

**CAPSTONE PROJECT
ON
“TALKSPACE”**

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Certificate

This is to certify that,

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Students of **CO6-I** (2023-2024) have successfully completed Project on "**TALKSPACE**", under the guidance of **Mr. Swapnil Suryavanshi** in partial fulfilment of the requirement for the award of diploma computer engineering from Maharashtra State Board of Technical Education, Mumbai at Government Polytechnic, Jalgaon.

Prof. Swapnil Suryavanshi

GUIDE

Dr. P. P. Chaudhari Sir

HOD

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PRINCIPAL

INDEX

Table of Contents

SR NO	Topics	PAGE NO
1	ACKNOWLEDGEMENT	
2	ABSTRACT	
3	CHAPTER 1 : INTRODUCTION	
4	CHAPTER 2 : PROJECT PLAN	
5	CHAPTER 3 : PROJECT REQUIREMENT	
6	CHAPTER 4 : PROJECT DESIGN	
	4.1 Risk Projection	
	4.2 Feasibility Study	
	4.3 E-R Diagram & Use case Diagram	
7	CHAPTER 5 : SYSTEM DEVELOPMENT	
	5.1 Source Code	
	5.2 Outputs	
8	CHAPTER 6 : SYSTEM TESTING	
9	CHAPTER 7 : FUTURE SCOPE	
10	CHAPTER 8 : CONCLUSION	
11	CHAPTER 9 : REFERENCE	

Table of Diagrams

SR NO	Topics	PAGE NO
1	FESIBILITY STUDY	
2	E-R DIAGRAM	
3	USE CASE DIAGRAM	
4	SYSTEM DEVELOPMENT	

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ABSTRACT

Talkspace offers a transformative approach to mental health care via its video conferencing web-based application. By eliminating geographical barriers, Talkspace enhances accessibility, enabling individuals to connect with licensed therapists anytime, anywhere. This convenience fosters consistent engagement, encouraging users to prioritize their mental well-being within their daily routines. Through personalized treatment plans and secure, confidential interactions, Talkspace ensures tailored therapeutic experiences that address individuals' unique needs and preferences. Empirical evidence and user testimonials attest to Talkspace's efficacy in tackling diverse mental health concerns, from anxiety to relationship issues.

Moreover, with stringent privacy measures and encryption protocols, Talkspace prioritizes user confidentiality and security. Looking ahead, the potential for video conferencing web-based applications in mental health care is vast, promising further innovation and improved access. Talkspace stands at the forefront of this evolution, heralding a future where mental health support is readily available, personalized, and inclusive, ultimately empowering individuals to lead happier, healthier lives.

Talkspace's user-friendly interface and intuitive platform design facilitate seamless navigation, ensuring a hassle-free experience for users seeking support. By integrating therapy sessions into individuals' daily lives, Talkspace promotes consistent engagement and progress, fostering positive outcomes over time.

Chapter 1:

INTRODUCTION

In an era defined by remote work and virtual communication, the demand for innovative video conferencing solutions has never been greater. Similar to platforms like Zoom and Google Meet, Talkspace introduces a video conferencing web application tailored specifically for commercial use, targeting college students and employees alike. This project aims to provide a comprehensive overview of Talkspace's features, benefits, and implications in the realm of remote communication and collaboration.

At its core, Talkspace seeks to address the unique needs and challenges faced by college students and employees in today's dynamic and fast-paced environment. Recognizing the increasing prevalence of remote learning and telecommuting, Talkspace offers a user-friendly and intuitive platform designed to enhance connectivity, productivity, and engagement among users.

One of the key pillars of Talkspace's value proposition is its emphasis on accessibility and convenience. By providing a seamless and flexible means of communication, Talkspace enables college students and employees to connect and collaborate with ease, regardless of their physical location or time zone. Whether attending virtual lectures, participating in group projects, or conducting team meetings, Talkspace empowers users to stay connected and productive from anywhere, at any time.

Moreover, Talkspace prioritizes personalization and customization to cater to the diverse needs and preferences of its users. Through customizable features and settings, users have the flexibility to tailor their virtual workspace according to their specific requirements, fostering a more personalized and engaging user experience. Whether adjusting video layouts, sharing screen content, or integrating third-party applications, Talkspace provides users with the tools they need to optimize their virtual interactions.

Security and privacy are paramount considerations in Talkspace's design and implementation. Robust encryption protocols and stringent privacy measures are employed to safeguard sensitive information and protect users' confidentiality. By prioritizing security, Talkspace instills trust and confidence among users, facilitating open and secure communication and collaboration.

Empirical evidence and user testimonials support the effectiveness and value of Talkspace in enhancing remote communication and collaboration for college students and employees. Studies have demonstrated the positive impact of virtual communication tools on productivity, engagement, and overall satisfaction in educational and professional settings. User feedback further underscores the convenience, accessibility, and efficiency of Talkspace in facilitating seamless and effective remote interactions.

Chapter 2:

PROJECT PLAN

- 1) Define Project Objective, Scope and deliverables.
- 2) Market Research and Analysis.
- 3) Platform Development.
- 4) User Experience Optimization.
- 5) Test the system by preparing relevant test cases.

Chapter 3:

PROJECT REQUIREMENT

This chapter will provide a full description of the system and its users. Then it depicts the functional and non-functional requirements that have been collected. After determining the most important requirements, requirement analysis was adopted using several tools such as data flow diagram.

3.1 System description

Talkspace is a video conferencing web application designed for commercial use, specifically targeting college students and employees. It allows users to connect remotely for virtual meetings, collaborative work sessions, and educational purposes. The platform prioritizes accessibility, security, and user experience.

3.2 System Requirements

1. Internet Connection: Users must have a stable internet connection to access the platform and participate in video conferences.
2. Audio and Video Capabilities: Users' devices must have functioning audio and video capabilities to participate in video conferences.
3. User Account: Users must create an account and log in to access Talkspace's features and functionalities.

3.2.1 Functional Requirements:

1) Admin

- User management
- Data analysis
- User Authentication
- Track application behaviour

2) User

- Create Meeting/Join
- Able to SignUp/Login
- Access Provided Features

3.2.2 -Functional Non Requirements

1. The platform does not support voice-only calls; it is specifically designed for video conferencing.
2. Talkspace does not include social networking features unrelated to professional or educational purposes.
3. The platform does not support offline functionality; users must have an internet connection to access Talkspace.

3.2 Hardware Requirements

- Chromium browser -> Chrome version 96.0 and above
- Desktop -> Windows 11
- RAM experience -> 1GB and above for better

3.3 Software requirements

- Visual studio
- Python Django
- HTML & CSS
- Bootstrap

Chapter 4:

PROJECT DESIGN

The project design for Talkspace revolves around creating a comprehensive and user-centric video conferencing web application tailored for commercial use, targeting college students and employees. At its core, the user interface design is pivotal, striving to provide an intuitive and visually appealing interface that facilitates effortless navigation and engagement. Through a clean and modern design aesthetic, Talkspace aims to cultivate a user experience that promotes ease of use and accessibility across various devices and screen sizes. Emphasis is placed on responsive design principles to ensure consistency and usability regardless of the platform or device being utilized.

Risk Protection

Risk protection is integral to ensuring the success and resilience of Talkspace. Comprehensive risk management strategies must be implemented to identify, assess, and mitigate potential threats that could impede the project's objectives. Firstly, rigorous risk identification is crucial. This involves a meticulous examination of various risk categories, including technical, financial, regulatory, and operational risks. Through stakeholder consultations, historical data analysis, and risk assessments, potential vulnerabilities can be identified, enabling proactive measures to be put in place. Once risks are identified, a robust risk mitigation plan should be developed. This plan outlines strategies to minimize the impact of identified risks. It includes preventive measures to mitigate risks before they materialize, as well as contingency plans to address risks if they do occur. For instance, implementing redundant systems or backup solutions can mitigate the risk of technical failures impacting service availability.

Security measures play a pivotal role in risk protection, particularly concerning the protection of sensitive user data. Encryption, access controls, and regular security audits are imperative to safeguard against unauthorized access or data breaches.

4.2 Feasibility Study:-

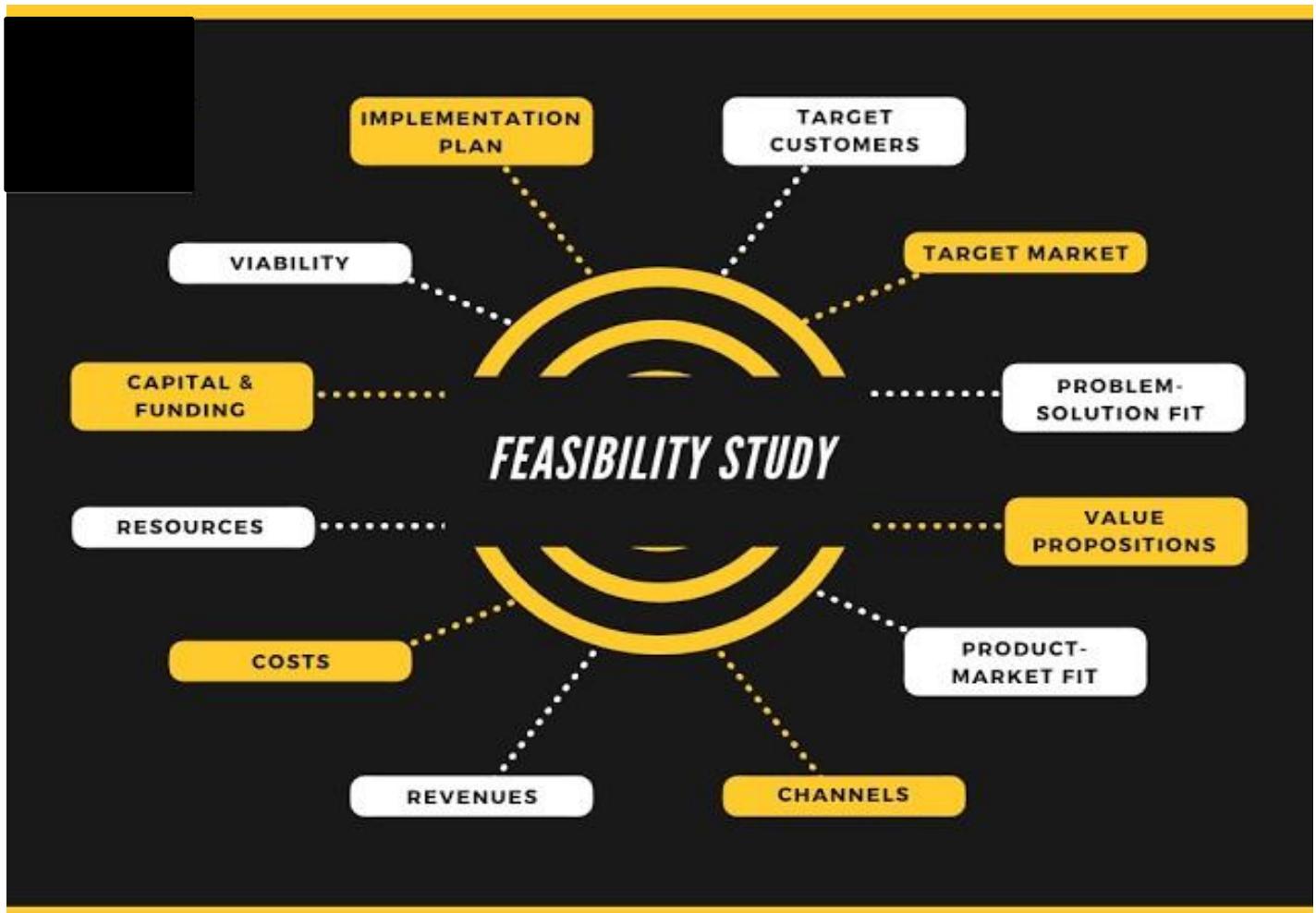


Fig 1.1

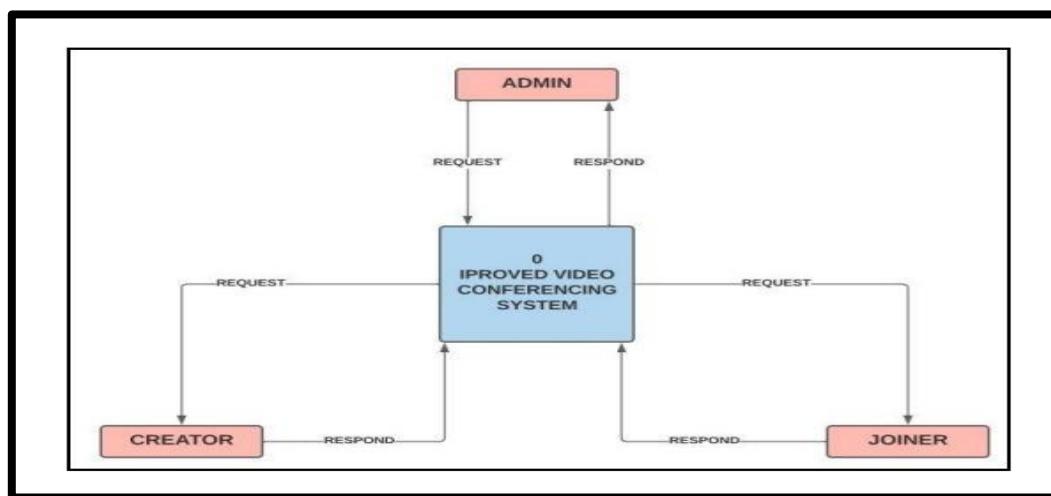
- **Technical feasibility** is the process of figuring out how you're going to produce your product or service to determine whether it's possible for your company. Before launching your offerings, you must plan every part of your operations, from first sourcing your production materials all the way to tracking your sales.

- **Financial feasibility** means the ability of a project to achieve sufficient income, credit, and cash flow to financially sustain the project over the long term and meet all debt obligations.

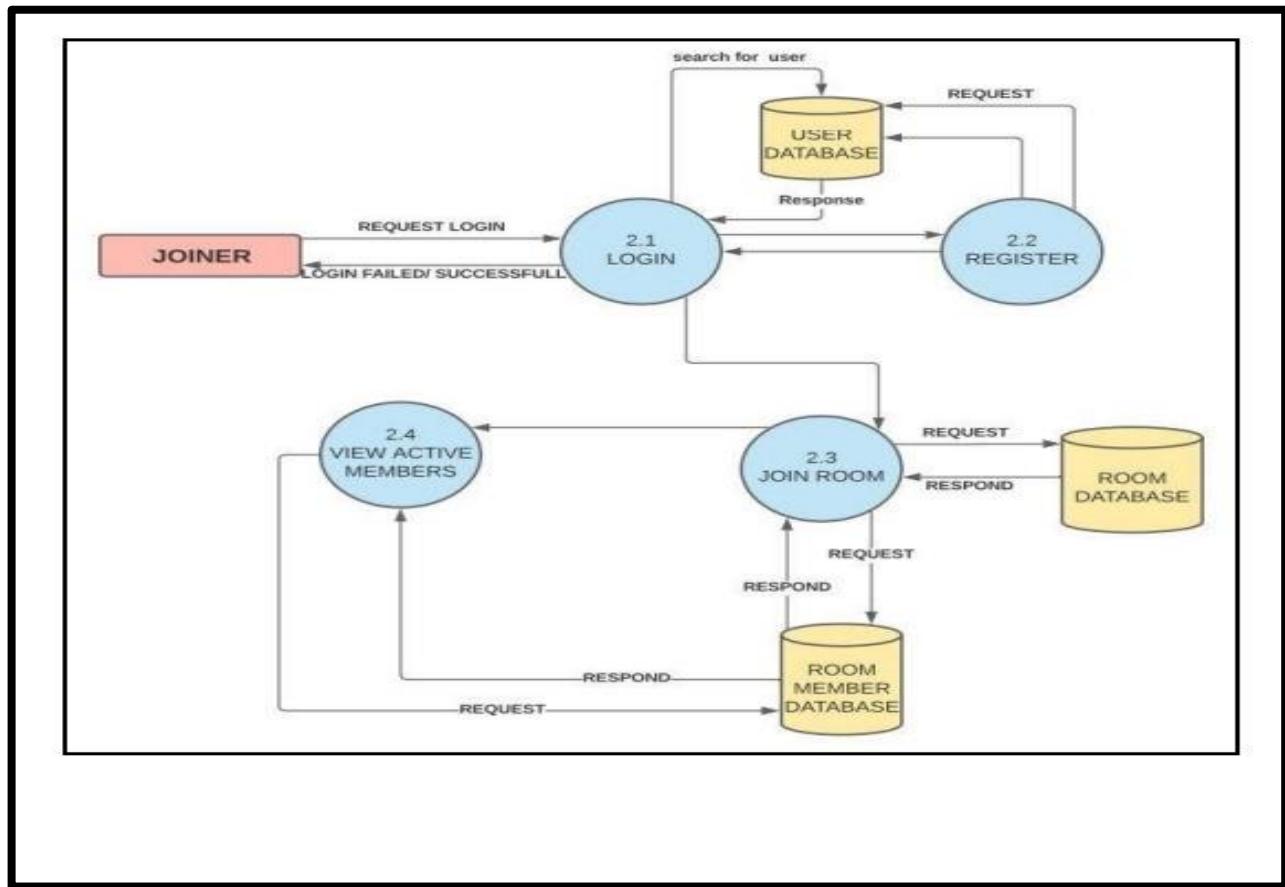
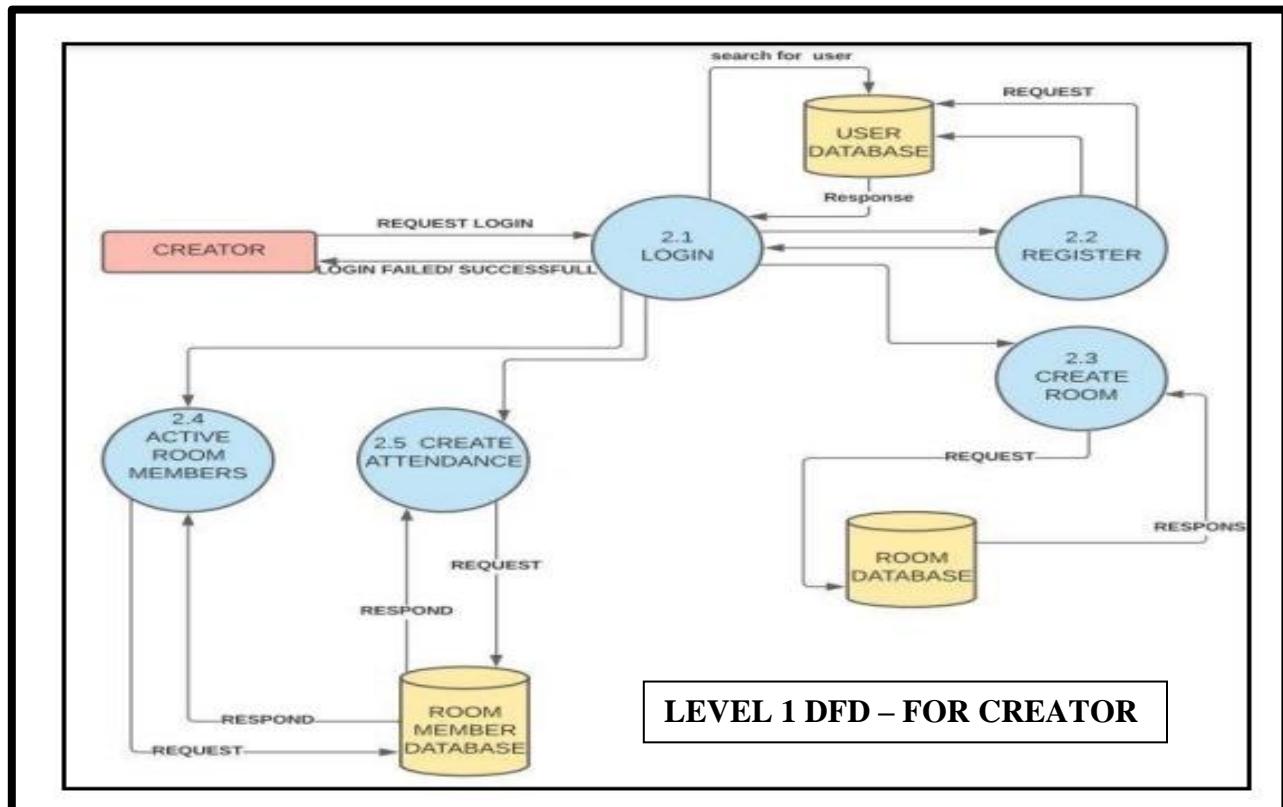
- **Operational feasibility** is the measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.

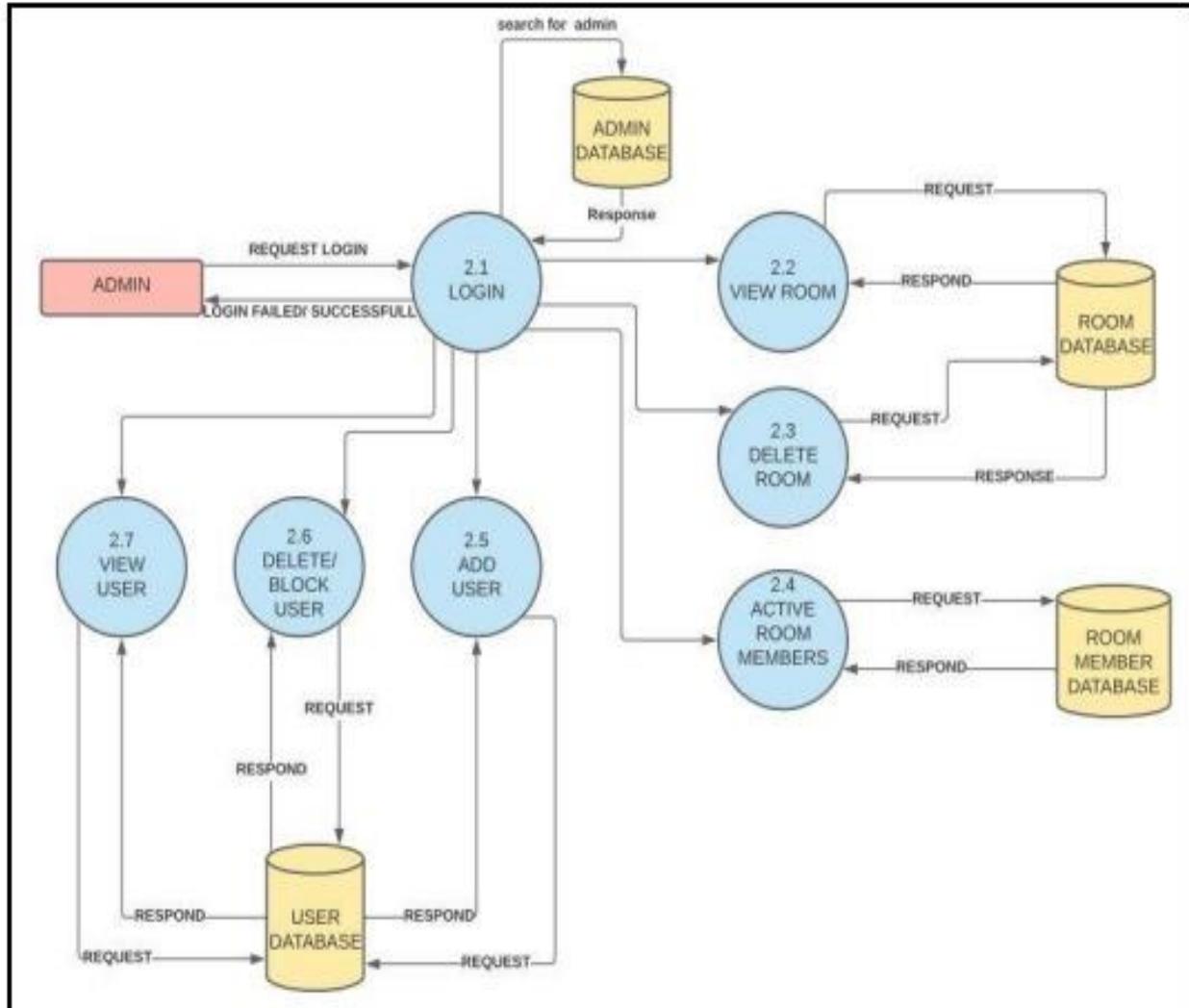
- **Resource Feasibility** This aspect looks at the resources that are required to complete the project and whether the amount of available resources are sufficient to complete the project effectively.

- **Data Flow Diagram**



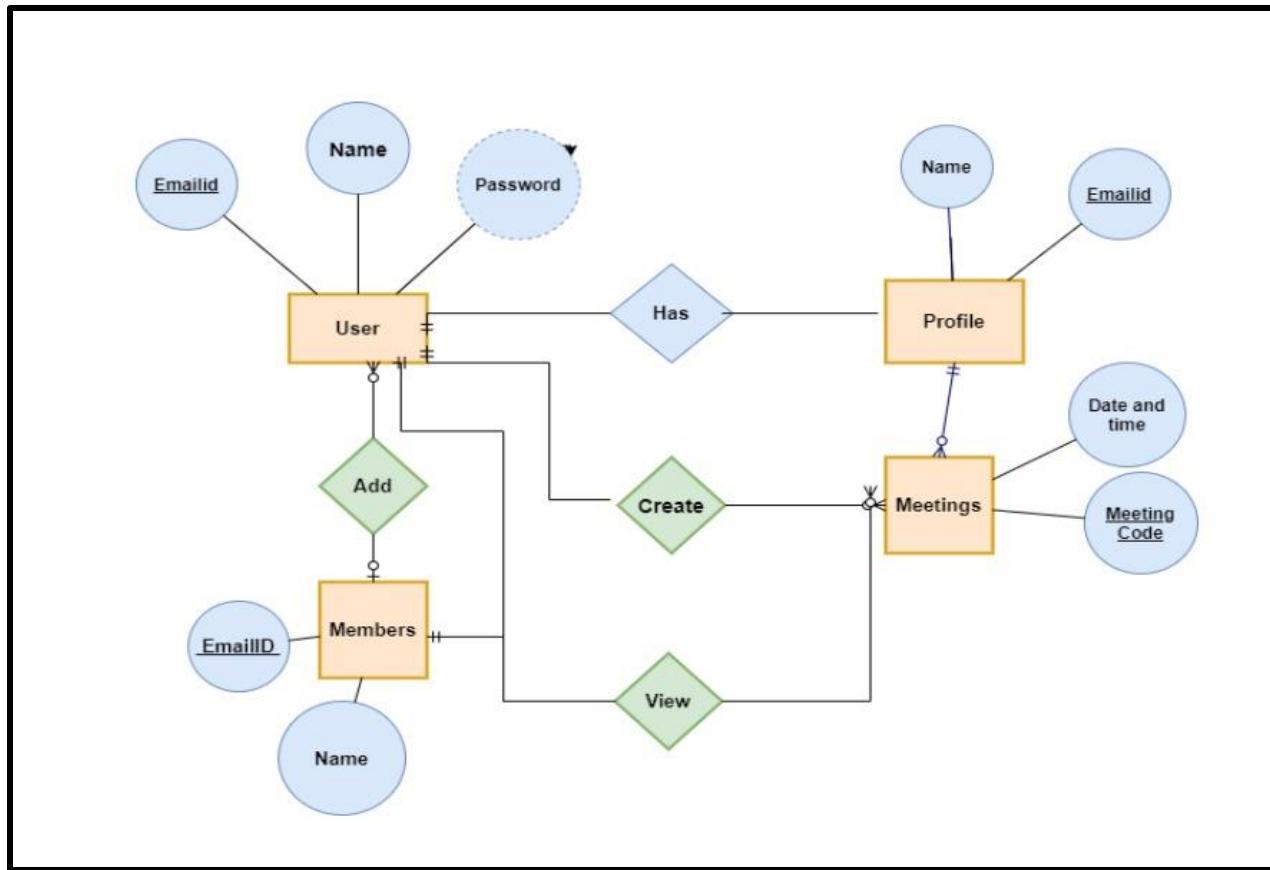
LEVEL 0 DFD – TALK SPACE



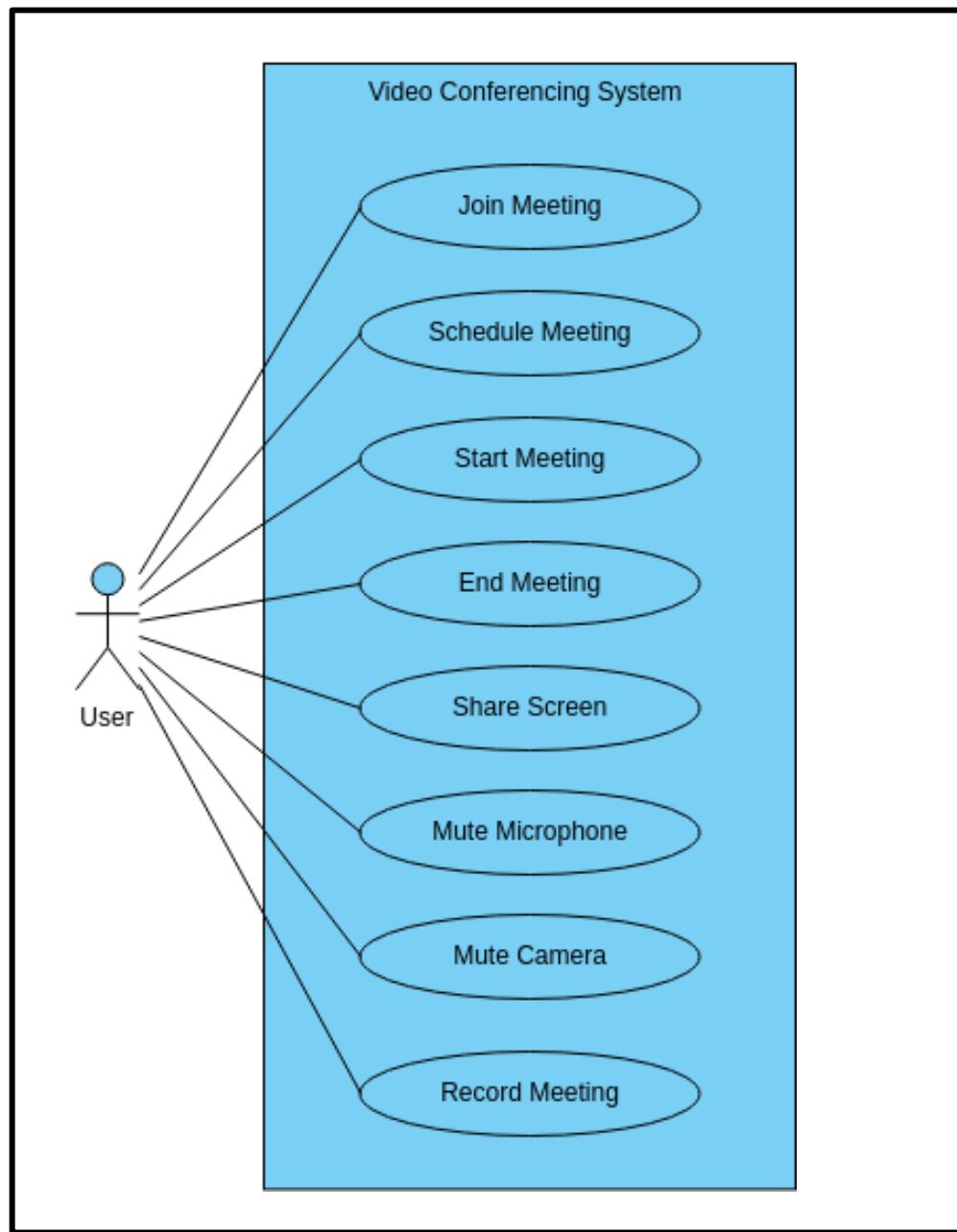


LEVEL 3 DFD – FOR ADMIN

➤ ER Diagram



➤ Use Case Diagram



Chapter 5:

SYSTEM DEVELOPMENT

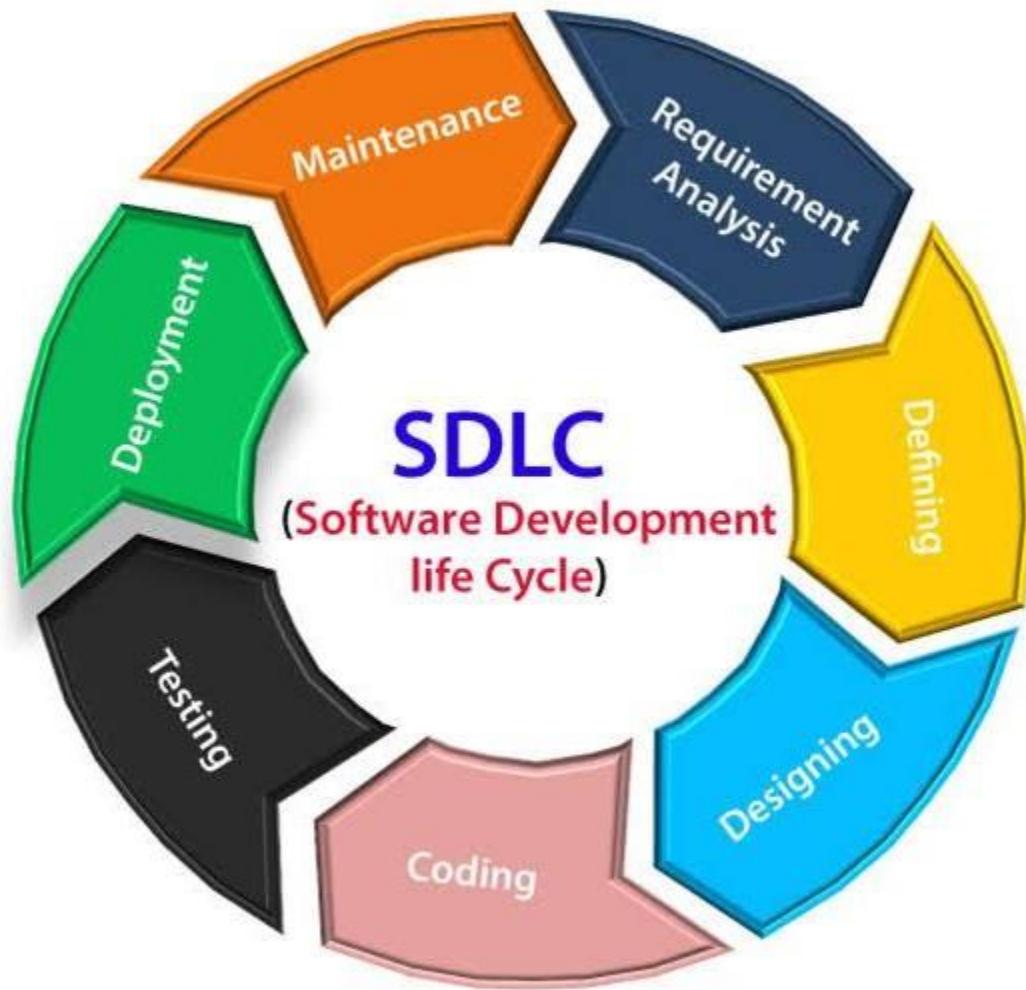


Fig 1.4

The stages of SDLC are as follows:

Stage 1: Planning and requirement analysis

Requirement Analysis is the most important and necessary stage in SDLC.

The senior members of the team perform it with inputs from all the stakeholders and domain experts or SMEs in the industry.

Planning for the quality assurance requirements and identifications of the risks associated with the projects is also done at this stage.

Business analyst and Project organizer set up a meeting with the client to gather all the data like what the customer wants to build, who will be the end user, what is the objective of the product. Before creating a product, a core understanding or knowledge of the product is very necessary.

Stage 2: Defining Requirements

Once the requirement analysis is done, the next stage is to certainly represent and document the software requirements and get them accepted from the project stakeholders.

This is accomplished through "SRS"- Software Requirement Specification document which contains all the product requirements to be constructed and developed during the project life cycle.

Stage 3: Designing the Software

The next phase is about to bring down all the knowledge of requirements, analysis, and design of the software project. This phase is the product of the last two, like inputs from the customer and requirement gathering.

Stage 4: Developing the project

In this phase of SDLC, the actual development begins, and the programming is built.

The implementation of design begins concerning writing code. Developers have to follow the coding guidelines described by their management and programming tools like compilers, interpreters, debuggers, etc. are used to develop and implement the code.

Stage 5: Testing

After the code is generated, it is tested against the requirements to make sure that the products are solving the needs addressed and gathered during the requirements stage.

During this stage, unit testing, integration testing, system testing, acceptance testing are done.

Stage 6: Deployment

Once the software is certified, and no bugs or errors are stated, then it is deployed. Then based on the assessment, the software may be released as it is or with suggested enhancement in the object segment. After the software is deployed, then its maintenance begins.

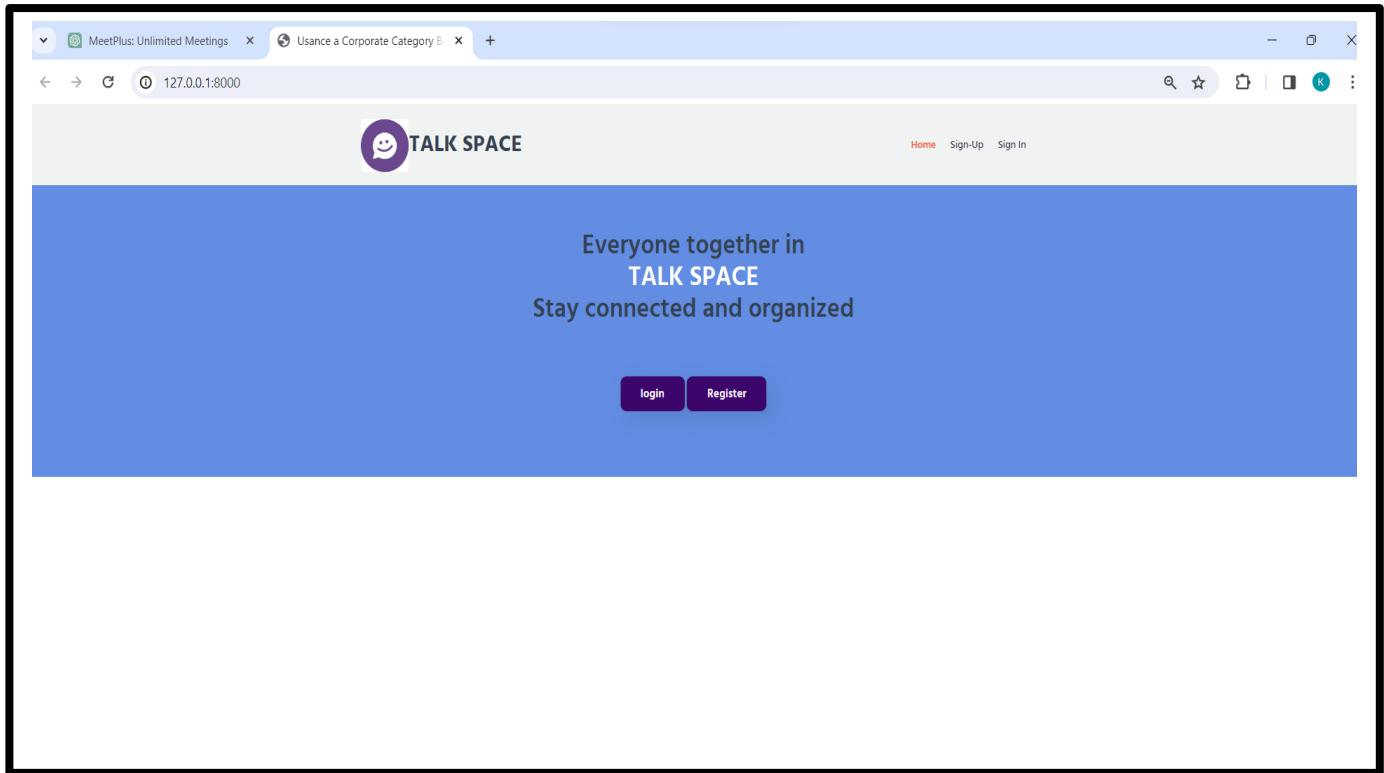
Stage 7: Maintenance

Once when the client starts using the developed systems, then the real issues come up and requirements to be solved from time to time.

This procedure where the care is taken for the developed product **is known as maintenance.**

5.1 OUTPUTS:

➤ Home Page View



➤ Register section view

A screenshot of the 'Talk Space' register form. The form is titled 'Register' and includes fields for User name (Kandarp), Email address (kandarp@gmail.com), First name (Kandarp), Last Name (Patil), Password (redacted), and confirm Password (redacted). There are 'SUBMIT' and 'ALREADY HAVE AN ACCOUNT? LOGIN' buttons at the bottom.

➤ Login section view

The screenshot shows the 'Login' page of the Talk Space website. At the top, there is a navigation bar with links for 'Home', 'Sign-Up', and 'Sign In'. The main area features a 'Login' form with fields for 'Enter Name' (containing 'Kandarp') and 'Enter Password' (containing '....'). Below the form are 'SIGN IN' and 'REGISTER' buttons. Further down, there are three colored boxes representing office locations: 'Jaigaon Office' (red), 'Nashik Office' (teal), and 'New York Office' (yellow). Each box contains the office name, address, phone number, and email. At the bottom, a map shows the location of SUMAGO INFOTECH PVT LTD in Jaigaon, Nashik.

The screenshot shows the 'Welcome' page of the Talk Space website. The header includes the 'TALK SPACE' logo and navigation links for 'Home', 'Services', 'Profile', and 'Log-Out'. The main content area displays a large teal 'Welcome ,Kandarp!' message. Below it, there are two input fields: one for 'Enter Name' (containing 'Kandarp') and another for 'Enter Room ID :' (containing '100'). At the bottom are two teal buttons: 'SUBMIT' and 'GENERATE MEETING'.

 TALK SPACE

Home Services Profile Log-Out

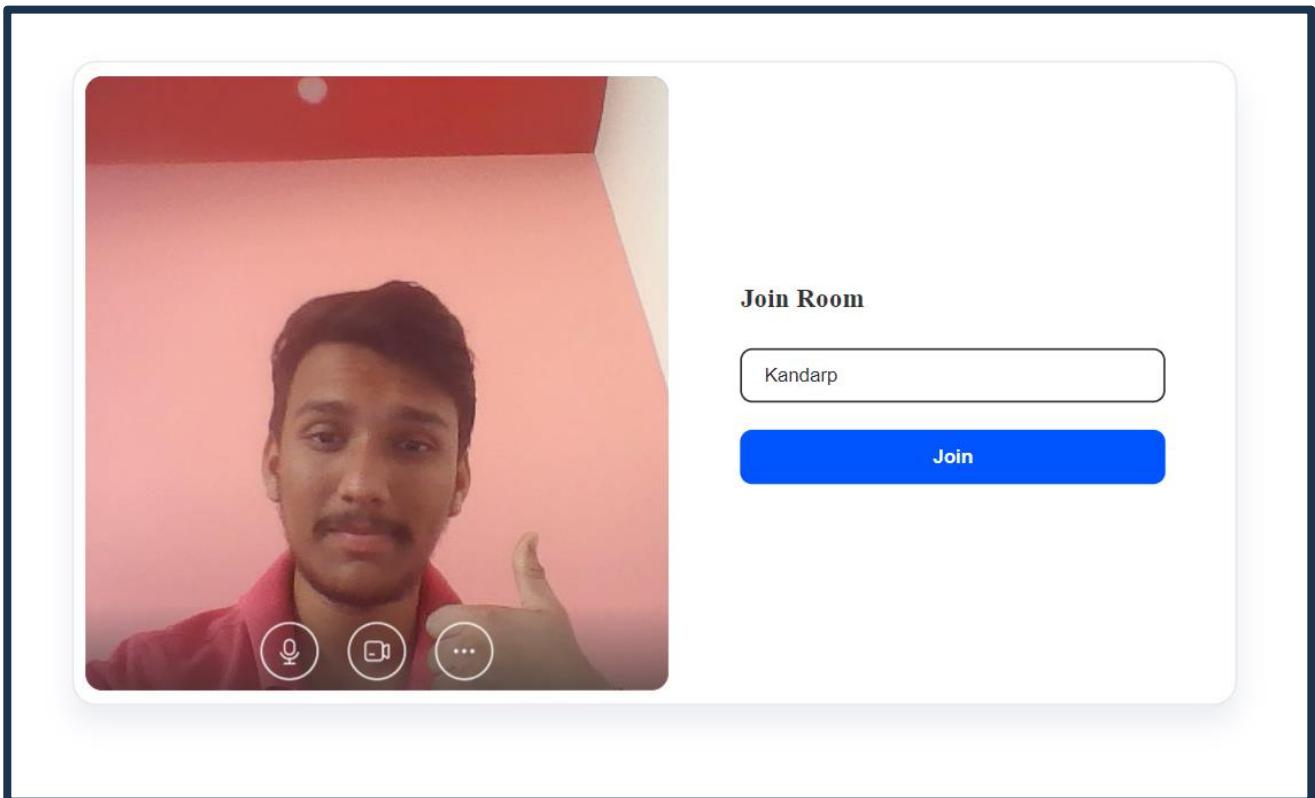
Meeting Is Not Yet Started!! Generate One To Join

Enter Name

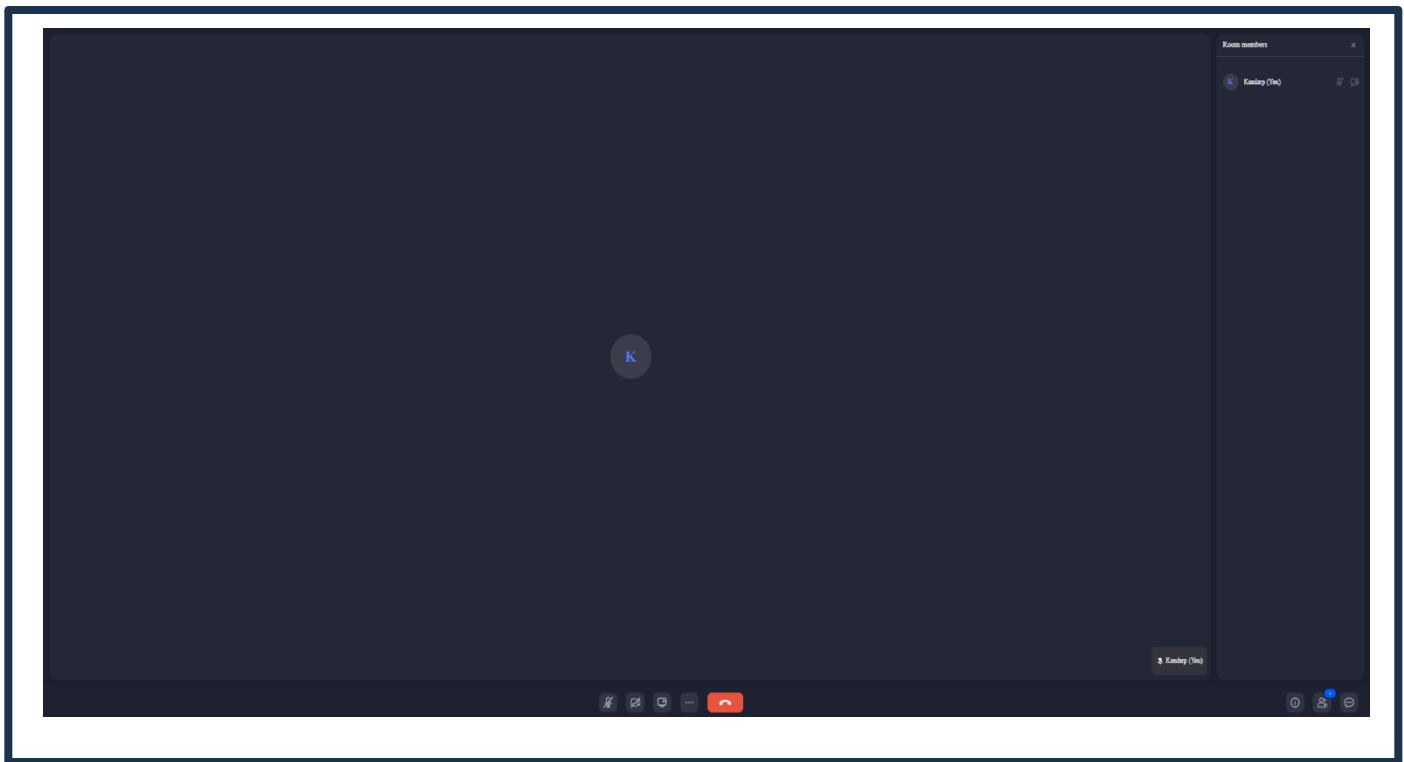
Enter Room ID :

SUBMIT **GENERATE MEETING**

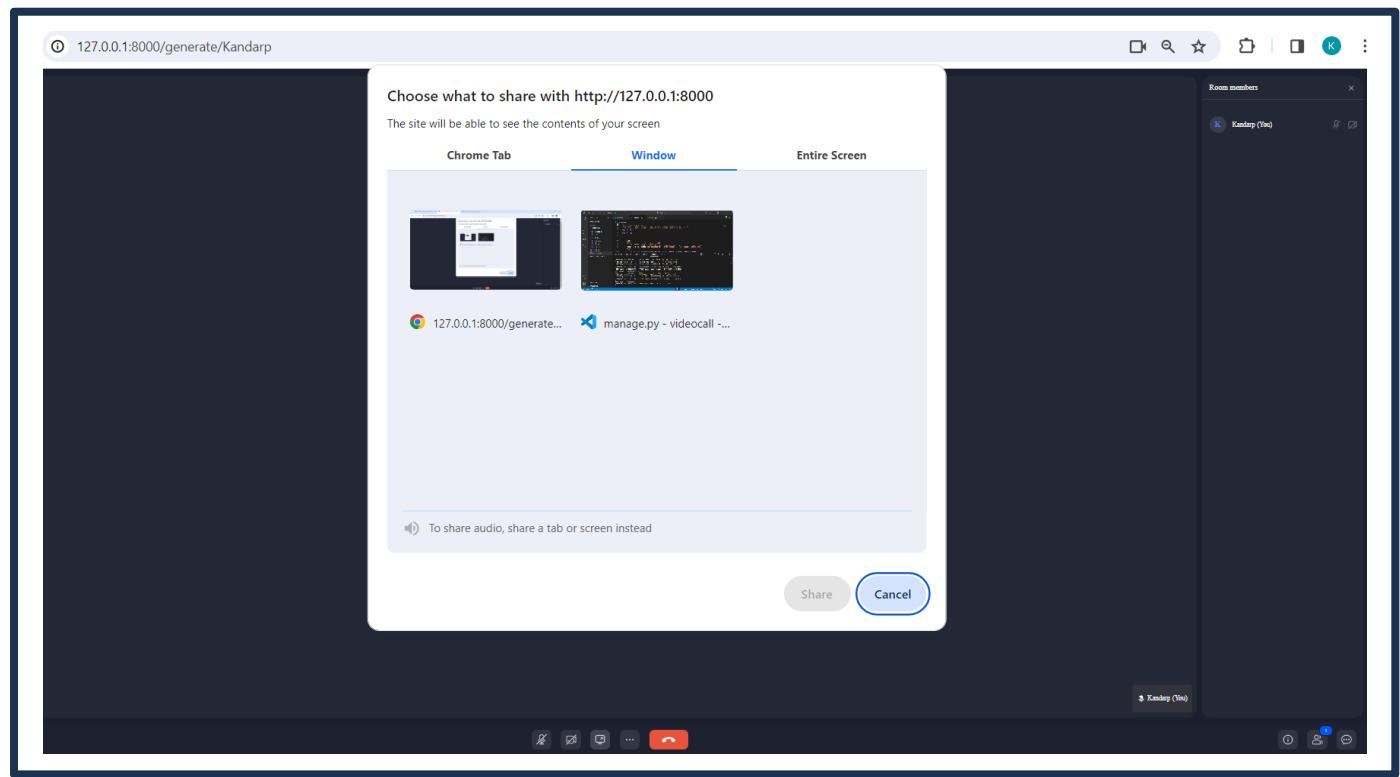
➤ Meeting room



➤ Meeting joined

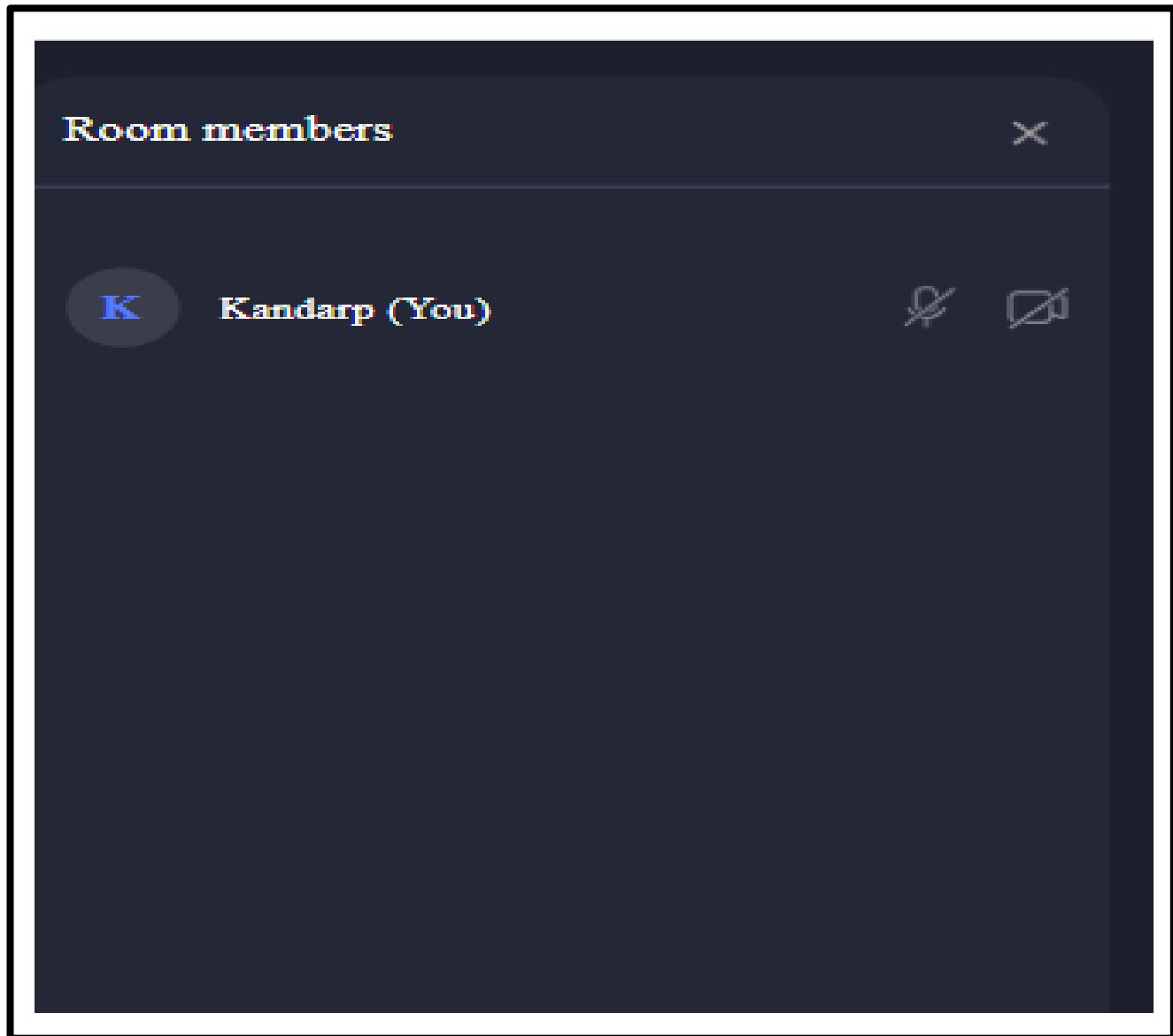


➤ Sharing screen

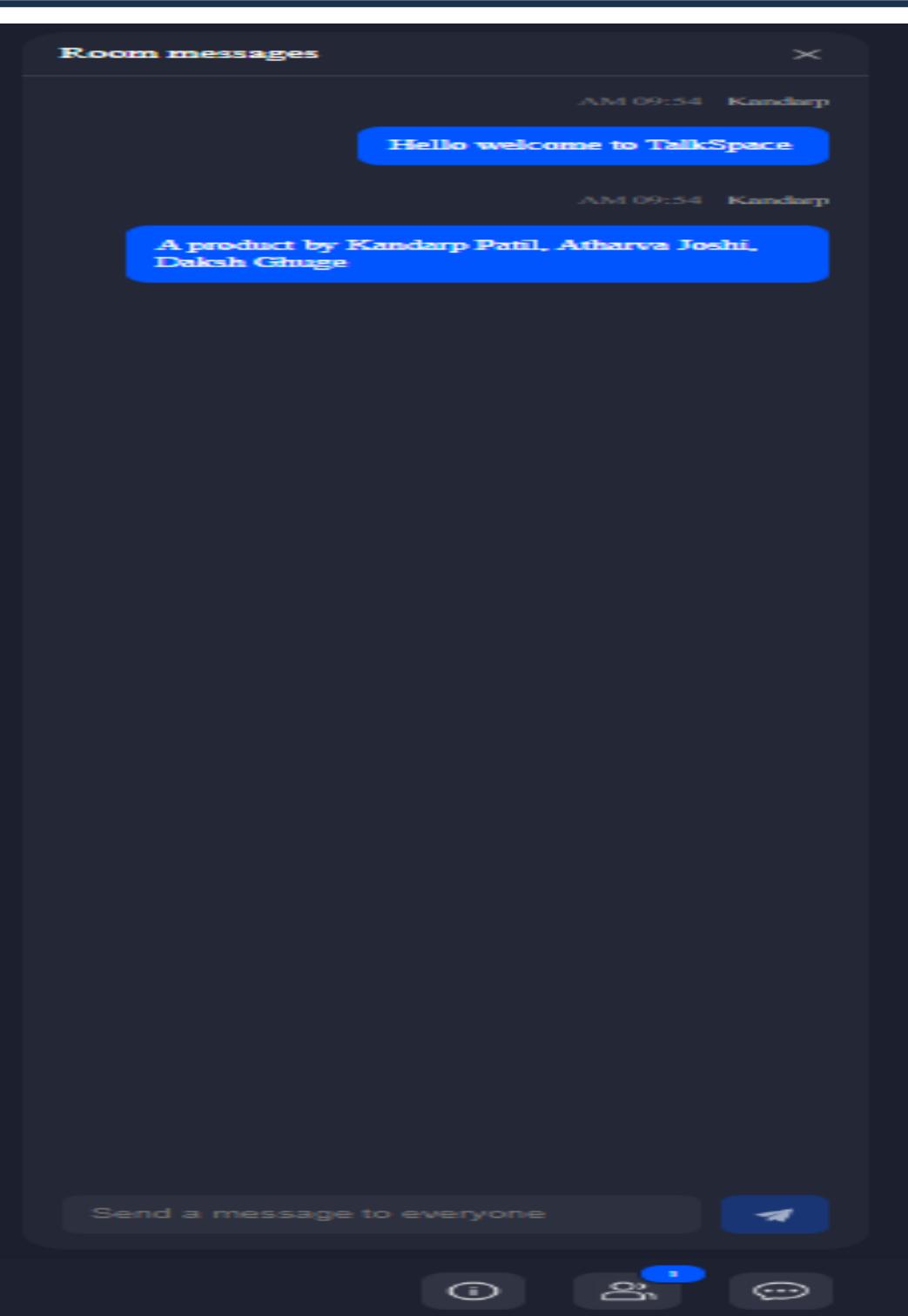


Meeting Room

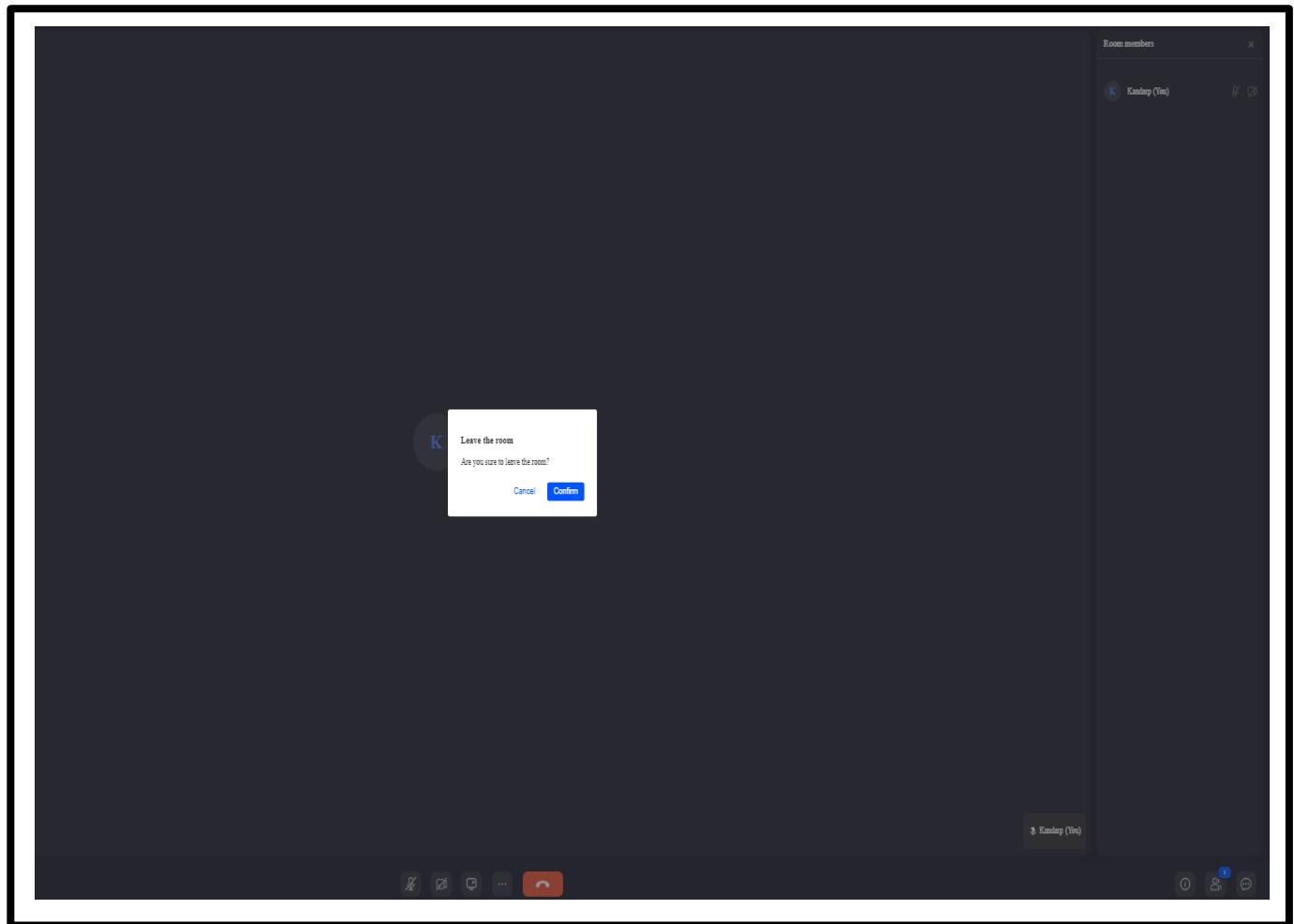
➤ Room members



➤ Chat room



➤ Leave meeting



➤ Database

The screenshot shows the phpMyAdmin interface for the 'chatbot' table in the 'chat1' database. The table has two columns: 'id' and 'queries'. There are 20 rows of data, each containing a question and its corresponding answer.

id	queries	replies
1	What is the definition of health?	Health is a state of complete physical, mental, an...
2	How can I maintain a healthy lifestyle?	A healthy lifestyle includes regular exercise, a b...
3	What is the role of genetics in human health?	Genetics plays a significant role in determining s...
4	What are the common symptoms of infectious disease...	Symptoms vary, but common ones include fever, fati...
5	How can one prevent the spread of infectious disea...	Practicing good hygiene, washing hands regularly, ...
6	What is the importance of vaccinations?	Vaccinations protect against infectious diseases b...
7	How does stress affect health?	Chronic stress can lead to various health issues, ...
8	What is the significance of a balanced diet?	A balanced diet provides essential nutrients for t...
9	How does exercise benefit health?	Regular exercise improves cardiovascular health, s...
10	What are the risk factors for chronic diseases lik...	Risk factors include poor diet, lack of physical a...
11	How does sleep impact health?	A proper amount of quality sleep is crucial for ph...
12	What are the warning signs of a heart attack or st...	Warning signs include chest pain or discomfort, sh...
13	How does mental health affect overall well-being?	Mental health is integral to overall health. Menta...
14	What are the effects of smoking on health?	Smoking is a major risk factor for various disease...
15	How can one promote good mental health?	Strategies include maintaining social connections,...
16	What are the key components of a healthy cardiovas...	A healthy cardiovascular system includes a strong ...
17	How does diabetes affect the body?	Diabetes results in high blood sugar levels, which...
18	What is the role of cholesterol in health?	Cholesterol is a fatty substance necessary for bu...
19	How does the immune system work to protect the bod...	The immune system defends the body against pathoge...
20	What is the connection between obesity and health ...	Obesity is linked to various health problems, incl...

The screenshot shows the phpMyAdmin interface for the 'dataset' table in the 'chat1' database. The table has two columns: 'Name' and 'description'. There are 26 rows of data, each containing a condition name and its detailed description.

Name	description
Drug Reaction	An adverse drug reaction (ADR) is an injury caused...
Malaria	An infectious disease caused by protozoan parasite...
Allergy	An allergy is an immune system response to a forei...
Hypothyroidism	Hypothyroidism, also called underactive thyroid or...
Psoriasis	Psoriasis is a common skin disorder that forms thi...
GERD	Gastroesophageal reflux disease, or GERD, is a dig...
Chronic cholestasis	Chronic cholestatic diseases, whether occurring in...
hepatitis A	Hepatitis A is a highly contagious liver infection...
Osteoarthritis	Osteoarthritis is the most common form of arthriti...
(vertigo) Paroxysmal Positional Vertigo	Benign paroxysmal positional vertigo (BPPV) is one...
Hypoglycemia	Hypoglycemia is a condition in which your blood s...
Acne	Acne vulgaris is the formation of comedones, papul...
Diabetes	Diabetes is a disease that occurs when your blood ...
Impetigo	Impetigo (im-puh-TIE-go) is a common and highly co...
Hypertension	Hypertension (HTN or HT), also known as high blood...
Peptic ulcer disease	Peptic ulcer disease (PUD) is a break in the inner...
Dimorphic hemorrhoids(piles)	Hemorrhoids, also spelled haemorrhoids, are vascul...
Common Cold	The common cold is a viral infection of your nose ...
Chicken pox	Chickenpox is a highly contagious disease caused b...
Cervical spondylosis	Cervical spondylosis is a general term for age-rel...
Hyperthyroidism	Hyperthyroidism (overactive thyroid) occurs when y...
Urinary tract infection	Urinary tract infection: An infection of the kidney...
Varicose veins	A vein that has enlarged and twisted, often appear...
AIDS	Acquired immunodeficiency syndrome (AIDS) is a ch...
Paralysis (brain hemorrhage)	Intracerebral hemorrhage (ICH) is when blood sudd...
Typhoid	An acute illness characterized by fever caused by...
	Hepatitis B is an infection of your liver. It can ...

Chapter 6:

SYSTEM TESTING

❖ User Problem Statement:-

During system testing of Talkspace, users may encounter a range of challenges that impede their experience with the platform. These problems could include difficulties in joining video conferences, such as issues with accessing meeting links or encountering errors during connection attempts.

Users might also face inconsistent audio or video quality during conferences, disrupting communication and collaboration efforts. Additionally, limitations or glitches with features like screen sharing and chat messaging may hinder users' ability to share information effectively. Managing user profiles and scheduling appointments could prove cumbersome due to interface complexities or technical errors. File sharing functionality might also present obstacles, such as upload errors or file size limitations.

Accessibility concerns, including compatibility issues with assistive technologies or navigation barriers for users with disabilities, could further exacerbate usability challenges. Users may express apprehensions about data security and privacy, underscoring the importance of robust security measures and compliance with regulations. Addressing these issues promptly during system testing is essential to ensure Talkspace delivers a seamless and user-friendly experience for its diverse user base.

❖ TALKSPACE MODULES:-

1. Admin Login Module :-

The login module is a fundamental component of the conferencing system, providing secure access for authorized personnel to the system's functionalities. Key objectives of the login module include authentication, authorization, and user meeting objectives.

2. User Login Module :-

The User login module consists of the user information provided by the user while registering to the web application when new to it, the project includes the Log in and Sign Up features for suitable user interface.

3. Meet Module :-

When a user register and Log in through the same id it authorize the user and thus enables to create a meeting option where the host of the meeting can generate meeting by filling up the necessary details meet id,code.

4. Meet Interface Module :-

The Meet Interface module is the important module where all the project objectives are initiated like as create meet, allow microphone ,allow camera, allow participants to join, present screen(entire ,window only), view all participants joined, texting to everyone while in meeting,no meeting length.

5. History Module :-

The history module consists of the databases where the admin can get the details of his registrations, number of meetings created, duration of the meeting with the actual figures.

TEST CASES-

Test Objectives	Input Data	Expected Result	Actual Result	Status
Admin Register	Enter Admin Details	Details should be entered correctly	Admin registered	Pass
User Register	Enter User Details	Details should be entered correctly	User registered	Pass
Create Meet	Enter Meeting Details	Correct meeting information should be entered	Meeting Created	Pass
Camera Module	Check camera on/off function	Camera should turn on when clicked on & vice versa	Worked done	Pass
Audio Module	Check audio on/off function	Audio should turn on when clicked on & vice versa	Worked done	Pass

Chapter 7:

FUTURE SCOPE

Scope of the project:-

- 1) Feature Expansion, Managing the data of User properly will help in creating a meeting with no problem.
- 2) Augmented Reality Enhancements for better meeting environments.
- 3) Enhanced Security and Compliance to prioritize further strengthening its security measures and compliance
- 4) User Experience Innovation for improvement and deliver intuitive, user-centric solutions that resonate with diverse audiences
- 5) Artificial Intelligence Integration to offer personalized recommendations, automate routine tasks, and enhance user experiences.

Chapter 8:

CONCLUSION

In conclusion, the future scope of Talkspace is brimming with possibilities for growth, innovation, and impact in the realm of remote communication and collaboration. With the continuous advancement of technology and evolving user needs, Talkspace has the potential to further solidify its position as a leading solution in the market. By expanding its feature set, integrating artificial intelligence, virtual reality, and augmented reality capabilities, and exploring new markets and industry verticals, Talkspace can unlock new avenues for success. Additionally, prioritizing enhanced security measures, compliance frameworks, and user experience innovation will be instrumental in maintaining

Furthermore, as Talkspace expands its global reach and delves into new industry verticals, it has the opportunity to address diverse user needs and foster greater inclusivity and accessibility in remote communication. By tailoring its offerings to specific cultural, linguistic, and regulatory requirements, Talkspace can better serve users worldwide and establish itself as a truly global platform for collaboration. Moreover, by remaining agile and responsive to emerging trends and technologies, Talkspace can stay ahead of the curve and continue to innovate in an ever-evolving landscape.

Chapter 9:

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