SYMBIOSIS INSTITUTE OF TECHNOLOGY (SIT)

PBL II Poster Presentation

Title: COLLABIO – "**Collaboration Made Easy**"

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INTRODUCTION

- Tired of the same old online meetings, just staring at a static grid of faces?
- Meet **Collabio** – a fun and easy 2D virtual platform that makes online teamwork more exciting and smooth for people around the world.
- Users move and jump around via arrows key and spacebar in a colorful 2D space, turning meetings into playful, creative sessions.
- It includes easy-to-use features like video calls that start when you're nearby, real-time whiteboards, global chat, video and chat summarization to make teamwork more lively and interactive.

OBJECTIVES & AIM

- Facilitate a simple create/join meeting flow for ease of use
- Utilize avatar-based movement for immersive virtual interactions
- Build a platform supporting up to 20 concurrent users
- Implement low-latency features for instant video calls and whiteboard syncing
- Add abstract backgrounds to make the virtual arena visually appealing
- Include video summarization to auto-record, transcribe, and generate meeting summaries
- Enable chat summarization for quick insights from text-based discussions
- Boost user engagement across educational, professional, and social collaborations
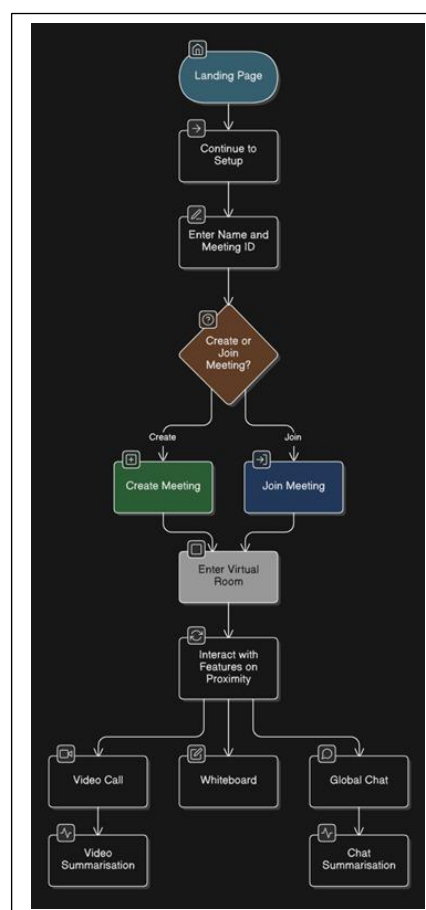
METHODOLOY AND IMPLEMENTATION

Fig 1: Depicts 3 Users in the space

Fig 2: When users (here, Nakul and Manu) move their avatars towards each other **as soon as the distance between avatars become less than 100 units, Video Call between the 2 users will start.**
It also supports multi User video calls, if for example 4-5 users come close to each other and distance between all of them is less than 100 units, **A group Video call will initiate between all 4-5 users**.
If the users want to disconnect the Video call they just have to move away and the call will be disconnected.
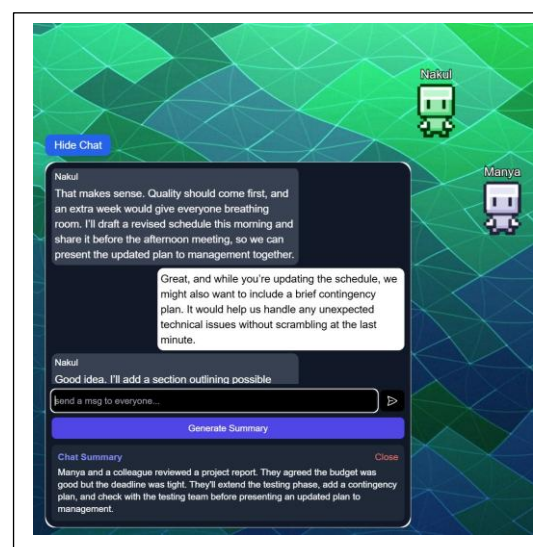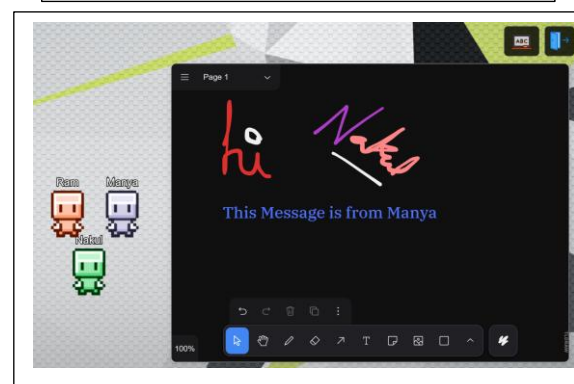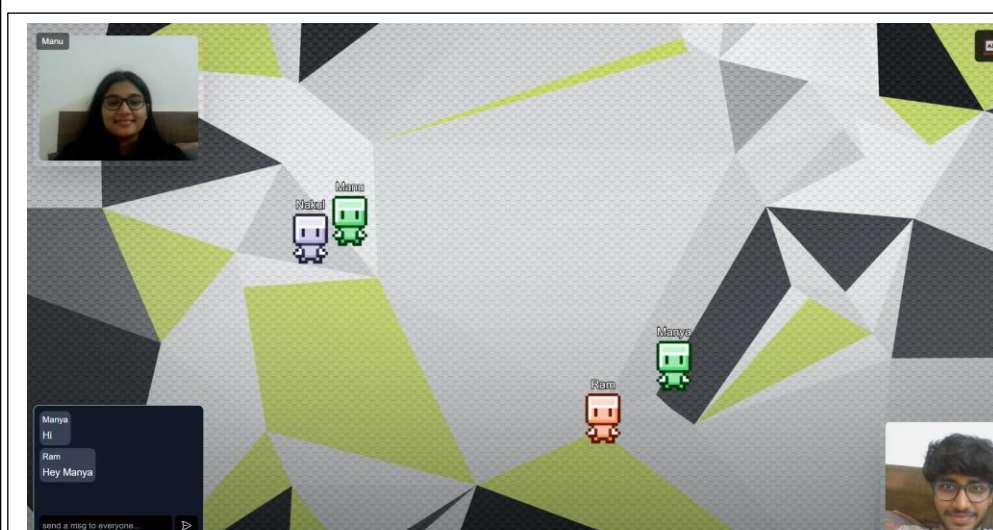
Fig 3: This image depicts a general Feature, this Chatbox is a global chatting system that sends message to all the users in the room irrespective of their distance, you can generate summary of the previous chats as well.

Fig 4: When In proximity, multiple users can draw and be creative on a Synced Whiteboard across all devices
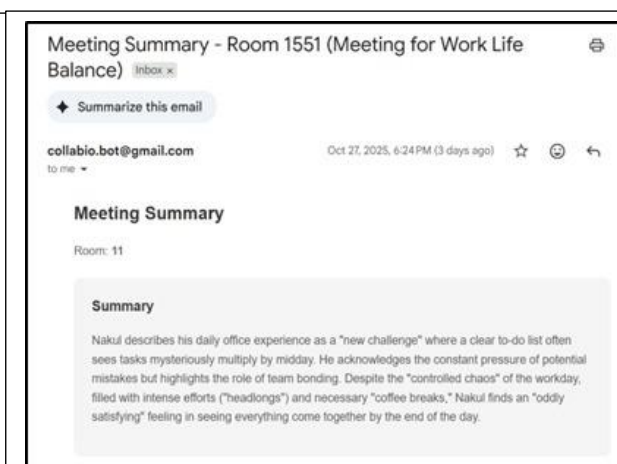
Fig 5: Video Summarization:
When users meet, a LiveKit session records and stores video in GCS, where speech-to-text and NLP summarization generate a brief summary emailed to participants.

Dive into our Virtual meeting Platform @ **collabio.life**

RESULTS AND CONCLUSION

Collabio delivers a dynamic and accessible platform that outperforms traditional tools like Zoom. With low-latency video, avatar-based navigation, and real-time collaboration, it offers a natural and engaging teamwork experience.
It addresses the core problem by enabling proximity-based interaction, spatial collaboration, browser accessibility, and AI-powered video and chat summarization with automated email insights.
Despite challenges in mobile optimization and LiveKit integration, Collabio proves the strength of combining WebRTC, Socket.io, and Tldraw with AI automation offering an innovative, scalable, and intelligent collaboration experience.

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