin for details.

Admin Contact Details

2nd Floor,
Mr Ninaad,
Aakash Lab,
CSE Building,
IIT Bombay,
Pin-400056
Mob-8888999922

[Send Request](#)

Step3.

If the Professor has his login Details,he can click Login Tab to Sign in as shown in fig

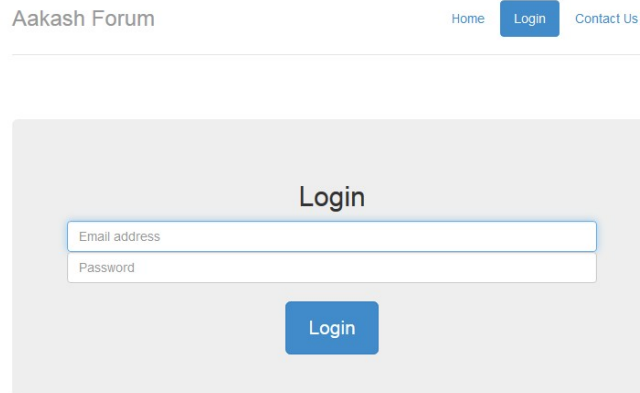
[Login](#)

below.

Choose Your Department

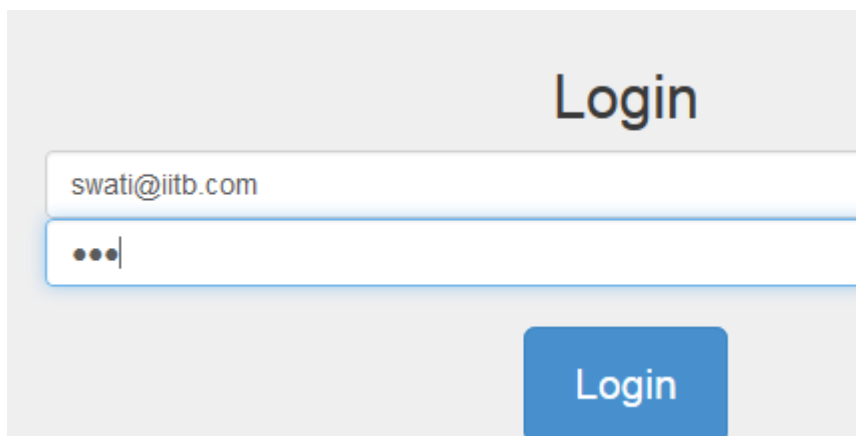
Computer Science	13	Civil	0	Environmental Science	0
Mechanical	0	Information Technology	0	Mathematics	0
Aerospace	0	Production	0	Electrical	0
Extc	0	Metallurgy	0	Textile	0
Electronics	0	BioTechnology	0	Mining	0

Step 4.



The screenshot shows the top navigation bar of the Aakash Forum website. It includes the site name "Aakash Forum" on the left, and links for "Home", "Login" (highlighted with a blue background), and "Contact Us" on the right. Below the navigation bar is a light gray box containing the "Login" form. The form has the title "Login" at the top, followed by two input fields: "Email address" and "Password". Below these fields is a blue "Login" button.

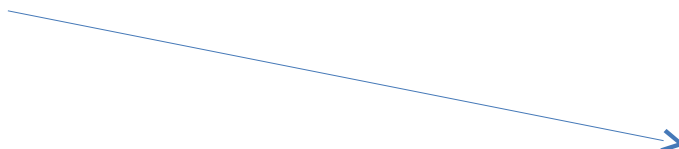
Professor should fill in his email id and password and click Login button.



This screenshot shows the login form with user input. The "Email address" field contains the text "swati@iitb.com". The "Password" field contains three dots, indicating a masked password. The blue "Login" button remains at the bottom of the form.

Step 5. A welcome home screen appears as shown below.

Logout Welcome Swati





Choose Your Department

Computer Science	13	Civil	0	Environmental Science	0
Mechanical	0	Information Technology	0	Mathematics	0
Aerospace	0	Production	0	Electrical	0
Extc	0	Mettallurgy	0	Textile	0
Electronics	0	BioTechnology	0	Mining	0

javascript:void(0);

Now professor needs to choose his department.

Step 6.

List of Prof is Displayed in that department. Professor needs to choose his identity in the list.

List of Prof. in Department

Sachdev	1
Bhatia	0
Dayal	0
Swati	2
Ankit	0



List of Prof. in Department Computer Science

Sachdev	1	Ankita	0	Anuresh	0
Bhatia	0	Narayan	0	Anuradha	0
Dayal	0	Bhatia Sir	0	Kalidas	1
Swati	2	Suresh	1	Kaalidas	0
Ankit	0				



Step 7.

His/her lectures will be displayed. Whichever lecture he/she needs to modify should be clicked.

List of Lectures by Prof. Swati

Java	mon 2/2/3
Android	mon 2/2/5

Step 8)

List of Various Doubts discussed in that lecture will be displayed. Professor can Edit the answer or delete them.

Android

Kaushik

What is computer?

hahahahohohhihihi

Edit Answer

Delete

mohit

What is computer?

asdfsdfsdf

Edit Answer

Delete

asdf

In order to edit answer of a particular question,he needs to click “Edit Answer” button.

A dialog will be opened as shown in fig below.

What is computer?

Computer is a device that....

Save Answer

Kaushik

What is computer?

hahahahohohhihihi

Edit Answer

Delete

mohit

What is computer?

asdfsdfsdf

Edit Answer

Delete

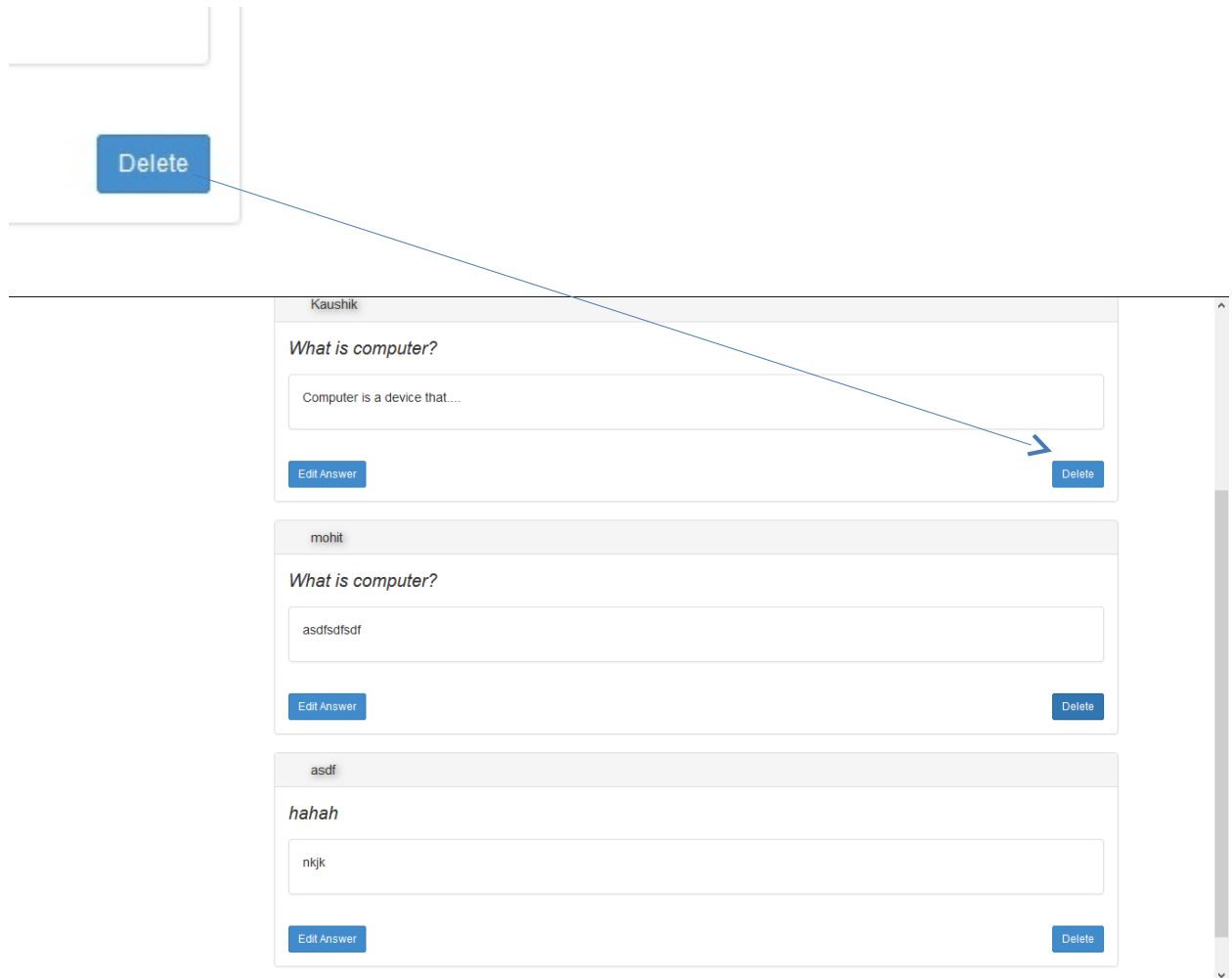
asdf

Write down the answer and click "Save Answer" Button.



The screenshot shows a user interface for asking and answering questions. At the top, the question "What is computer?" is displayed in a light blue box with a close button (X) in the top right corner. Below the question is a text input field with a pencil icon on the left and a small grid of dots on the right. The text "Computer is a device t" is entered into the field. At the bottom right of the input area is a blue button labeled "Save Answer".

In order to delete any unwanted doubt. He simply needs to click delete button below that question.



After clicking Delete button,that question will be removed as shown below.

Android

Kaushik

What is computer?

Computer is a device that...

Edit Answer

Delete

asdf

hahah

nkjk

Answer

Delete

Step 9.

Once he is done editing and deleting the doubts,
He can click Logout tab to exit his session.

Logout



iClass**Forum**

[Home](#)

[Logout](#)

Welcome Swati

Department of Computer Science

Prof.Swati

Android

Kaushik

What is computer?

Computer is a device that....

Edit Answer

Delete

asdf

hahah

nkjk

Answer

Delete

localhost:8084/Aakash/logout.jsp

