

Project Report

Enhanced E Learning

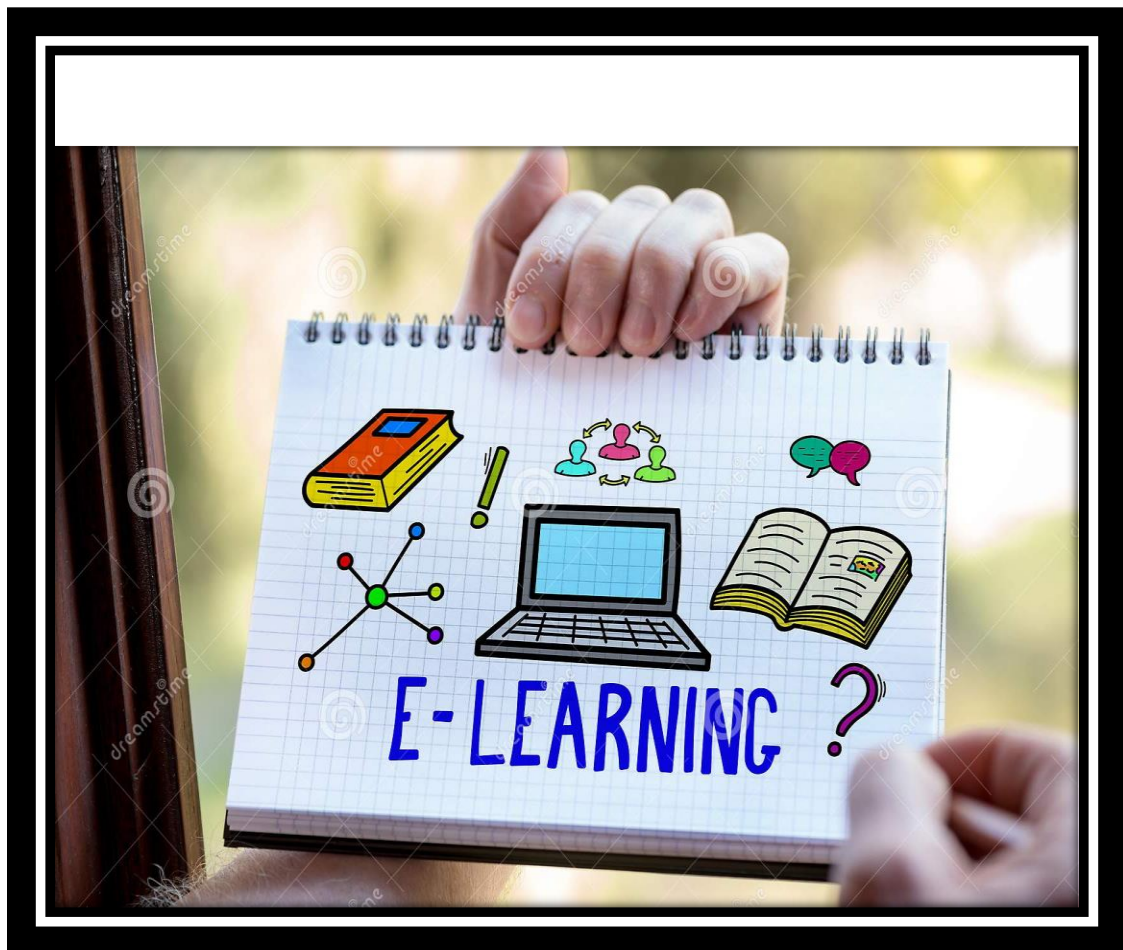
<https://github.com/QasimHassan78/HCI>

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Class ID

104498



Proposal:

Introduction:

E-Learning achieves interactive technologies and communication systems to improve the learning experience. It has the potential to transform the way we teach and learns across the board. It can raise standards and widen participation in lifelong learning. It cannot replace teachers and lecturers, but alongside existing methods, it can enhance the quality and reach of their teaching, it also reduces the time spent on administration. It can enable every learner to achieve his or her potential, and help to build an educated workforce empowered to change. It makes possible a truly ambitious education system for a future learning society.

Methodology:

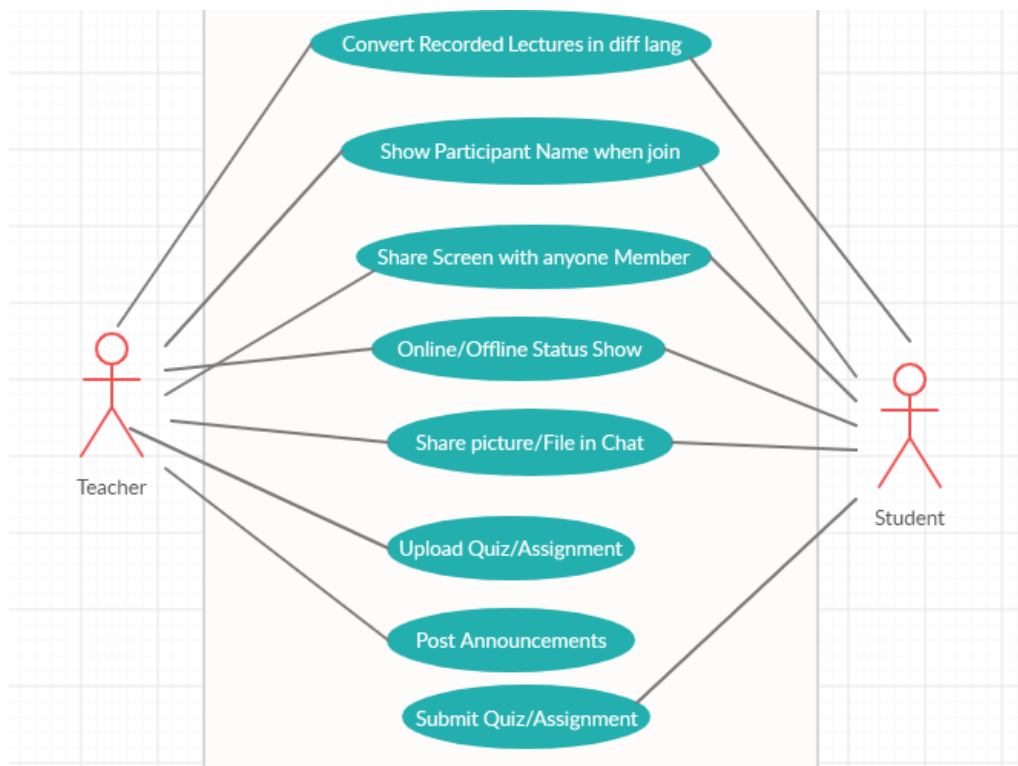
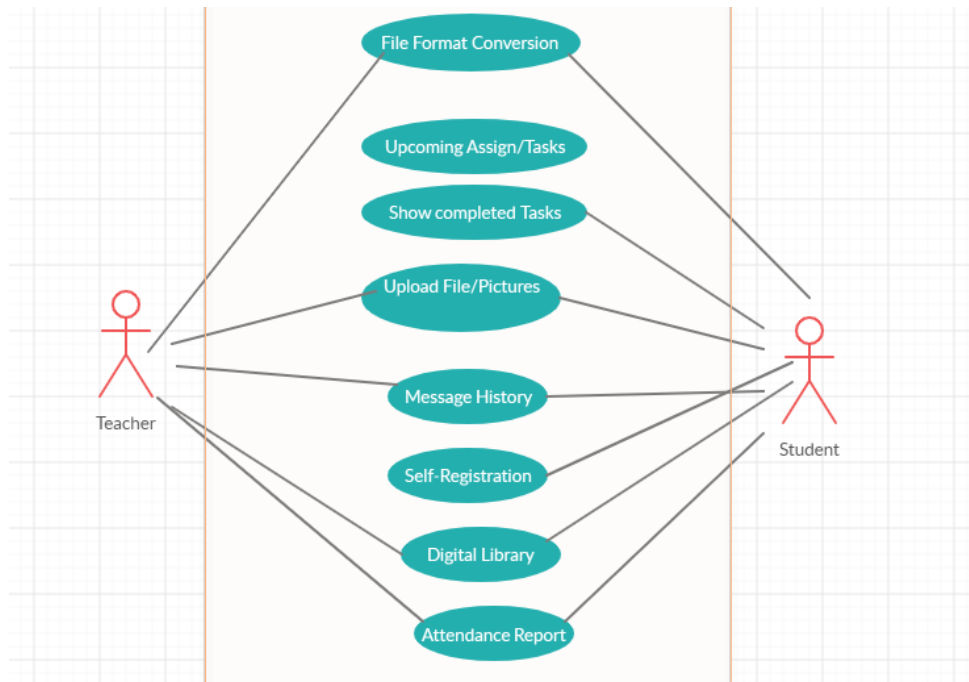
The idea of this project is to create and develop an e-Learning system where a person without high qualification in e-Learning training processes can be prepared to interact with it. This methodology is reflected in the design of a collective training plan adapted to each group of learners with personalized treatment. The purpose of this project is to create interactive design prototype for an e-learning application it will not be functional but the GUI will be interactive.

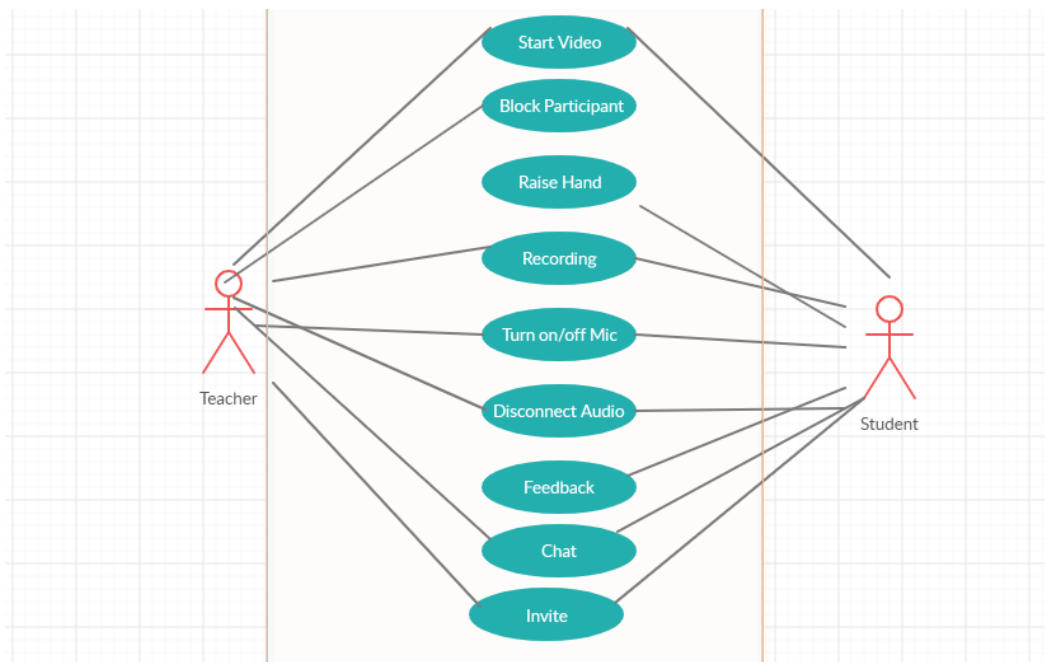
Goal:

Goal of this project is to create an interactive GUI so that the students those who are not highly qualified can even interact with it easily. We will be designing an interactive GUI which will provide an enhanced e-learning system which will have all-in-one features we will try to enhance apps like Google classroom. We will add all features like video-meeting, chat messenger, Teacher Announcement system, Grading System and attendance system as well.

Usecase:







Task Analysis:

Teacher's perspective

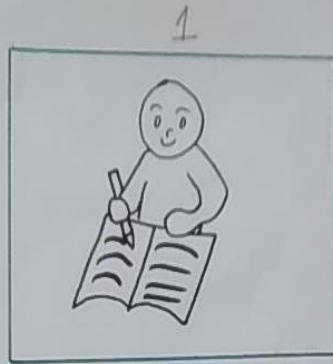
1. Firstly, teacher will register on the app
2. Then will login
3. After that it will create a meeting
4. Will invite students
5. Turn on recording
6. Share the screen
7. Start the class
8. He will ask questions regarding course
9. Teacher will take quiz within the app
10. He will tell the students to submit it in a certain format
11. He will also have the facility to convert into certain file format
12. In last teacher will mark attendance
13. After the class he will upload lecture which will be viewed to all the students
14. Then teacher will upload marks
15. Teacher can view student attendance report
16. Can post announcements
17. He can create notes
18. Teacher can chat or call any member individually within the group
19. He will also be able to send voice notes in chat
20. Can share picture in a chat
21. Teacher can send email to all the members in the group
22. It can take screenshots of shared screen
23. Can search for any member in the group
24. Access digital library for a book
25. Convert languages of recorded lecture
26. Edit posts
27. Remove posts
28. Can comment on the posts
29. Can turn on/off mic of a particular student
30. Block student
31. Finally teacher will logout

Student's Prespective

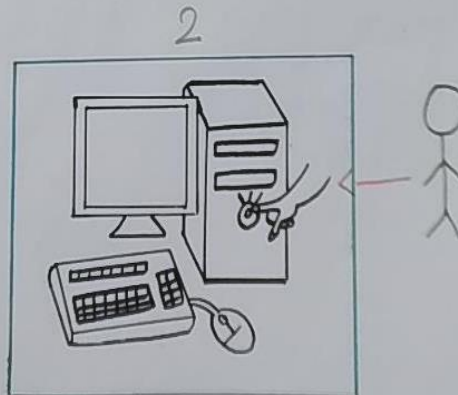
1. Self-registration
2. First of all student will register itself
3. Then will login to the system
4. Will join a particular meeting
5. He will take class
6. Create notes
7. Answer the questions asked by teacher
8. Share their screen with teacher
9. Student will attempt quiz
10. Submit quiz
11. Will view quiz marks
12. Can view their overall performance
13. Can raise hands on any query
14. Can create group with classmates for studies
15. Can invite classmates
16. Change a recorded lecture in a different language
17. Can access digital library to download books
18. Make assignment
19. Submit assignment
20. Search for a file or document
21. Can view their own attendance report
22. Students can send voice note to teachers in a chat
23. Share a file or picture in a chat
24. Can see their issued books
25. Can check class schedule
26. Can comment on the posts
27. Edit posts
28. Remove posts
29. Can mail to teacher in case of query
30. Finally will logout

Story board:

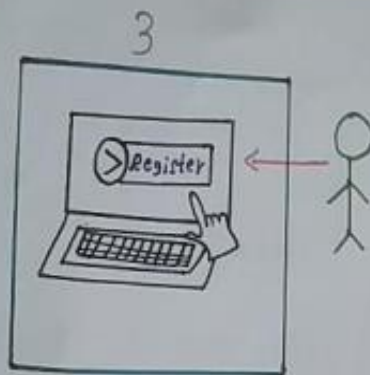
Teacher Flow:



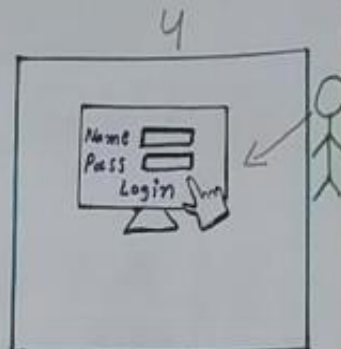
Action: Teacher is preparing notes for lecture.



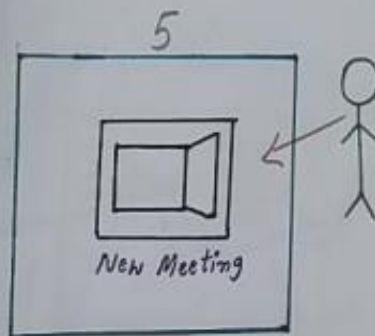
Action: Teacher is turning on computer.



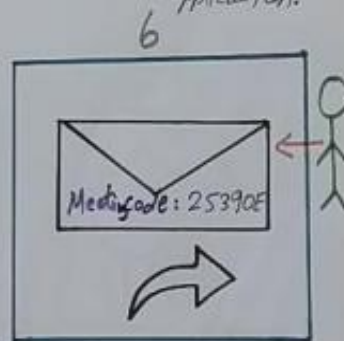
Action: Teacher is getting register.



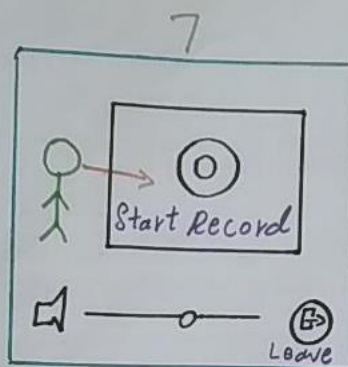
Action: Teacher is login to the application.



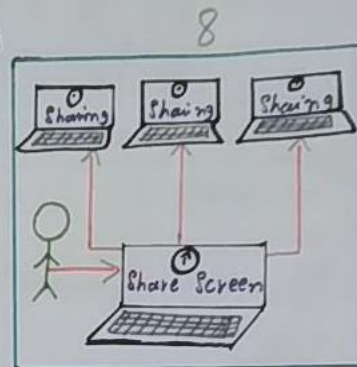
Action: Teacher is creating the meeting.



Action: Teacher is inviting students.



Action: Teacher is starting record.



Action: Teacher is sharing screen.



Action: Teacher is starting teaching.



Action: Teacher is asking questions.

11

QUIZ

What would you do?

☒ A _____

☒ B _____

☒ C _____



Action: Teacher is taking quiz.

12

ATTENDANCE

☒ _____

☒ _____

☒ _____



Action: Teacher is taking attendance.

13

Submit Lectures

Save

☒ Photo ☒ Doc ☒ Audio



Action: Teacher is uploading lectures.

14

Upload Marks

Name	Assignment	Project
Satna	19	15
Fari	20	15



Action: Teacher is uploading student marks.

17

Post ▼

Post to classrooms?

Attach file, video

📷 📄 📺

Action: Teacher is posting something.

18

Chat

Are you asking about HCI?

Yes, Sir!

HCI stands for Human Computer Interaction.

Type a message...

📤

Action: Teacher is chatting with student.

19

Tom Bob Alice Oscar

☐ ☐ ☐ ☐

Select above to send mail!

Write your Text

☐ 12kB

Send

Action: Teacher is sending mail to students.

20

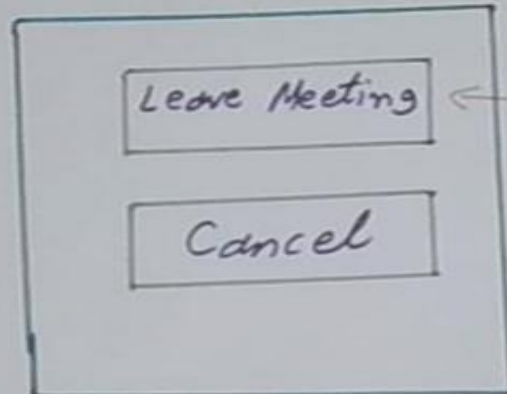
ScreenCapture

click here

▷ All Programs

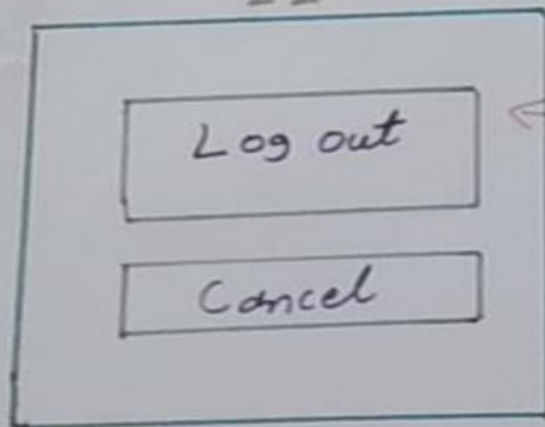
Action: Teacher is taking screenshot.

21



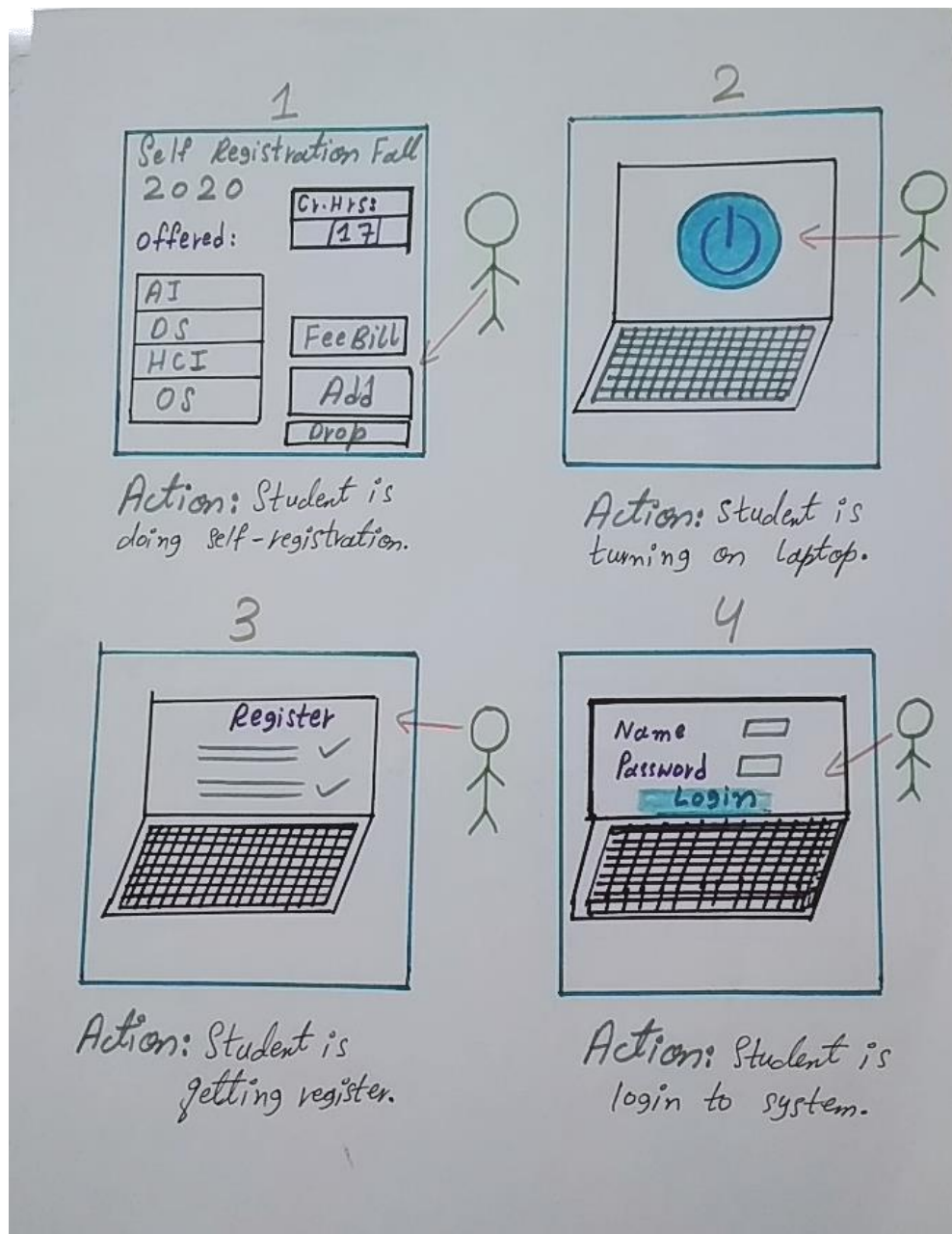
Action: Teacher is leaving the meeting.

22

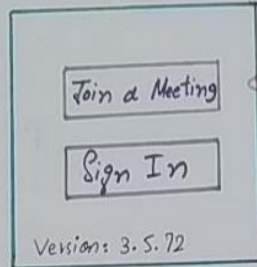


Action: Teacher is logging out.

Student Flow:



5



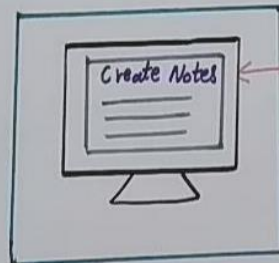
Action: Student is joining meeting.

6



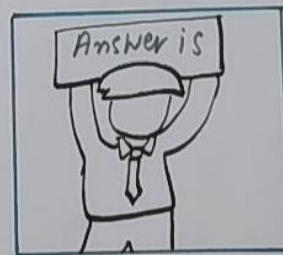
Action: Student is taking class.

7



Action: Student is creating the lecture notes.

8



Action: The student is answering the question asked by teacher.

9

Attempt Quiz

Time limit
20 mins

Attempts allowed = 2



Action: Student is attempting quiz.

10

Your Work

+ Add or Create

Mark as Done



Action: Student is submitting quiz.

11

Student Results

1003-AI

ID	Assessment	Marks
1003	Lab 1	5/5
1003	Lab 2	5/5



Action: Student is viewing his marks.

12

Raise hand

Participants

☒ 10

Raise hand

☒ Yes

☐ No

☐ More



Action: Student is raising hand to ask questions.

13

My Groups

create New

Type Group Sub

Create

Group Icon



Action: Student is creating group.

14

Search File

1 2

Cancel



Action: Student is searching file.

15

Find/Invite people!

Add Contacts

○ □ □ □ ☆



Action: Student is inviting people.

16

To Email!

Write Text

12kB

Send

Cancel



Action: Student is sending mail to teacher.

17

Attendance Report			
ID	Course	Pre	Abs
1	Calculus	26	2
2	CoAL	45	3
3	OS	11	0
4	AI	10	0
5	HCI	15	5

Action: Student is viewing his attendance report.

18

Digital Library			
Categories:			
Eng	Physics		
Maths	Computing		
Books:			
Eng	Math	Phy	Comp
click	click	click	click
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Action: Student is accessing digital library.

19

Issued Books			
Issue Date	Book ID	Book Title	Campus
—	1	Phy	NN2
—	2	Comp	NN2

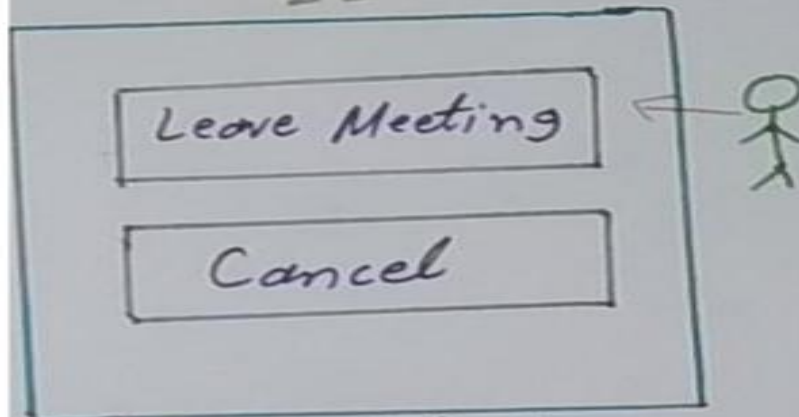
Action: Student is viewing his issued books.

20

HCI (104493)		:
Recorded Lecture!		
MP4	MP4	
MP4	MP4	
Languages		
		Eng
		Eng

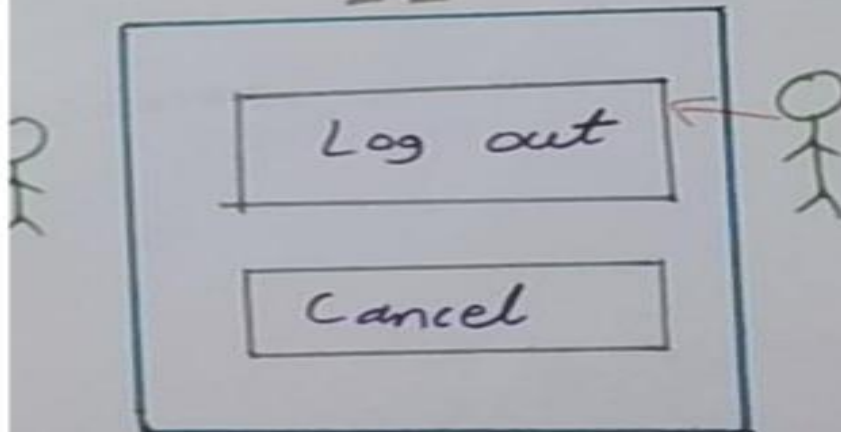
Action: Changing the recorded lecture to desired language.

21



Action: Student is leaving the meeting.

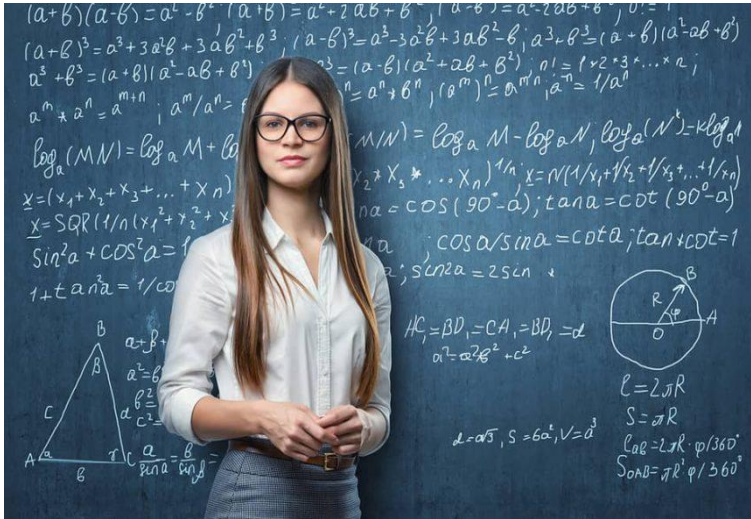
22



Action: Student is logging out.

Personas:

Susan



Name: Susan

Gender: Female

Lives in: Beijing

Occupation: University lecturer

Background Knowledge:

Susan is a university teacher. She lives in Beijing with her family including her parents and two sisters. She likes technology a lot. Over the summer, she received a tablet from her parents on her convocation ceremony. She adores the tablet because it lets her stay online wherever she goes. She likes the touch screen, but most applications are not notably easier to use than regular versions of the application are. Her hobbies include playing with pets and doing scientific research.

Goal:

She wants to accomplish the goal of teaching her students online via an application. She also wants to achieve every fundamental activity in that application like marking attendance, taking online class easily, sharing her video, post announcements, chatting with her students and record the lectures.

Pain points:

In Beijing there is rainy season almost the whole year, and because of that she really wants to take online classes by which she can educate her students.

Feedback:

- There should be recording option by which I can record the lectures.
- Digital library doesn't have Engineering books.
- The colors used in the applications are so bright making it annoying.

Improvements:

- We can add the recording button on the bottom of the screen and after turning on the recording, a label naming recording would be displayed at the top right corner.
- Further we will add engineering books and also some novels so that students can enjoy their reading novels in their leisure time.
- We will use grey and light sky-blue color in the application.



- Female
- Single
- 35 years old
- University lecturer
- Lives in Pakistan

Personality:

Motivation

Passionate

Hard working

Loving

Giving

Background knowledge

Sana is 35 years old. She is a teacher and lives in Pakistan with her husband and two children. She is a software engineer who is balancing her career with raising a family. She cares deeply about animal rights. She adores spending time with pets.

Skills

- Recently she did M.Phil. from Harvard university.
- She has worked in a software house for 6 years.
- Currently enrolled in PhD.
- Excellent in programming.

Pain points:

- As a teacher she doesn't have facility to create lecture notes.
- She doesn't have communication facilities to interact with students.
- Conducting the quizzes online is very necessary.
- She doesn't have a platform where all the activities regarding teaching can be done

Goals

- Convert particular quiz/assignment file to common formats like pdf/word
- Easily interact with students.
- Take online classes

- Take quizzes online
- View student attendance report
- Upload lectures
- Access digital library
- Block particular student
- Post announcements

**Background knowledge**

Lee is a university student who lives in Chicago with her parents and two brothers.

She is a hardworking student and loves to read books in her leisure time.

She goes to university daily and after heading back to home she takes rest for a while.

After that she starts making her assignment and continues her studies.

Skills:

- She has excellent skills of IT.
- Lee loves to write codes.
- She has taken many programming courses and classes, and currently she is teaching programming in a reputed institute.
- Proficient with the technology she uses.

Pain points:

- Easily communicate to teachers after university time.
- Take online lectures

- Raise hand in case of query

Goals:

- Easily take online classes
- Communicate to teachers
- Make groups with classmates
- View lecture recordings anytime



Name: Emma

Gender: female

Marital status: single

Lives in: Africa

Occupation: Teacher

Background Knowledge:

Emma is an active person who likes travelling to new destinations wherever she can. She is an extravagant. She loves to learn new things in life. She is a very great teacher who really wants to teach her students the best.

Goal:

She wants to have an application for the teaching purpose in which all the fundamental activities should be present like taking online classes, post announcements, take quizzes, mark attendance, view student reports etc.

Pain points:

As we know that she is fond of travelling so because of this she finds it very difficult to create notes manually and also she doesn't have a platform where she can easily take class online.

Feedback:

- The icons in the application are so large.
- There is no functionality of forgot password option.
- I cannot see the student's screen.



Name: Katty perry

Gender: Female

Lives in: America

Marital Status: Single

Work: Student

Background Knowledge:

Katty is an undergraduate engineering student who loves to enjoy life. She likes to use new technologies and making desktop applications. She is an expert programmer and in her leisure time she writes codes.

Goal:

Katty wants to have an application where she can comfortably teach students and also the students can learn easily and efficiently. She wants to achieve the goal of having an application by which she can take online classes and post announcements also she wants the facility of creating notes online.

Pain points:

As we know that Katty is a programmer, and she remains busy in making desktop applications all the time so because of that she has the difficulty of creating manual notes and spending time on it.

Feedback:

The lecture notes creation screen is very complicated there should be few options on it.

Improvements:

We can make a simple creating notes screen in which there would be very few and fundamental options.

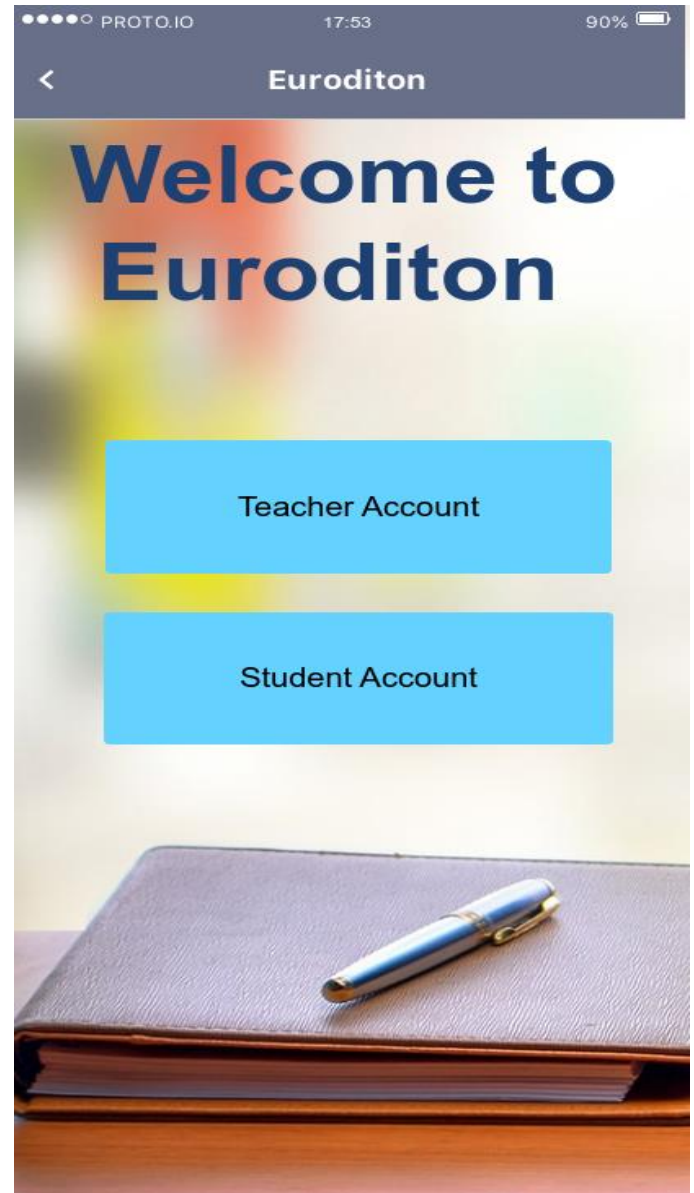
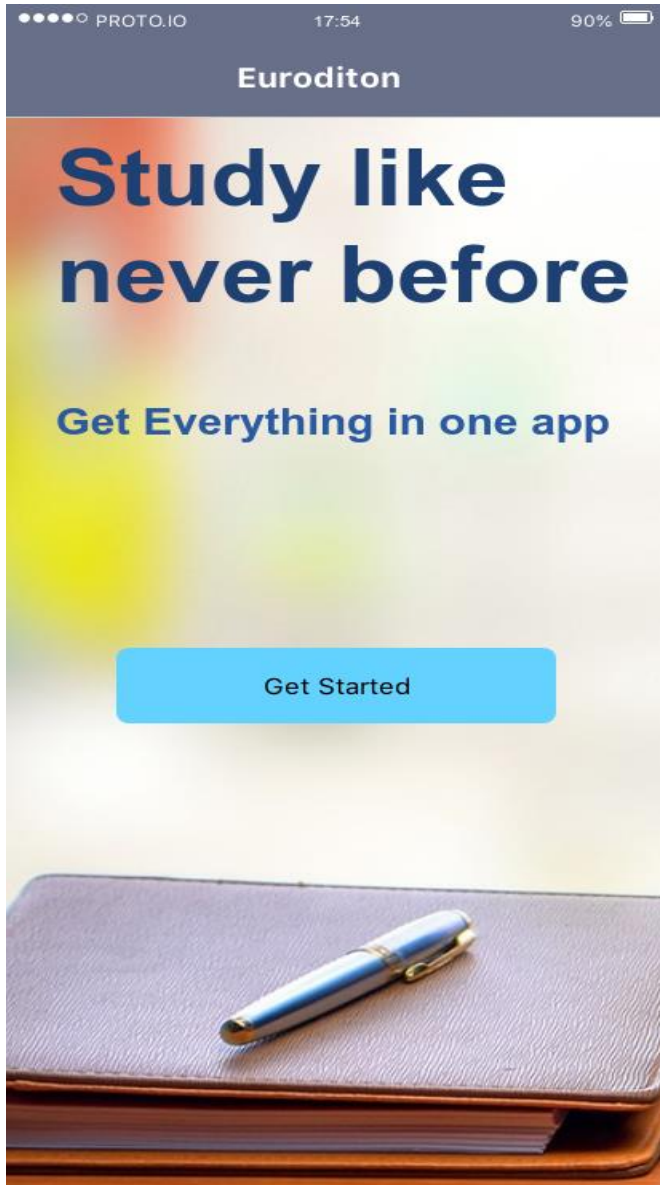
Low Fidelity Video Link:

<https://github.com/QasimHassan78/HCI/blob/master/HCI%20LOW%20FIDELITY%20VIDEO.mp4>

Testing/Feedback:

The initial feedback on the application was quite positive. However there were few recommendations like to have a little bit more colorful UI and the icons of the application should be small in size so that it can attract more to users. Otherwise users were satisfied with all the functionalities that we are providing.

High fidelity Prototype:



PROTO.IO06:1490%

<

Teacher Signup

Name

Email

Username

Password

Gender


Sign up

Already have an account? Login

PROTO.IO16:5790%

<

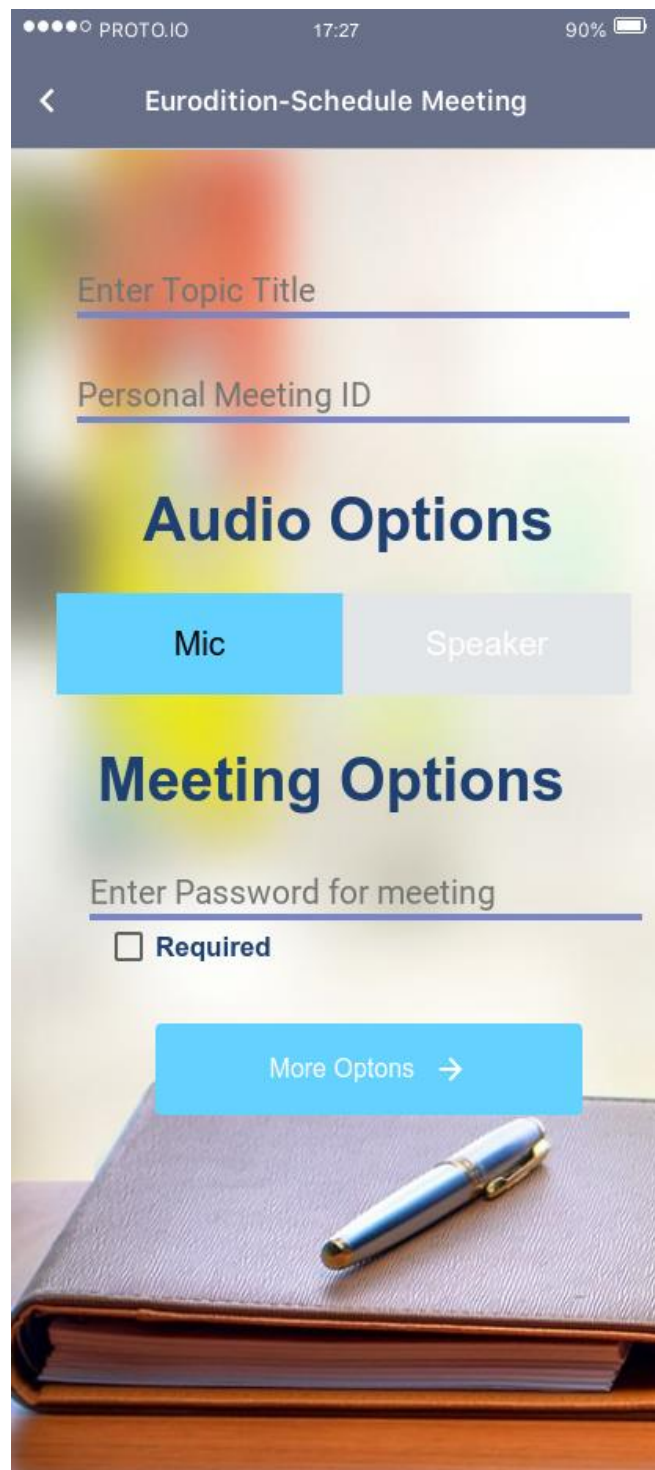
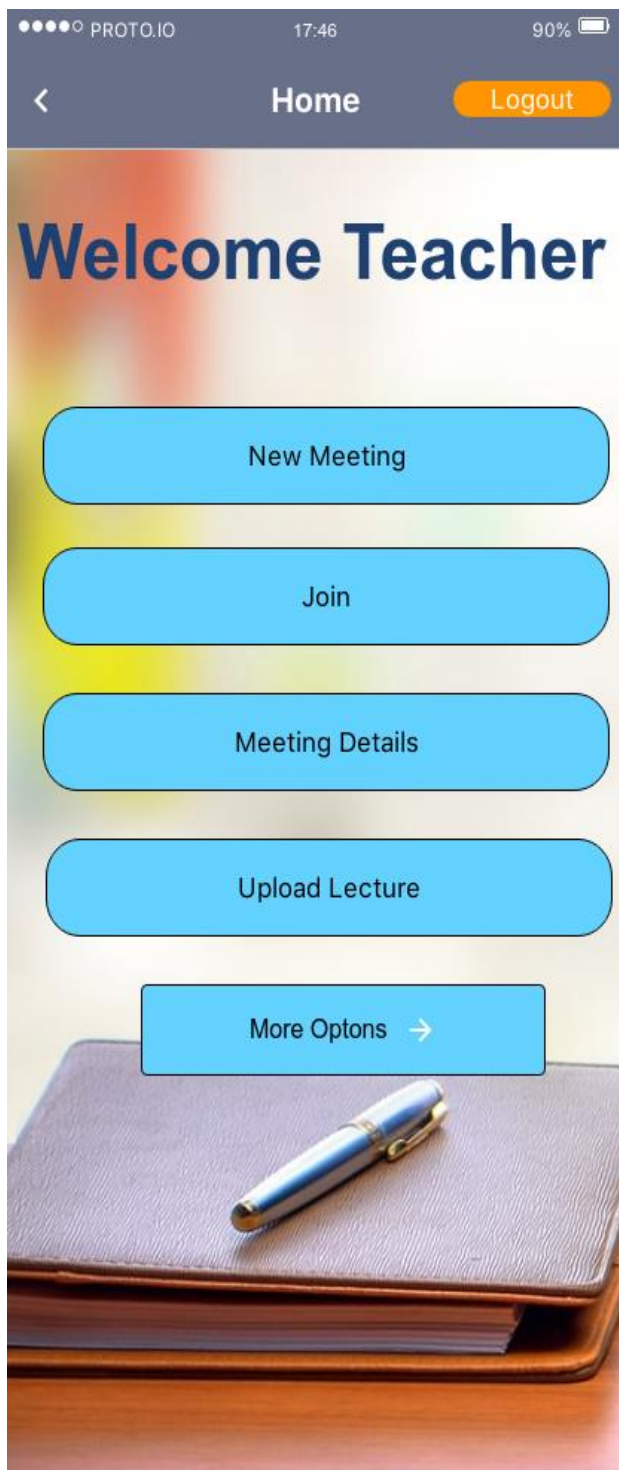
Teacher Login



Username

Password

Login



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<Euroditon - Join Meeting

To

From

Subject

Join Meeting

URL : <https://:awdawd>

Pass: 12xcv323

PMI: 123-452-234

Send

●●●●○ PROTO.IO18:2790%

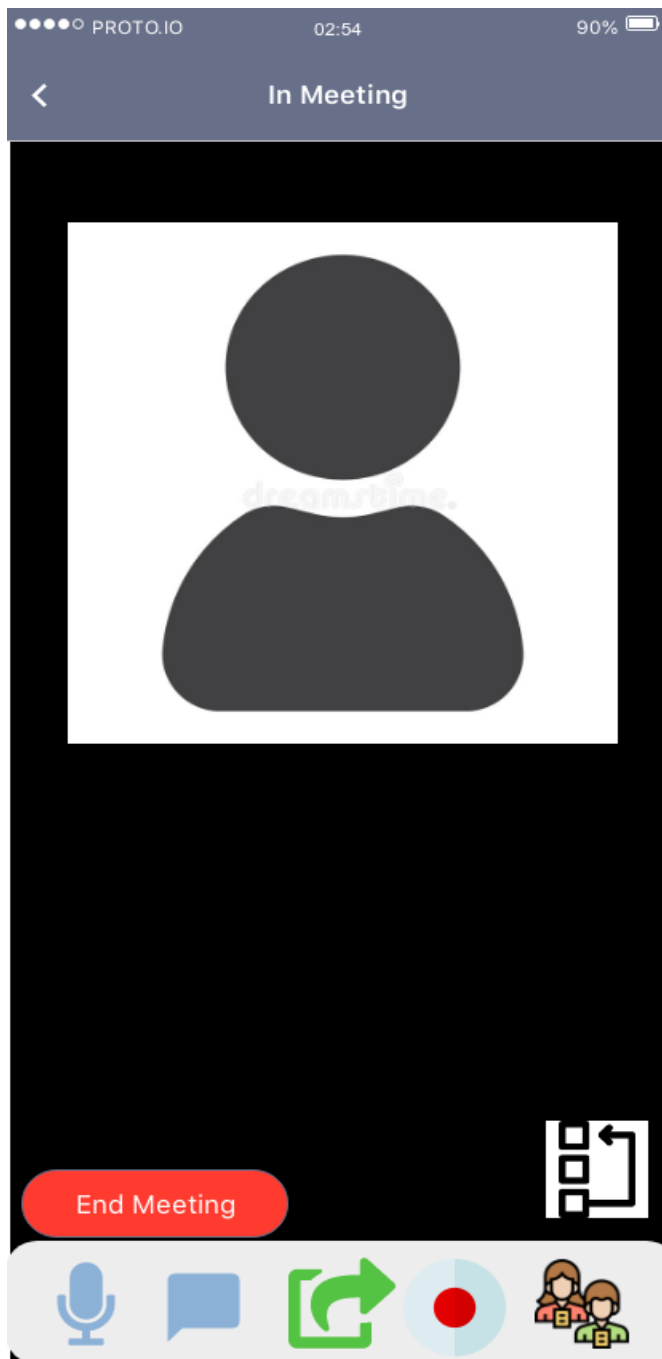
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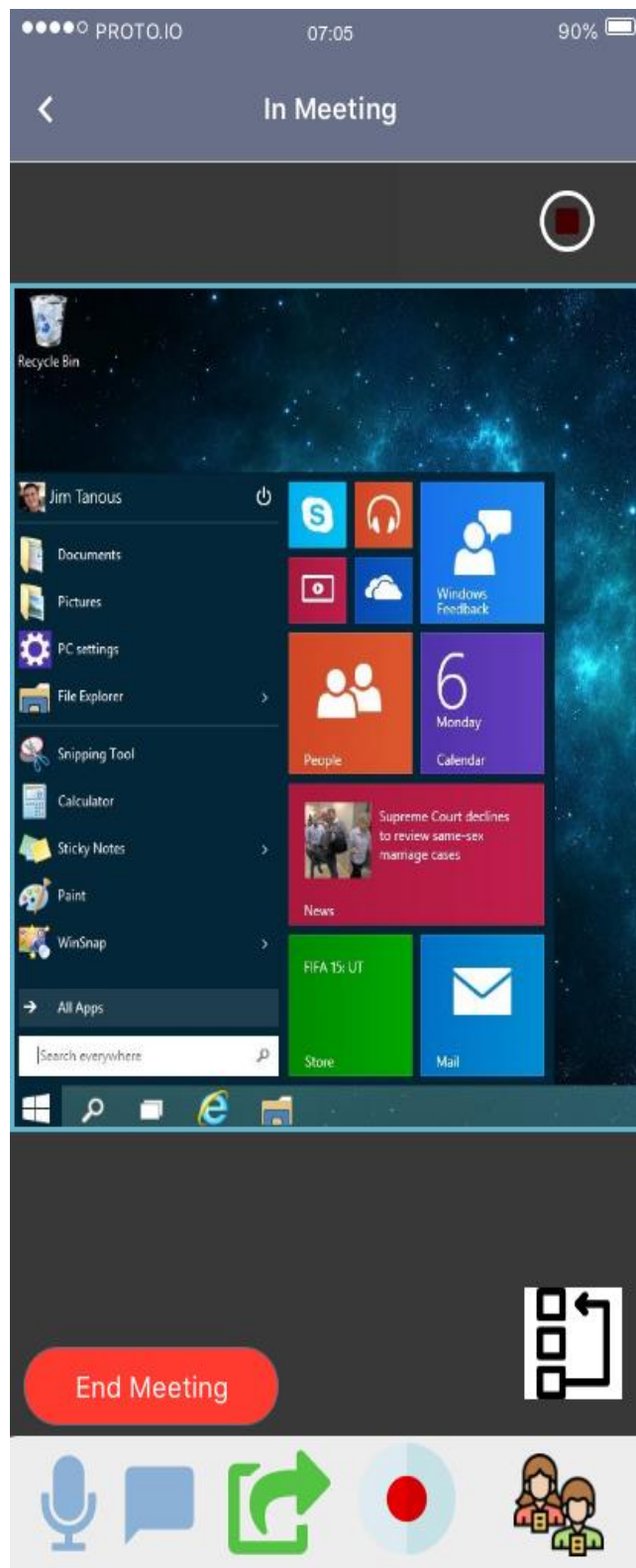
Join Meeting

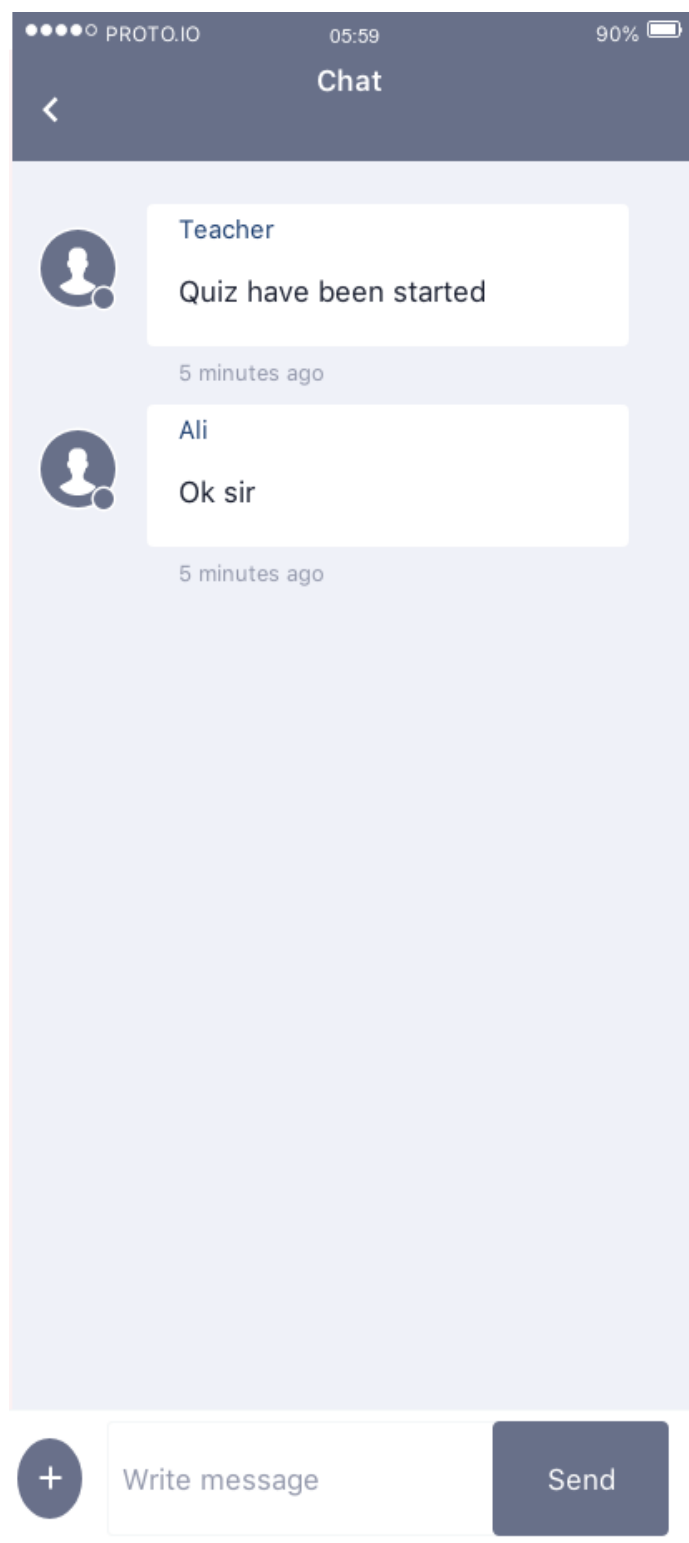
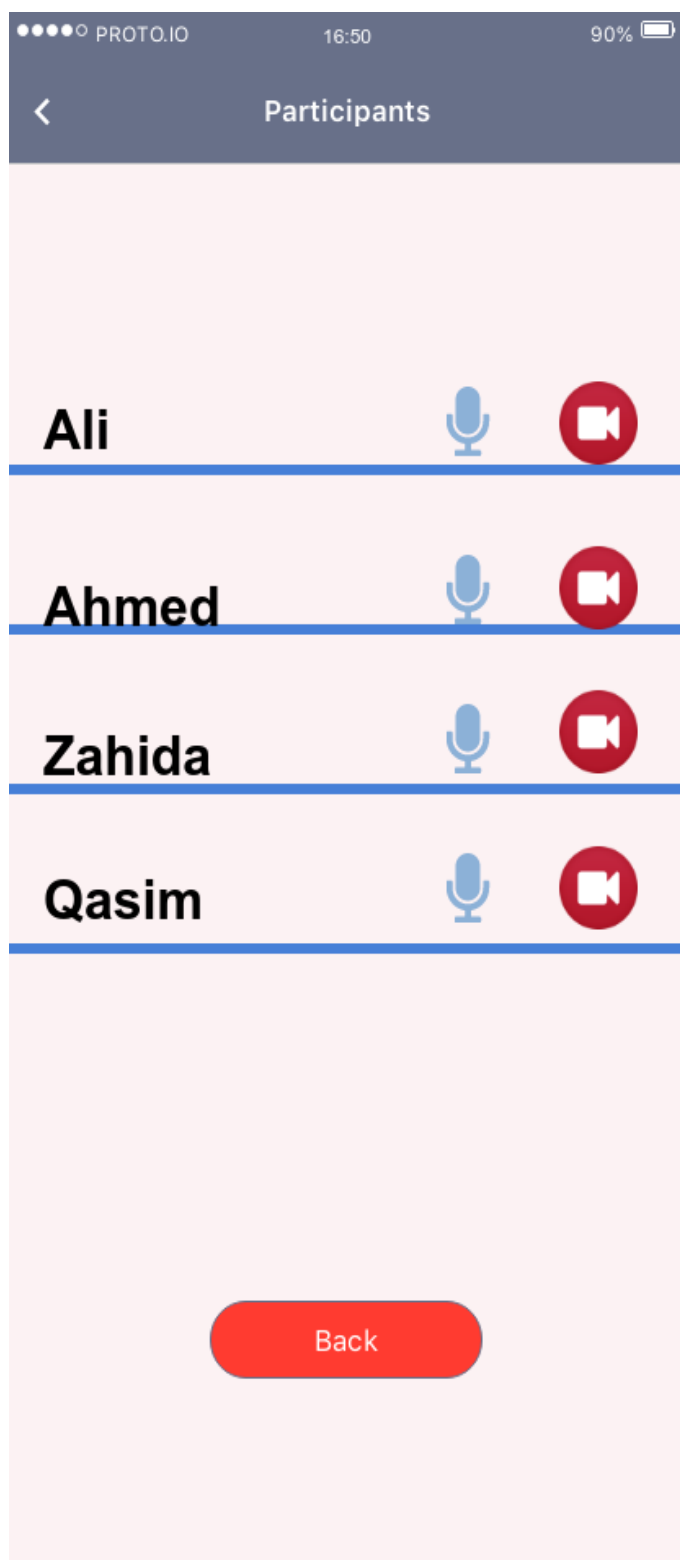
PMI

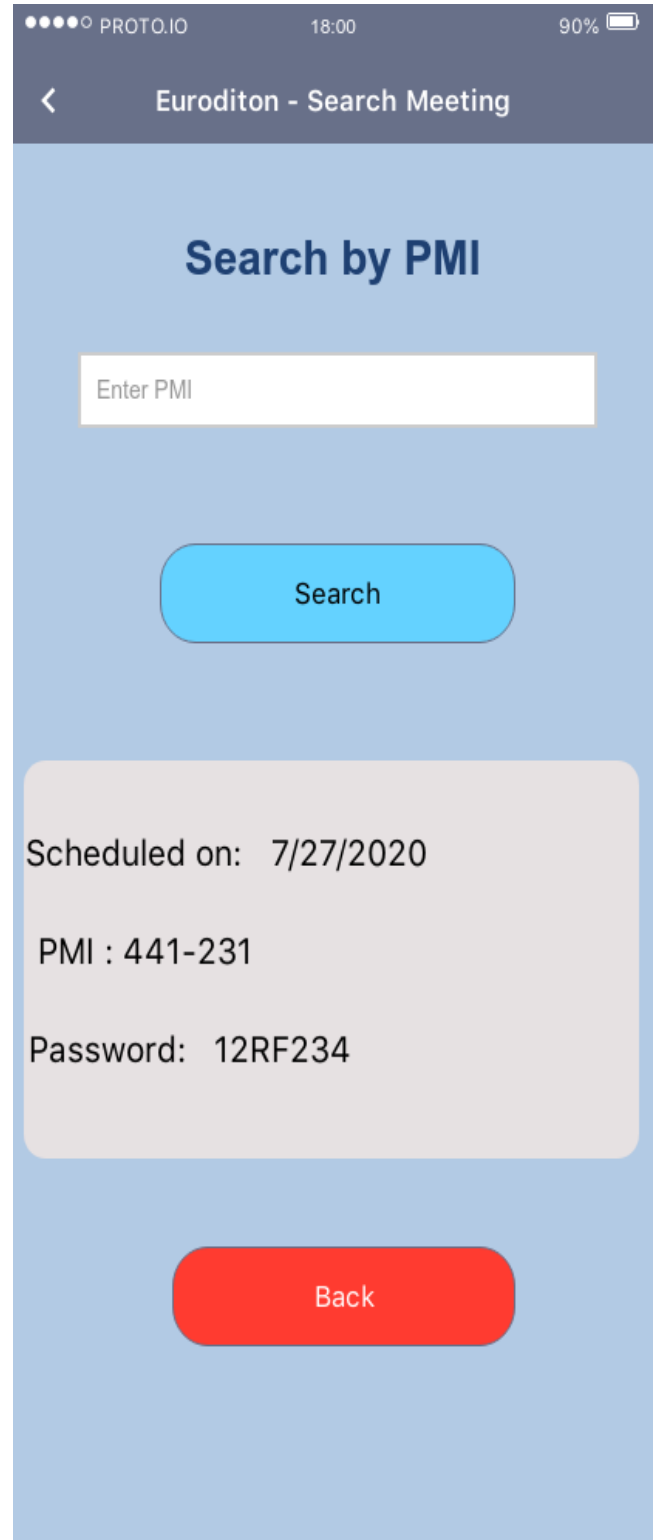
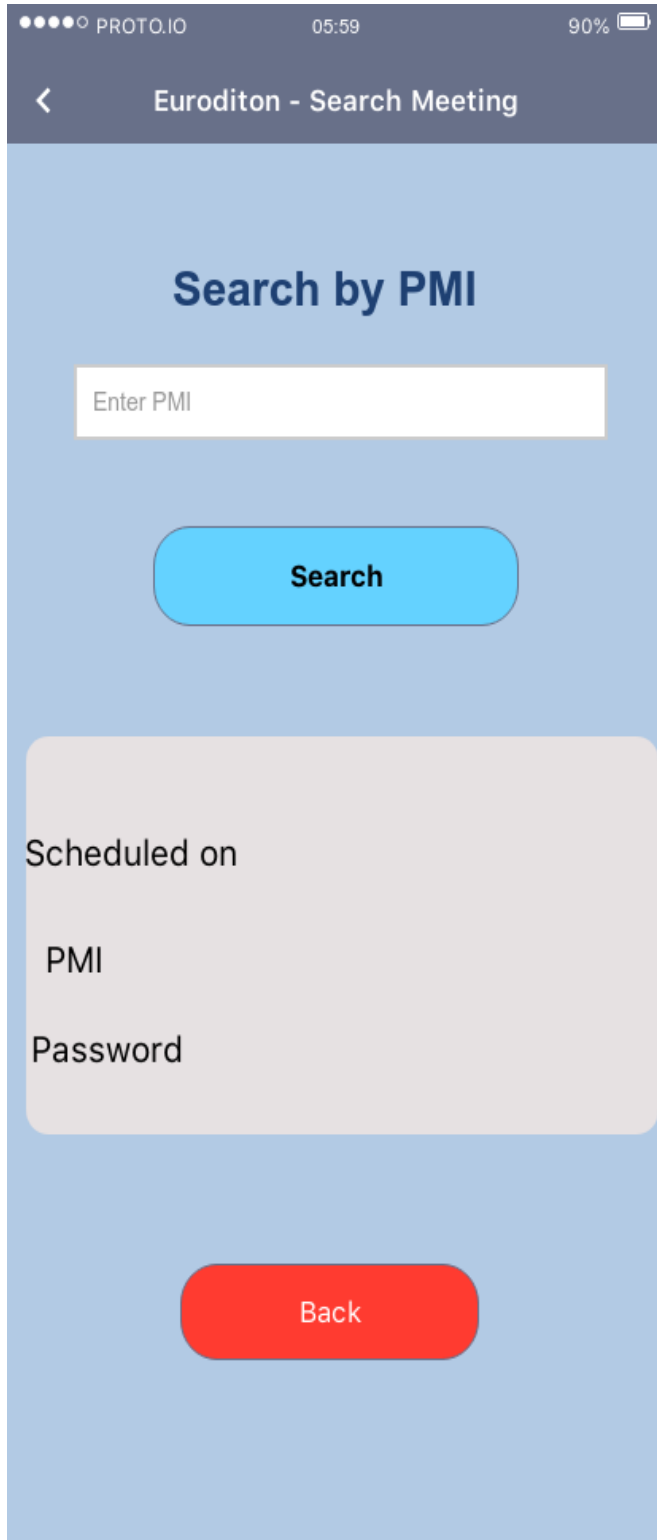
Password

Join










●●●●○ PROTO.IO18:0590%

<Euroditon - Upload Lecture

Attach Lecture



Add

Convert to

DOC

PDF

Convert


Upload

Back

●●●●○ PROTO.IO06:3590%

<Euroditon - Take quiz

Attach Quiz File



Time limit

Add time

Attempts

1

2

Convert to

DOC

PDF

Upload

Back

Names	Class 1	Class 2
Zahida	P	A
Qasim	P	P
Ali	A	A
Nabeel	P	P
Faiq	P	INSERT

Update

Back

Enter PMI

Show

Names	Quiz 1	Quiz 2

Update

Back

●●●●○ PROTO.IO07:0690%

<

Euroditon - Create Note

Create Notes

Enter Title

Tile for note

Write Text

Save

Cancel

●●●●○ PROTO.IO05:5990%

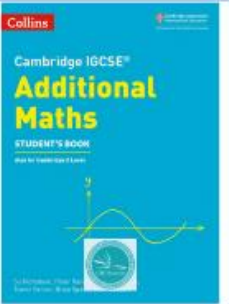
<

Euroditon - Library

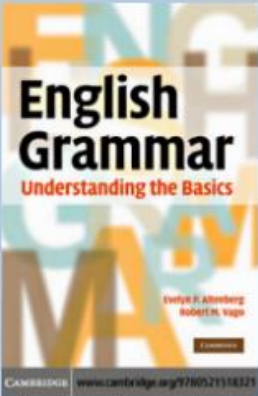
Library

Type here

🔍

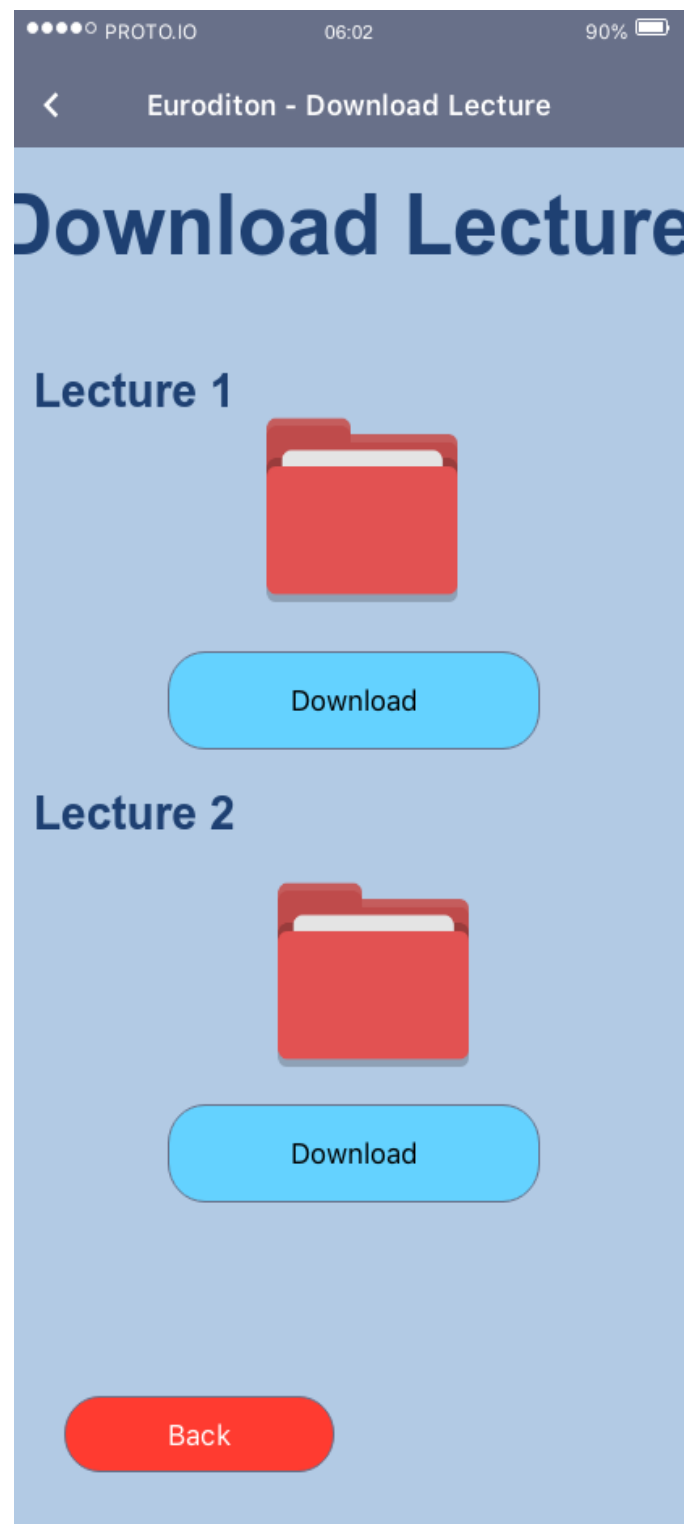
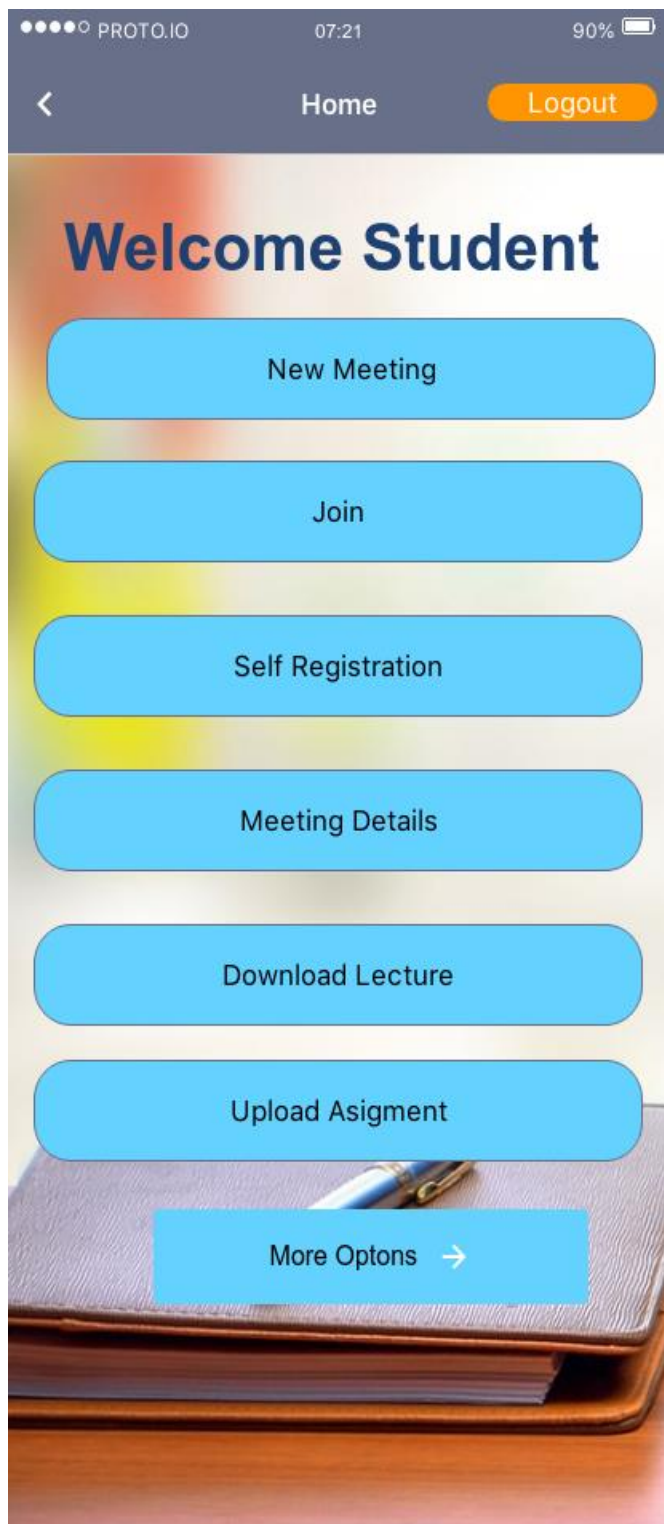


Download



Download

Exit



●●●●○ PROTO.IO06:0490%

<Join Meeting

Join Meeting

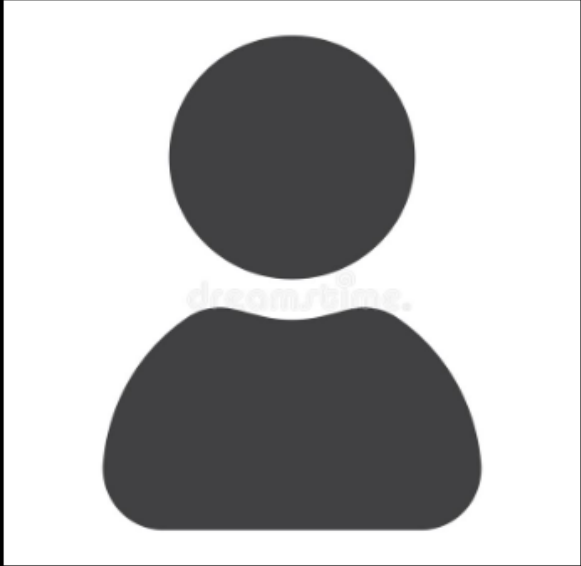
PMI

Password






Join

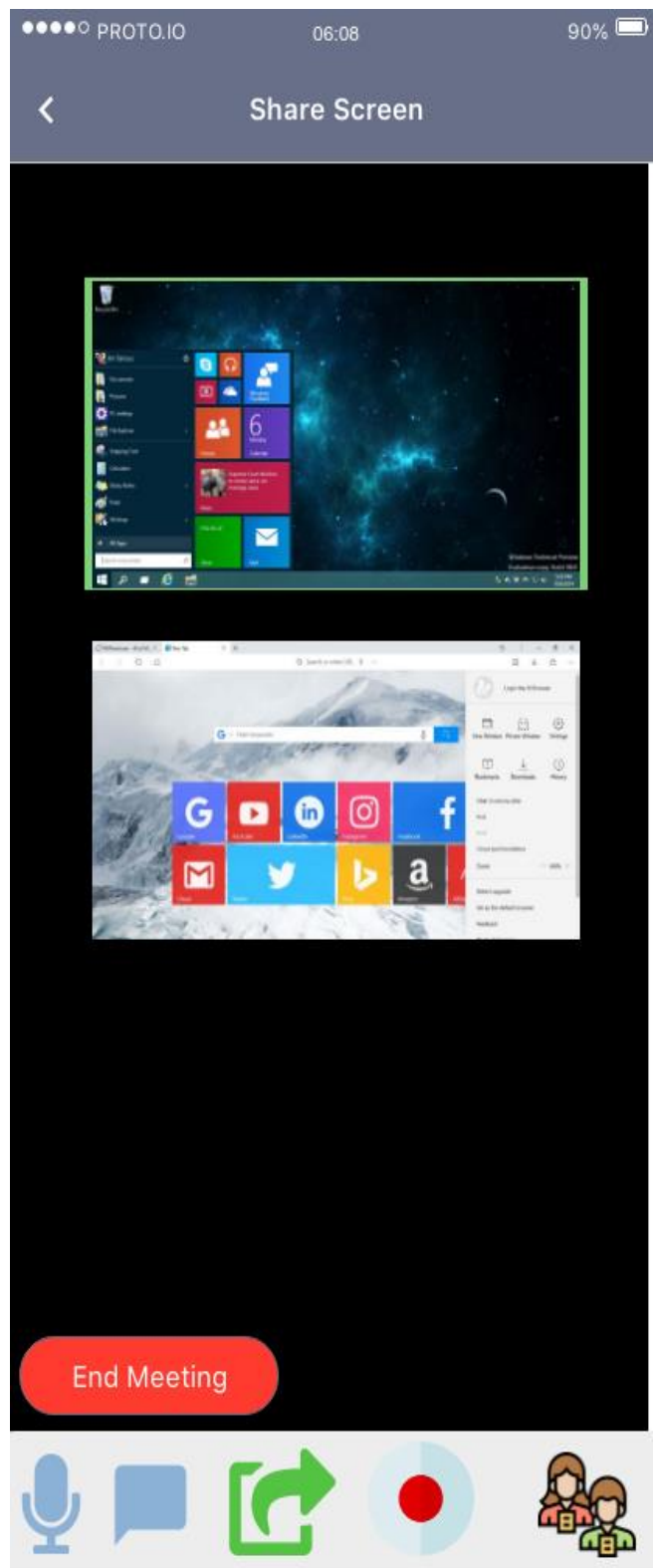
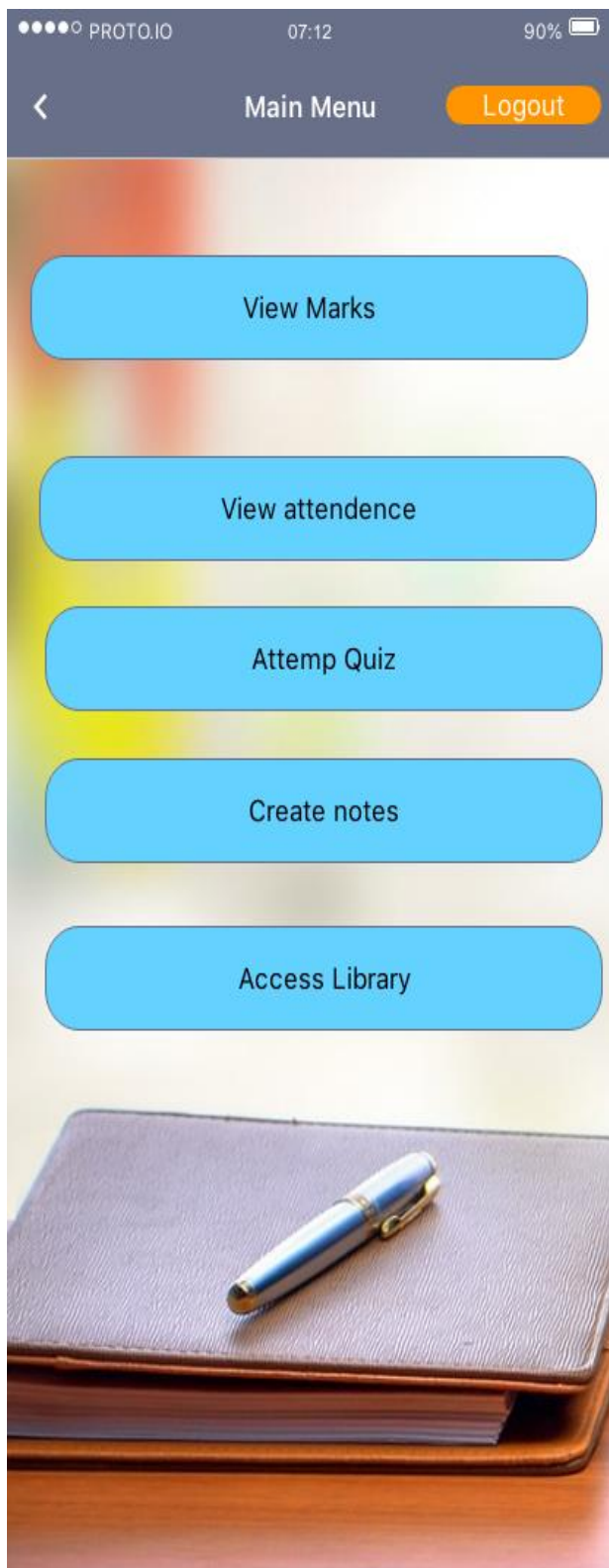
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<In Meeting



End Meeting





Subject	Quiz 1	Quiz 2
PF	5/10	6/10
AI	6 / 10	6 / 10
HCI	7/10	4/10
M1	9/10	9/10

Back

Subject	Present	Absent
PF	12	2
AI	10	3
HCI	9	2
M1	11	1

Back

●●●●○ PROTO.IO07:0990%

<Euroditon - Create Note

Create Notes

Enter Title

Tile for note

Write Text

SaveCancel

●●●●○ PROTO.IO06:3190%

<Euroditon - Library

Library

Type here



Download



Download

Exit

●●●●○ PROTO.IO16:4990%

<Euroditon - Search Meeting

Meeting Details

Search by PMI

Enter PMI

Search

Scheduled on: 7/27/2020

PMI : 441-231

Password: 12RF234

Back

●●●●○ PROTO.IO06:3290%

<Euroditon - Upload Assignment

Upload Assignment

Attach Assignment

Add

Convert to

DOC

PDF

Convert

Upload

Back

●●●●○ PROTO.IO 07:01 90%

< Euroditon - Attemp quiz

Solve Quiz


Start

Submit

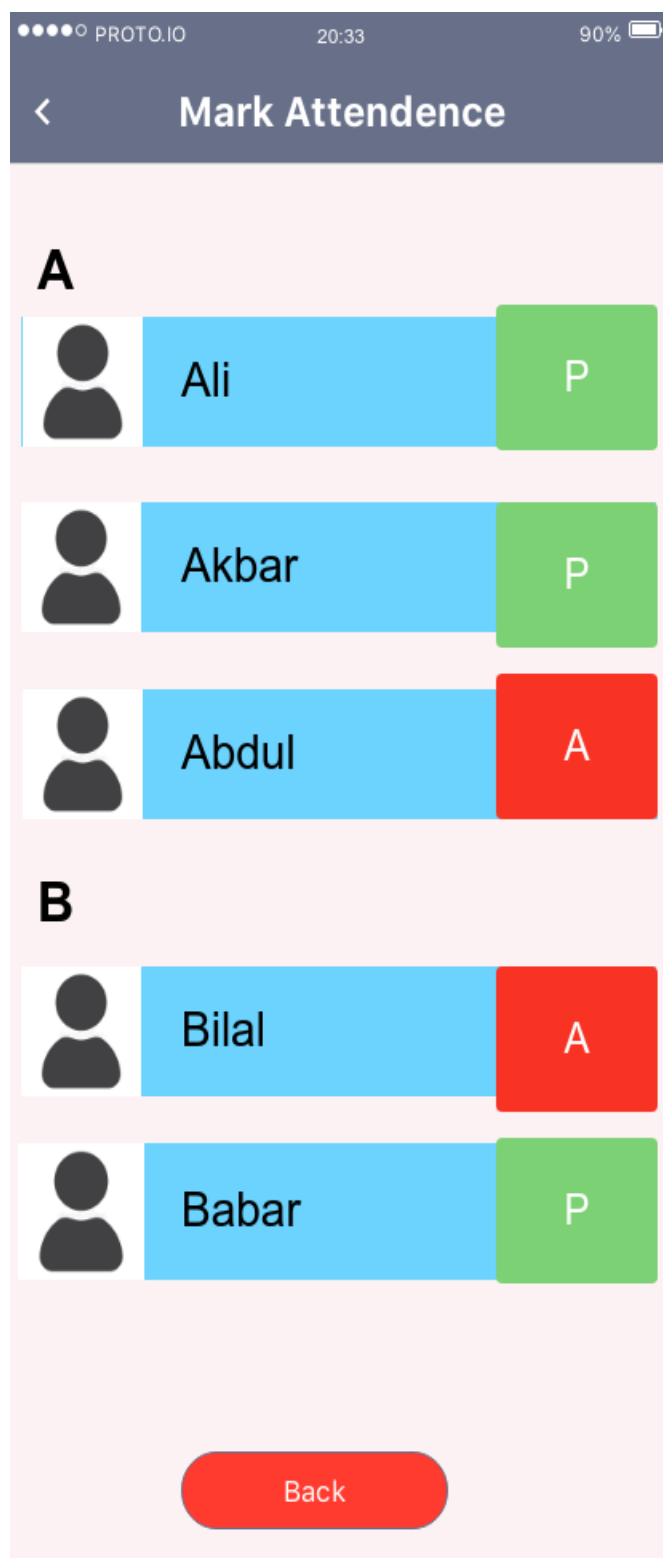
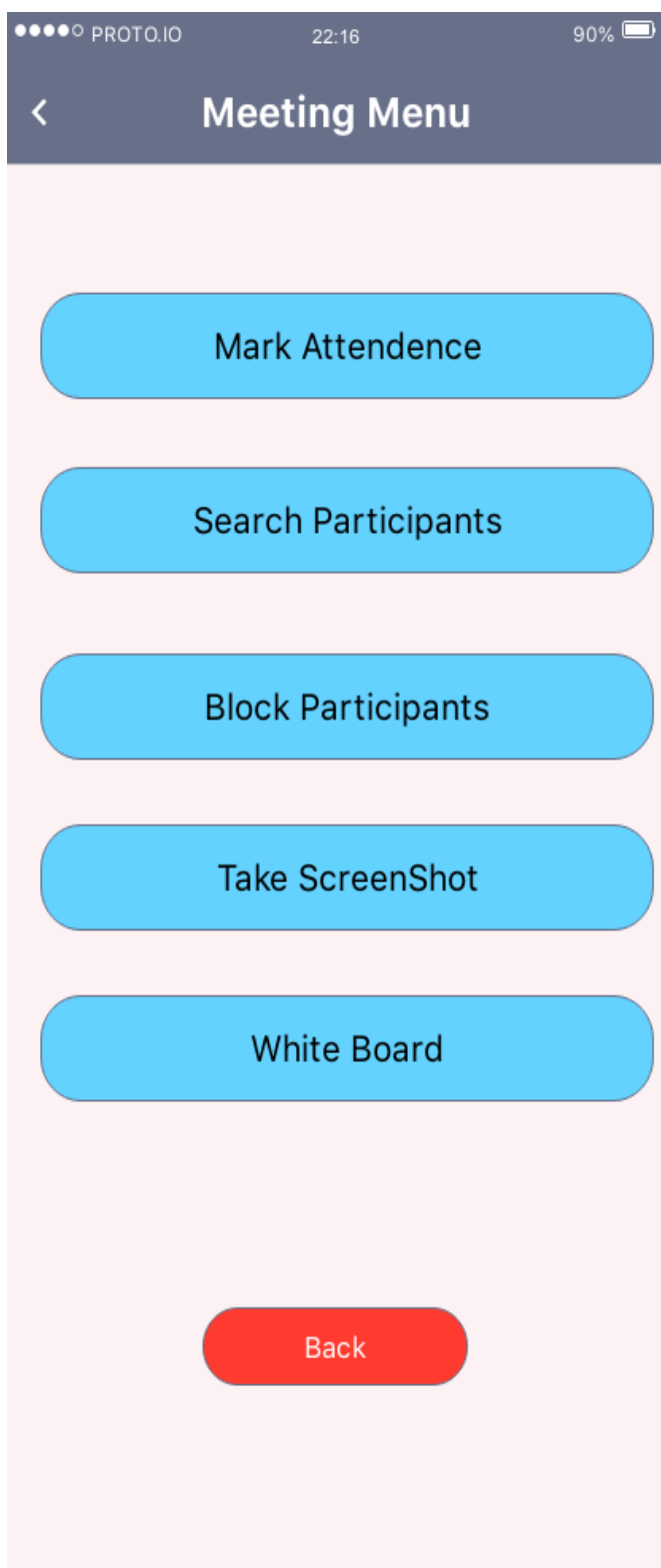
Back

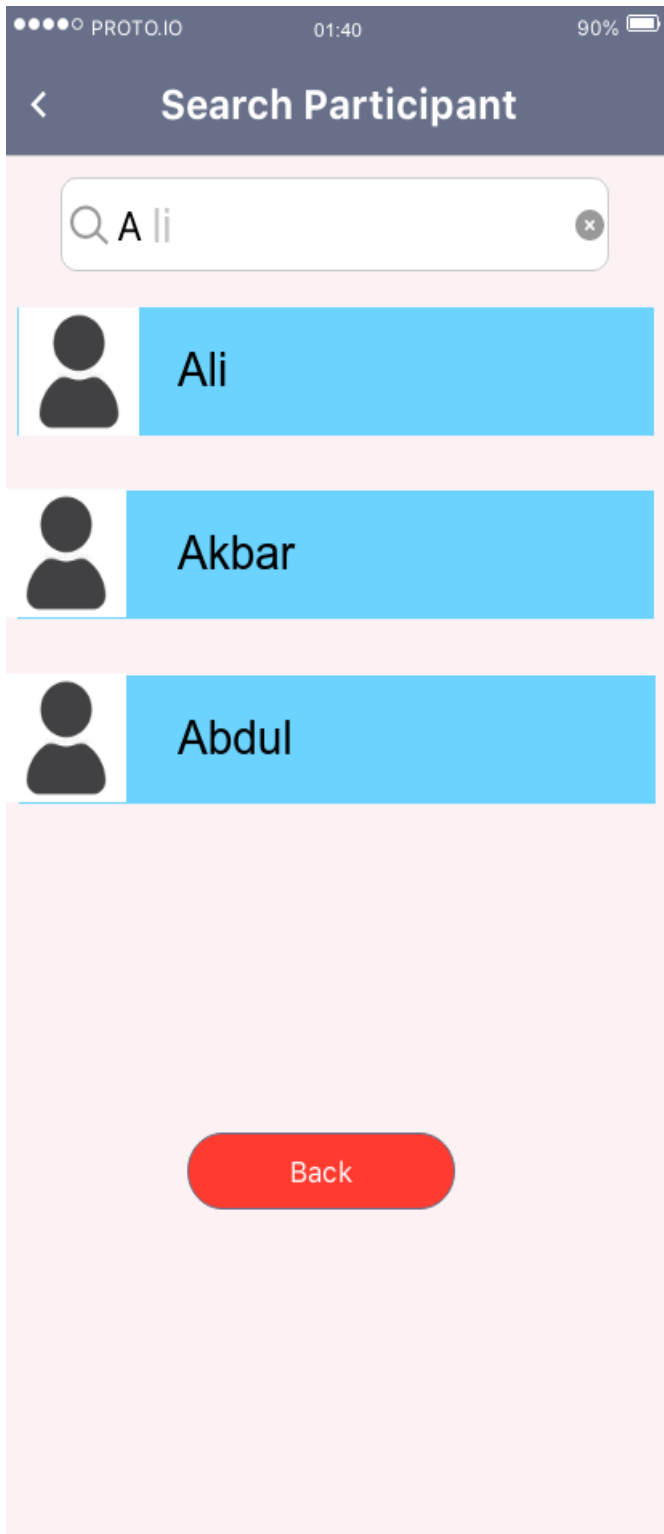
●●●●○ PROTO.IO 16:57 90%

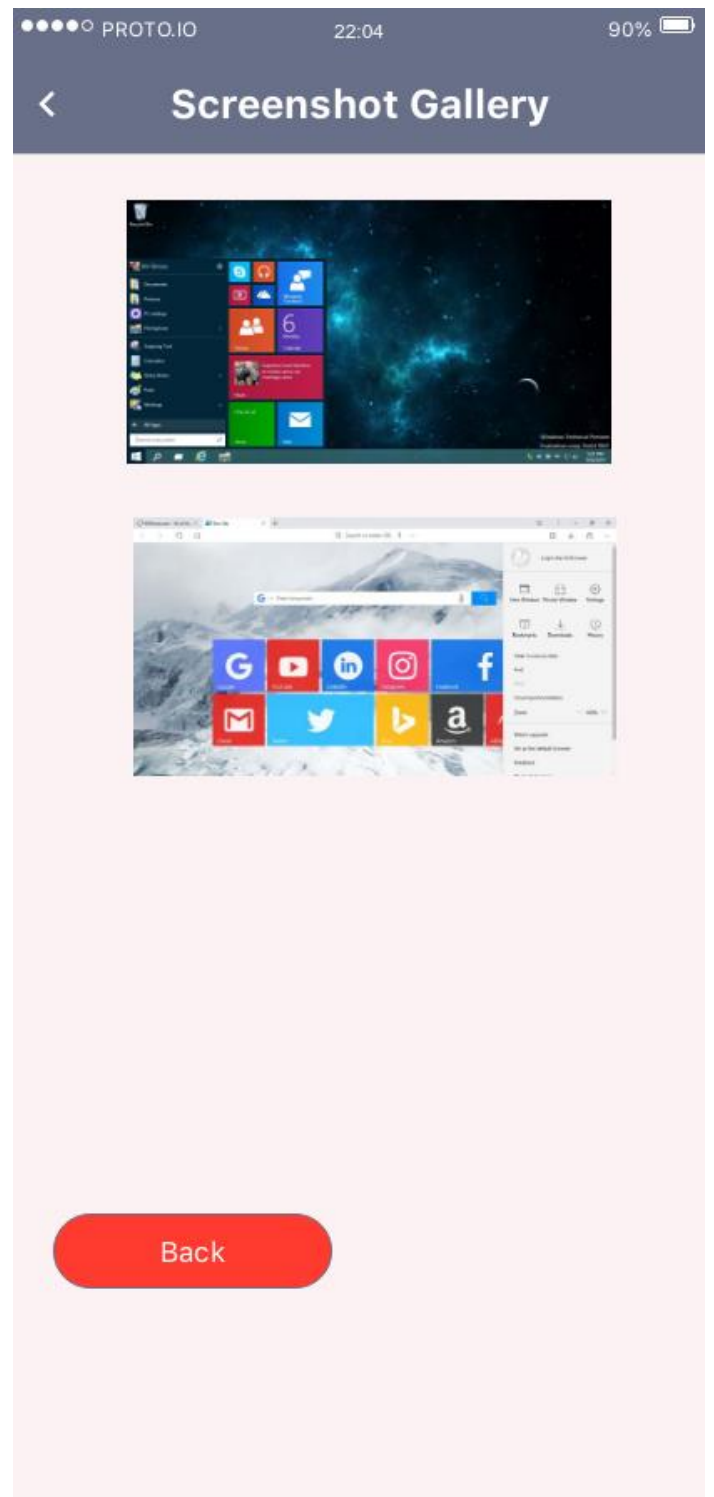
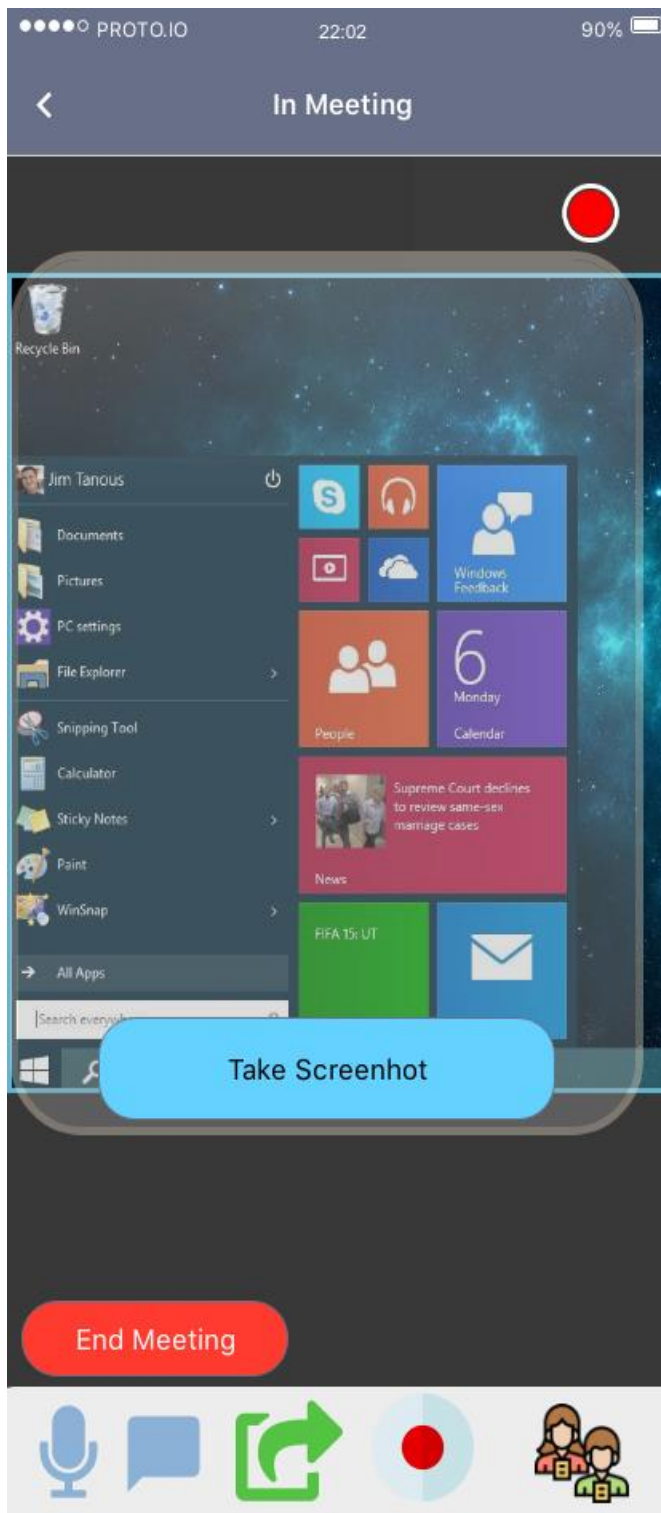
< Student Login

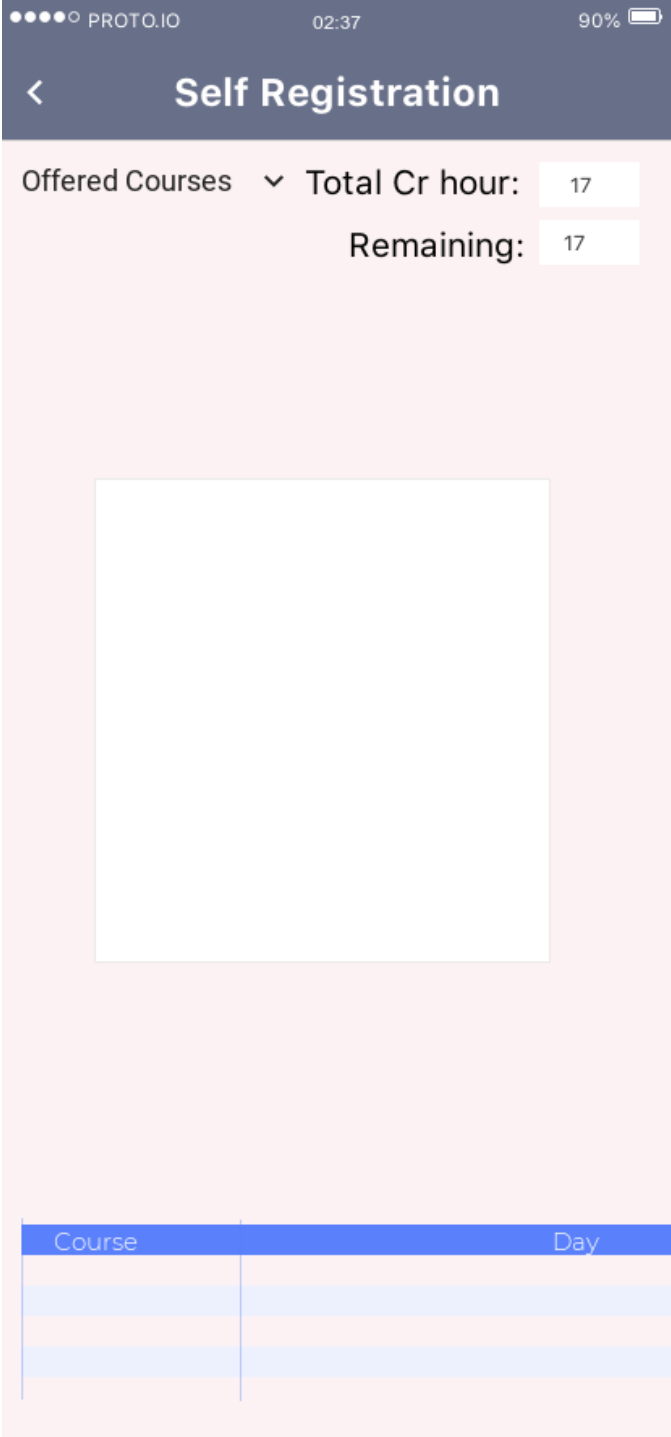
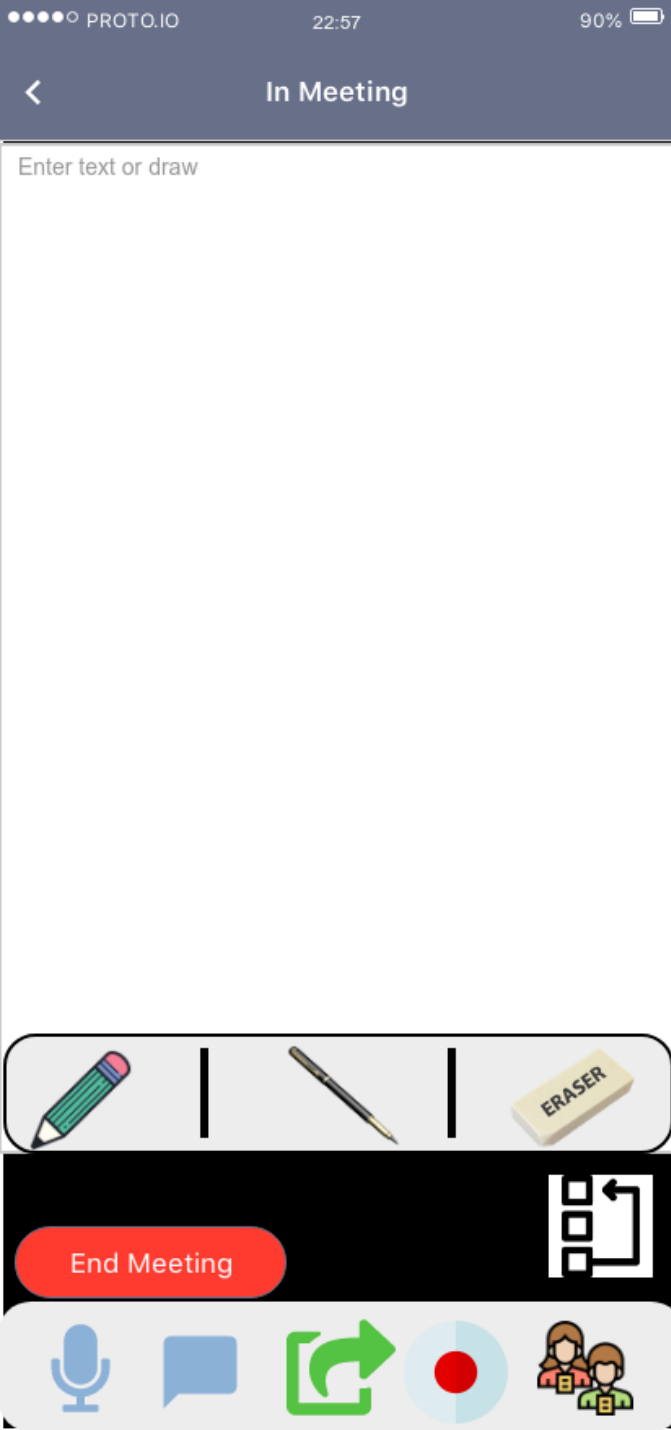


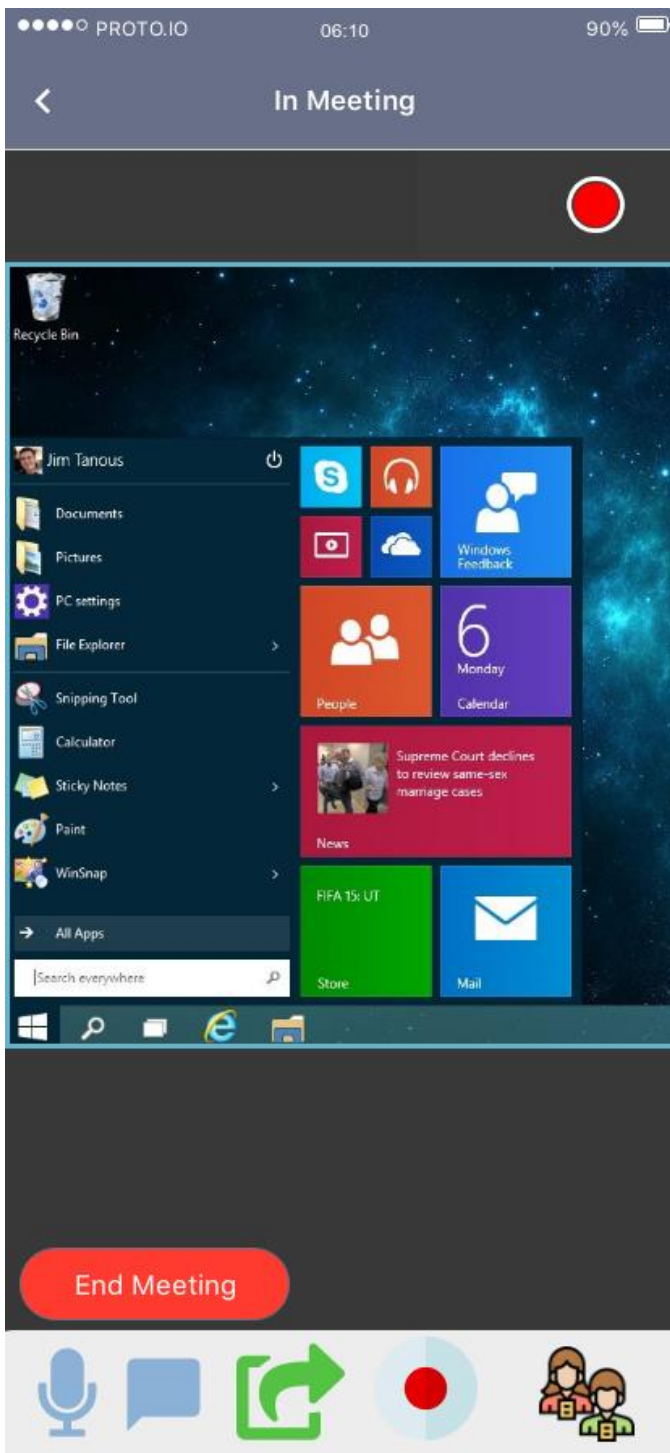
Login











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< Euroditon - Join Meeting

To

From

Subject

Join Meeting

URL : <https://:awdawd>

Pass: 12xcv323

PMI: 123-452-234

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