

# SimplyOnline

Simple way to connect

# Agenda

1. Problem description
2. Acceptance Criteria
3. User Stories
4. Sprint 3 backlog and test cases
5. Team Metrics
6. Application Screenshots



# TEAM MEMBERS



Ajay Kumar  
Full Stack Developer



Amarendra Reddy  
Developer



Pruthvi Raj Reddy  
Database Administrator



Mounik  
Developer



Sreeja Reddy  
Quality Analyst



Ravi Teja Reddy  
Developer

# Improvements from Professor's feedback

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Users Stories are improved and created with tables.

Sprint backlogs are improved.

Added project demo as video.

# Project Description

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Simply online is a web application that aims to simplify the process of online classes. This application allows lecturers to create virtual rooms and share the room id with their students for seamless connectivity. Using webRTC technology, simply online allows group video-sharing features and screen-sharing capabilities. This application allows lecturers to easily take attendance with just a click of a button. This platform automatically marks attendance, eliminating the need for manual tracking. Overall, simply online offers a comprehensive and user-friendly solution for educators and students to enhance their online learning experience

# Team Working Agreement

## Participation:

All the team members are expected to involve in project discussions and attend the meetings promptly. Absence during multiple meetings will affect the team's performance and efficiency.

The team member can discuss beforehand with the team leader if he/she is going to miss the meeting or make it up for it before the next meeting is scheduled.

## Communication:

The team will communicate with each other using WhatsApp group and meetings will be scheduled on Zoom.

Jira software will be used to track the assigned tasks. For any dependency on another task, mention it in the task comments.

Task management, bugs, sprint planning, and meeting minutes will be tracked in Jira.

To share the final deliverables, Google docs will be used where all the team members can edit the document.

## Work Division:

The entire project work should be divided into equal parts, and equal responsibilities should be given to all the team members. Each team member should complete their division of work before the deadline. If they are unable to complete the work on time, that hinders the performance of the entire team. If in case a team member is facing trouble and issues at some point, they can share it with others so that they can help each other and complete the work before the deadline.

## Meetings:

All the team members will meet on zoom virtually every Tuesday and Friday. All the team members must be present, as attendance is mandatory unless there is an exceptional case. The team leader would be responsible for sending meeting details and conducting the meeting.

A meeting track or meeting minutes report would be listed after every meeting to keep track of the project and its progress.

Every team member is expected to come up with ideas, participate in the discussion, and give an update on their progress for their part of the work.

# Persona

**Name:** Professor James

**Age:** 45

**Occupation:** University Professor

## **Profile:**

James is a tenured professor in the Computer Science department at a large university. He teaches both undergraduate and graduate-level courses and conducts research in his field. Due to the COVID-19 pandemic, his classes have been moved online, and he uses various platforms to deliver lectures, holds office hours, and communicate with his students. He lives with his spouse and two children, who are also attending school virtually.



## **Goals and Motivations:**

- Deliver high-quality lectures and course material to his students  
Engage his students and create a dynamic and interactive virtual classroom environment.
- Ensure that his students are keeping up with the coursework and meeting their learning objectives.
- Provide effective feedback and support to his students.

# Persona

**Name:** Sarah

**Age:** 24

**Occupation:** College student

## Profile:

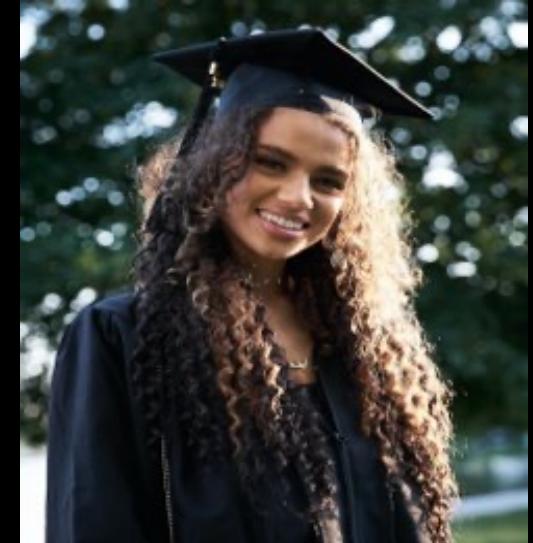
Sarah is a full-time student pursuing a degree in psychology. Due to the COVID-19 pandemic, her classes have been moved online, and she uses Zoom to attend lectures, participate in group discussions, and communicate with her professors and classmates.

She lives in a small apartment with roommates and shares a room with one of them.

She has a busy schedule and often has to balance her coursework with a part-time job and other responsibilities.

## Goals and Motivations:

- Attend all her classes and be an active participant in class discussions  
Stay organized and manage her time effectively to meet assignment deadlines.
- Have a reliable and user-friendly platform for attending virtual classes. Connect with her professors and classmates, and build a community within her course



# Persona

**Name:** Ishika

**Age:** 27

**Occupation:** Elementary school teacher

## **Profile:**

Ishika is a dedicated elementary school teacher who loves working with children. She has been teaching for three years and is always looking for ways to improve her classroom management and student engagement. Ishika is originally from India but moved to the US with her family when she was a child. She is fluent in English and Hindi and enjoys cooking traditional Indian dishes in her free time



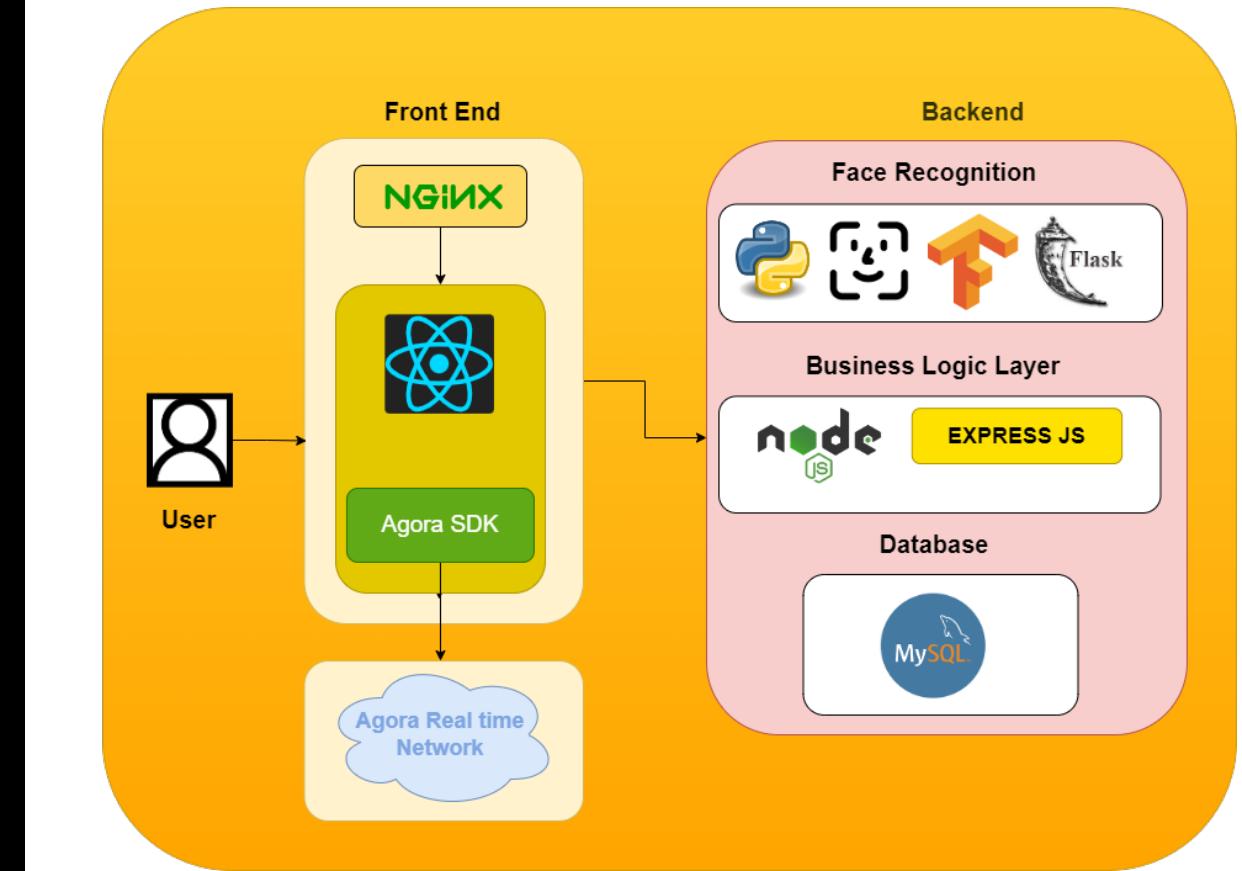
## **Goals and Motivations:**

- Ishika is a dedicated elementary school teacher who loves working with children. She has been teaching for three years and is always looking for ways to improve her classroom management and student engagement. Ishika is originally from India but moved to the US with her family when she was a child. She is fluent in English and Hindi and enjoys cooking traditional Indian dishes in her free time
- Ishika's main goal is to create a safe and engaging learning environment for her students. She wants to be able to take attendance quickly and efficiently so she can spend more time teaching and less time on administrative tasks. Sarah is also motivated by the opportunity to track student attendance and identify patterns that might indicate a need for additional support.

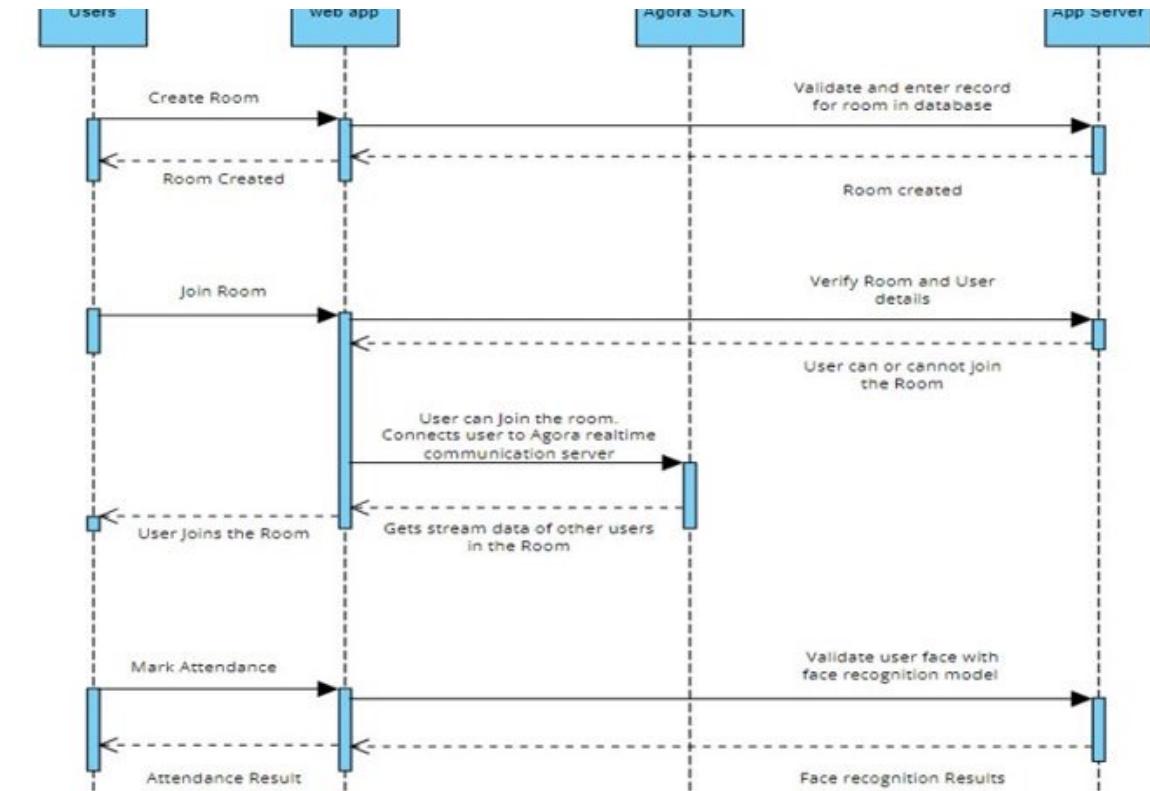
# Technologies



# Architecture Diagram



# Sequence Diagram

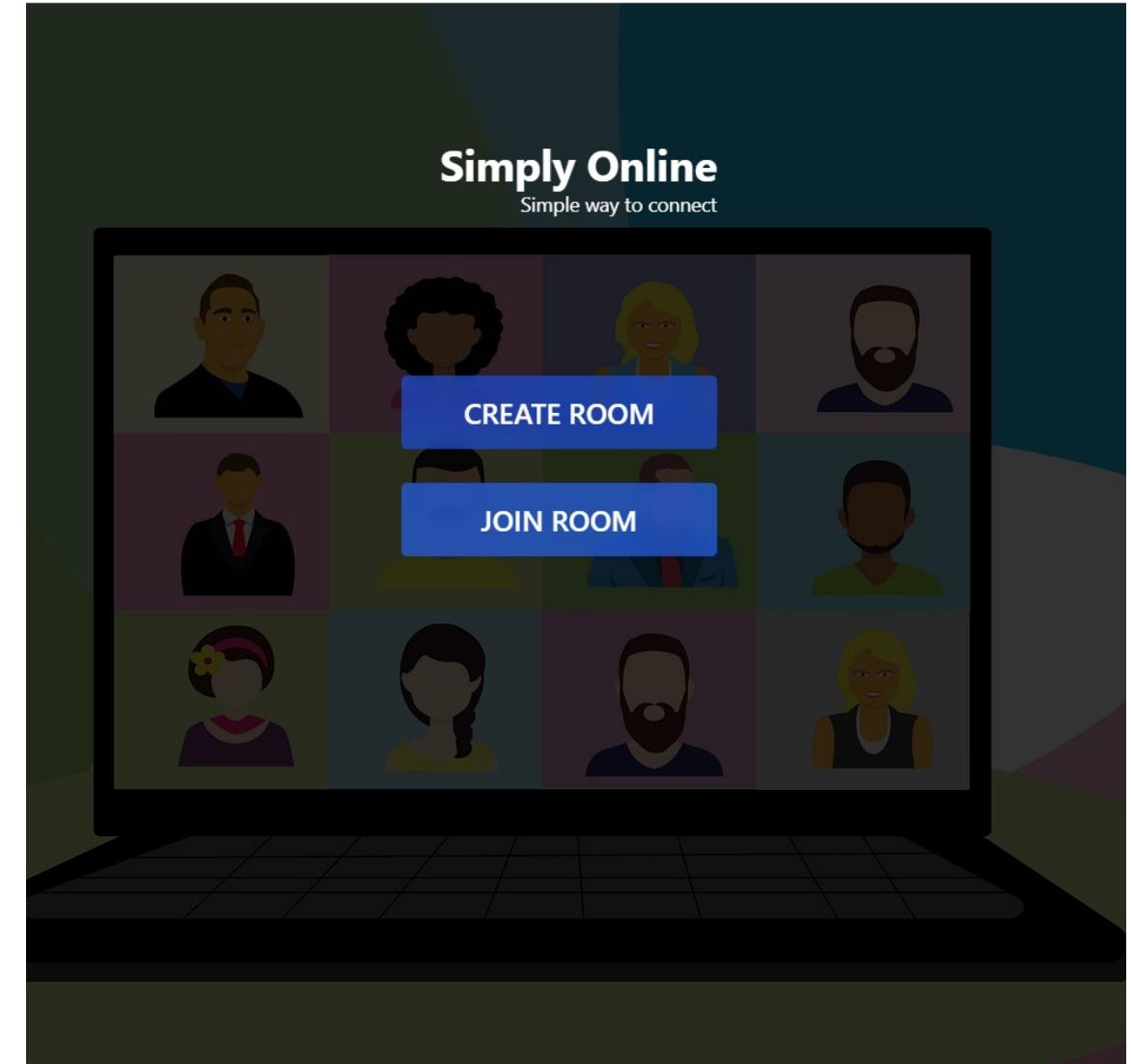


**MINIMUM VIABLE  
PRODUCT**

# Home Page

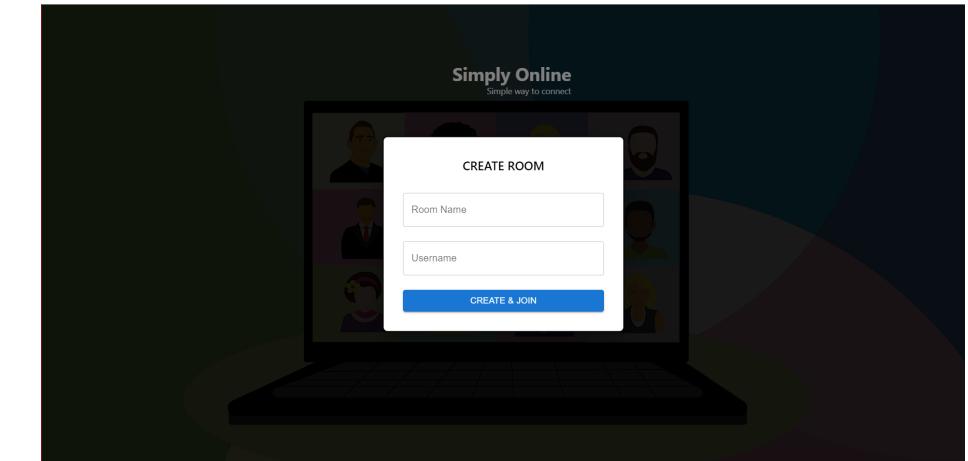
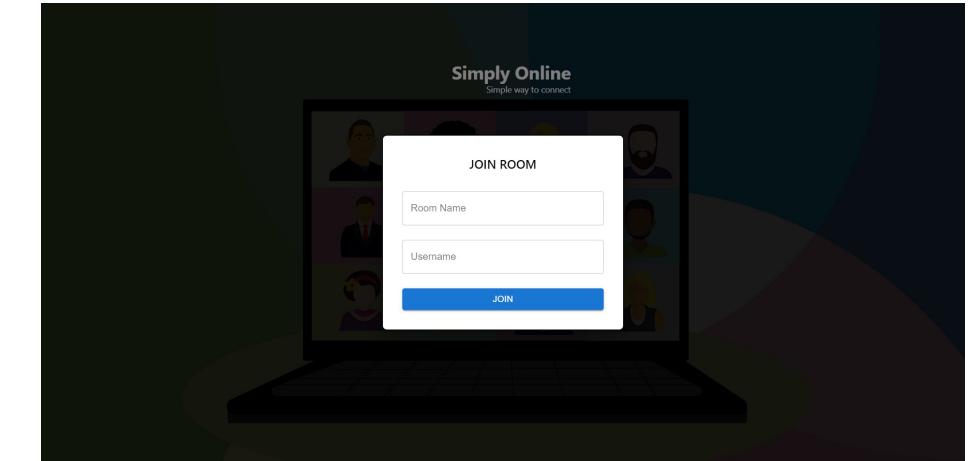
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Home page has a simple interface where users can create new room or join existing room.



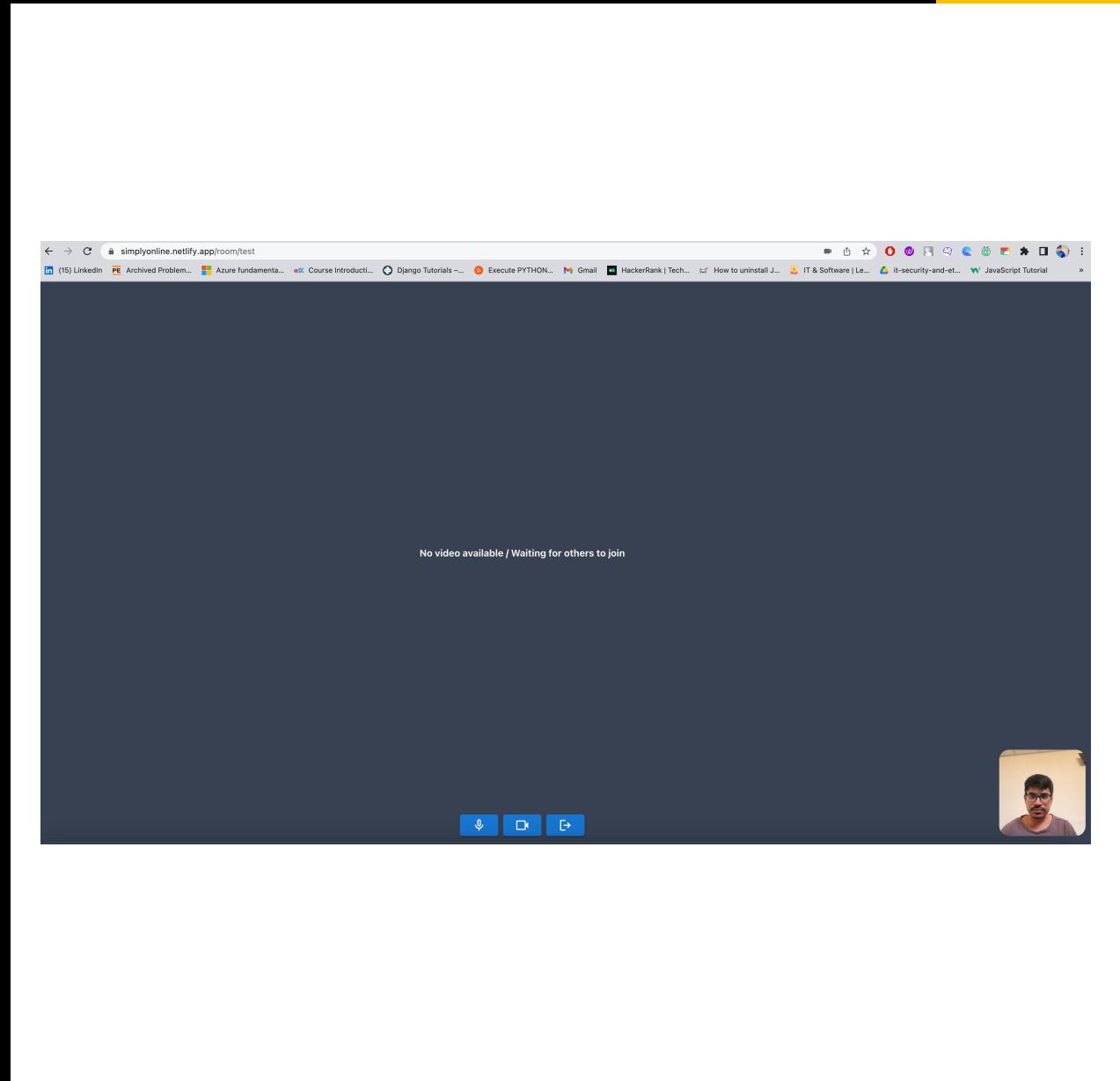
# Create/Join Room

- User can create or Join a room by providing Room Name and Username



# Room

- Single user room interface after joining in the room.



# Acceptance criteria

Scenario	Summary	Criteria
1. User should be able to create Online Classroom	<p><b>As a user</b></p> <p><b>Given</b> I'm on the Home page</p> <p><b>When</b> I click on "Create Room" Button</p> <p><b>Then</b> I should see popup asking for "Room Name" and "Username"</p> <p><b>When</b> I enter "Room name" and "Username"</p> <p><b>And</b> I click on "Create &amp; Join" button</p> <p><b>Then</b> a room should be created and I should enter the room</p>	<p><b>User Experience:</b> I Should be redirected to video conference screen.</p>
2. User should be able to join an existing Room	<p><b>As a user</b></p> <p><b>Given</b> I'm on the Home Page</p> <p><b>When</b> I click on "Join Room" Button</p> <p><b>Then</b> I should see popup asking for "Room Name" and "Username"</p> <p><b>When</b> I enter Room Name and Username</p> <p><b>And</b> I click on "Join" button</p> <p><b>Then</b> I should join the room</p>	<p><b>User Experience:</b> I should be redirected to the video conference screen</p>

# Acceptance criteria

Scenario	Summary	Criteria
3. User should have control to turn his mic on or off	<p><b>As a user</b></p> <p><b>Given</b> I'm on the "Room Page"</p> <p><b>And</b> there are other users also in the room</p> <p><b>When</b> I click on "Mic" Icon</p> <p><b>Then</b> My mic should be disabled</p> <p><b>When</b> I click on "Mic" Icon</p> <p><b>Then</b> My mic should be enabled</p>	Changes should reflect to other users in the room, if the audio is disabled and enabled as expected.
4. User should have control to turn his video on or off	<p><b>As a user</b></p> <p><b>Given</b> I'm on the "Room Page"</p> <p><b>And</b> there are other users also in the room</p> <p><b>When</b> I click on "Video" Icon</p> <p><b>Then</b> My video should be disabled</p> <p><b>When</b> I click on "Video" Icon</p> <p><b>Then</b> My video should be enabled again</p>	Changes should reflect to other users in the room, if the video is disabled and enabled as expected.

# Acceptance criteria

Scenario	Summary	Criteria
5. User should exit from the room	<p><b>As a user</b></p> <p><b>Given</b> I'm on the "Room Page"</p> <p><b>When</b> I click on "Exit" Icon</p> <p><b>Then</b> I should exit from the room</p> <p><b>And</b> redirected to home page</p>	Changes should reflect to other users in the room, if the audio is disabled and enabled as expected.
6. Verify face recognition	<p><b>As a user</b></p> <p><b>Given</b> I'm on the "Face Recognition" Page</p> <p><b>When</b> I click on "Capture" Button</p> <p><b>Then</b> My picture should be clicked</p> <p><b>And</b> "Retake" and "Verify" buttons should be visible</p> <p><b>When</b> I click on "Verify" button</p> <p><b>Then</b> the image should be verified and result should be printed</p>	<p><b>Accuracy:</b> Face recognition should be accurate and work as expected</p> <p><b>User Interface:</b> Result should be printed below the verify button</p>

# Test Cases

Unit to test	Scenario	Expected Result
Create Room	Create room	Room should be created and user should be redirected to Room page
Join Room	Join Existing Room with users already joined	User should be joined into the room and see other users in the room
Mic	Mic enable and disable	Mic should be enabled or disabled when user clicks on mic icon
Video	Video enable and disable	Video should be enabled or disabled when user clicks on video icon
Load testing	User load testing with more than 10 users	Join the same room with 10 users and test the performance
Face Recognition	Test face recognition model	Verify model with test images from UI
UI responsiveness	Test user responsiveness	UI should be interactive for all devices
User session	User name should be saved if user enters it once	When username is entered while entering one room, name should be saved and should be auto filled next time

# Product Backlog

Summary	Issue key	Status	Priority
Create UX & UI screen for group calling	SIM-14	Done	Medium
Test the maximum users that can be connected to one group call using peer to peer architecture	SIM-15	Done	Medium
Create Face recognition model using tensor flow	SIM-16	Done	Medium
Analysis and implementation of facial recognition model using tensor flow	SIM-18	Done	Medium
Connect to Agora RTC Server to enable group video calling	SIM-25	Done	Medium
create tables and stored procedures to save and retrieve data	SIM-27	In Progress	Medium
ux changes for better interactivity	SIM-31	Done	Medium
Implement video conference ui using agora react component library	SIM-32	Done	Medium
Face recognition implementation using deepface	SIM-33	Done	Medium
Research on deepface	SIM-34	Done	Medium
Create a web api using flask to connect to face recognition code	SIM-35	Done	Medium
Implement face recognition in ui	SIM-36	Done	Medium

# Sprint Backlog

Summary	Issue key	Status
Implement UI to mark attendance	SIM-17	To Do
Test facial recognition model	SIM-19	In Progress
Enable attendance marking feature to room owners	SIM-20	To Do
Enable screen sharing feature	SIM-21	To Do
Test whole application and implementation of auto attendance system	SIM-22	To Do
create tables and stored procedures to save and retrieve data	SIM-27	In Progress
Technical paper and documentation	SIM-28	To Do
Deployment Procedure	SIM-29	To Do
Test of whole application functionality	SIM-30	To Do

# Retrospective

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What went well:

Team completed all the stories that were planned for the sprint and able to deliver work that met the requirements. Team successfully encountered unexpected challenges or obstacles during the sprint.

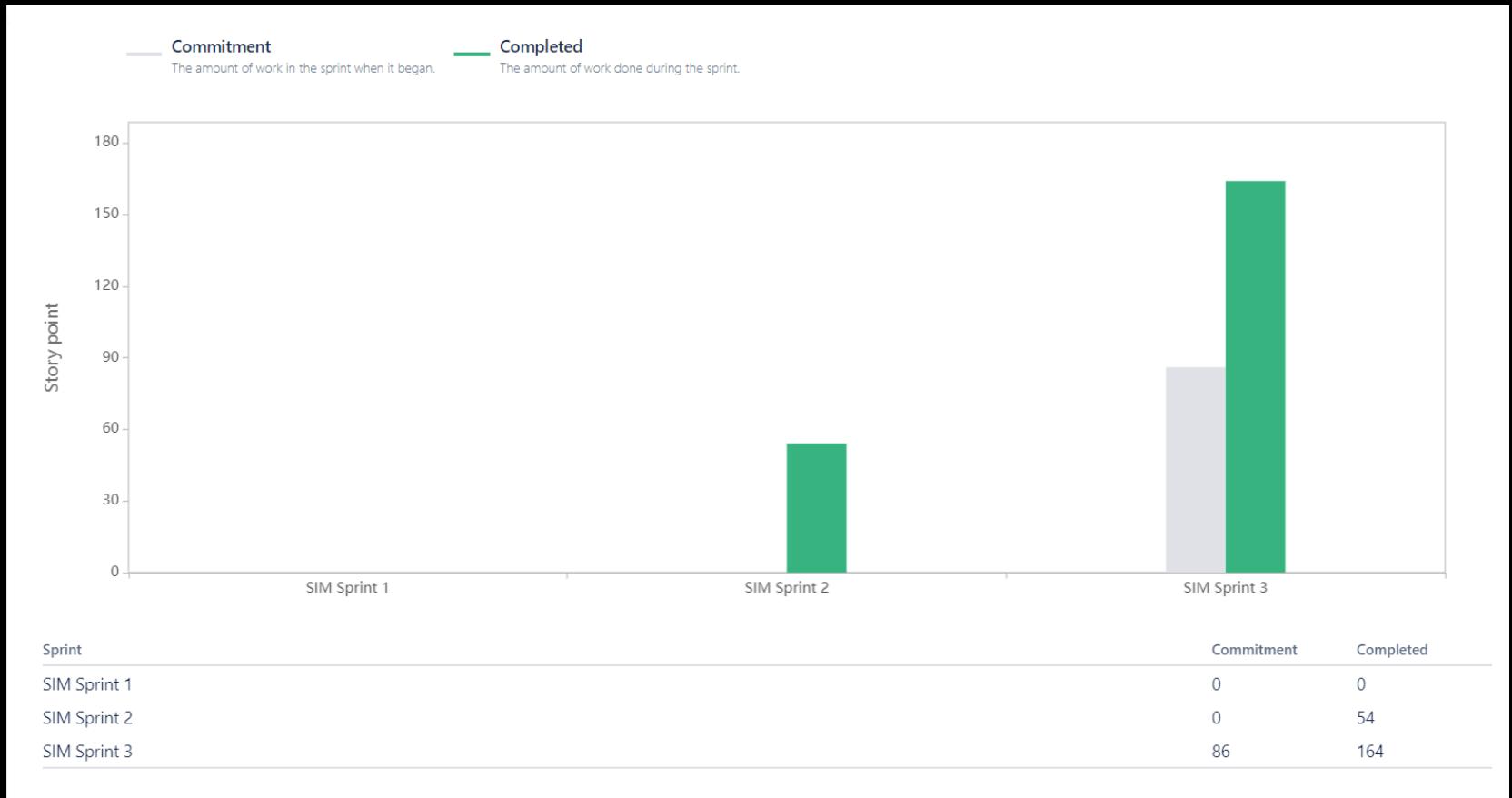
What needs to improve:

Team needs to be effectively collaborated and communicate with each other to ensure that the work should on time.

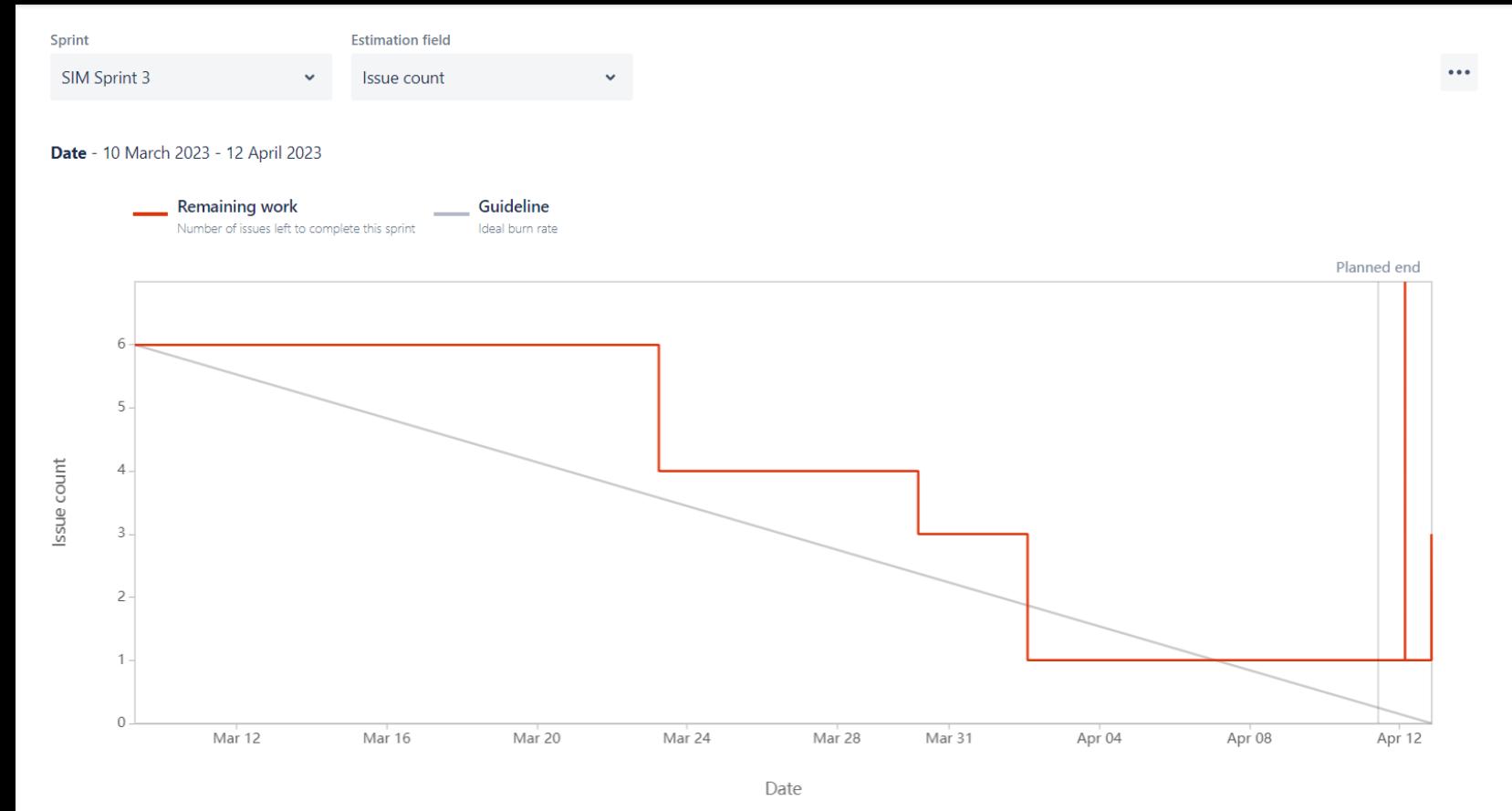


# Metrics

# Velocity Report



# Sprint Burndown Chart



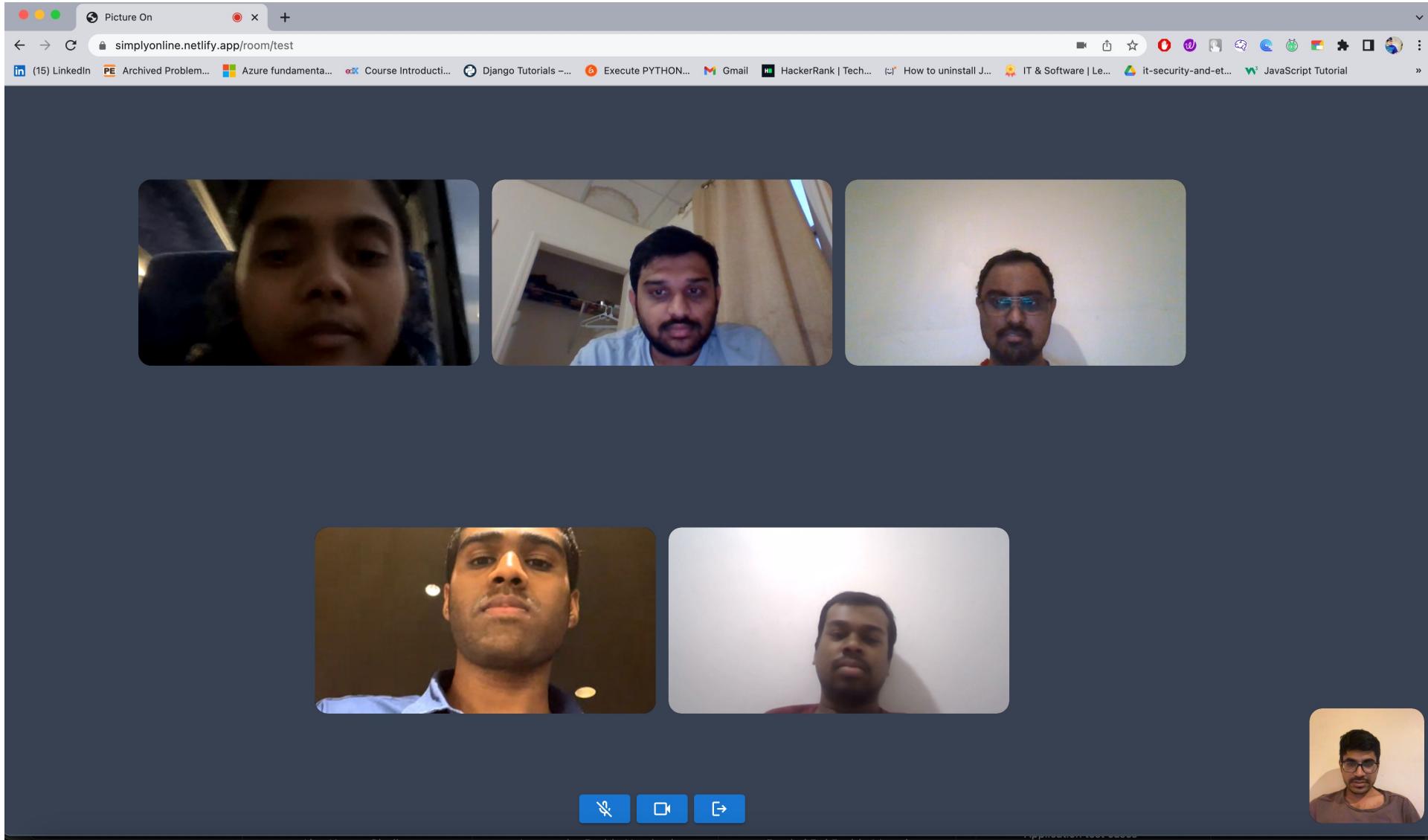
# Burnup Report



The background of the slide features a dense, shallow-focus arrangement of numerous stylized human figures in various colors (blue, orange, yellow, grey) and poses, creating a sense of a large group or community.

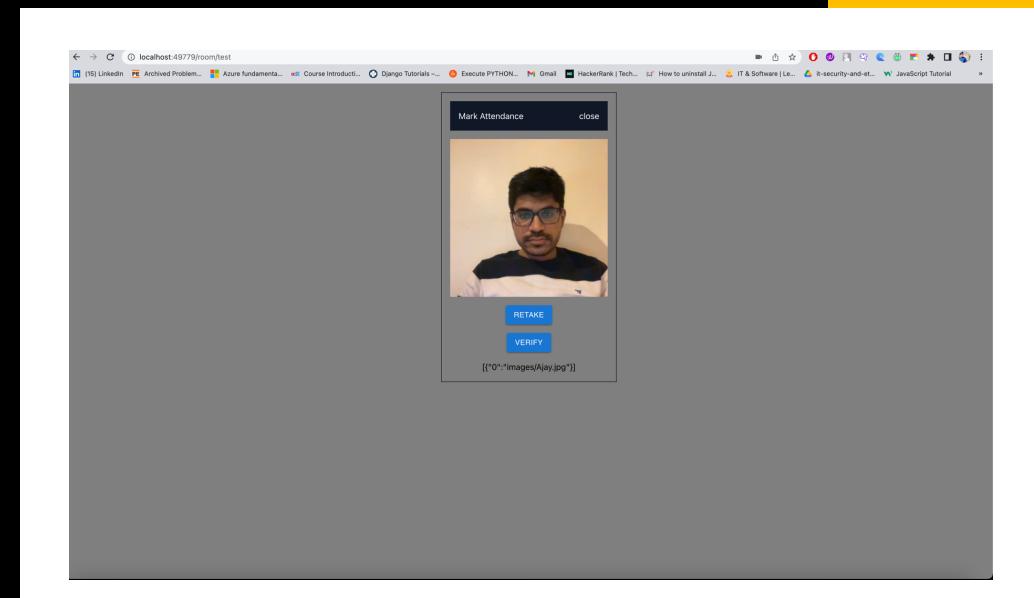
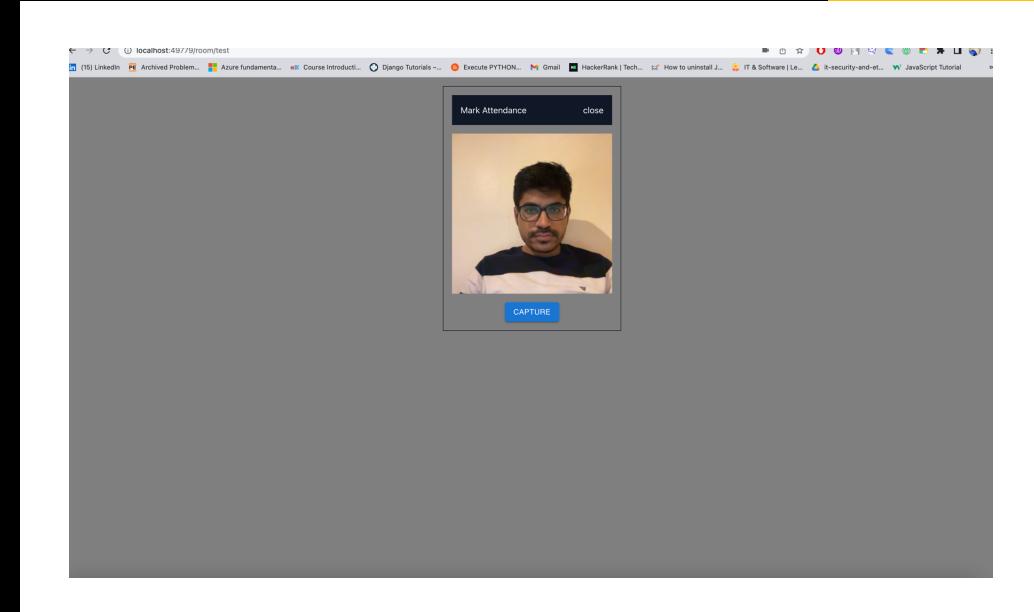
Group call

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# Mark Attendance/verify

- This screen allows user to capture the photo and verify that it is the same user or not



# Thank You