

VIDEO CHATTING APPLICATION

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GROUP - 4

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VIDEO CHAT FEATURES



1. Video and audio calling:

Enables real-time audio and video calls with multiple participants, ideal for remote work, learning, and connecting with distant friends and family.

- Tools typically include call controls (start/end, mute/unmute), multi-participant capability, and picture-in-picture display for simultaneous viewing of user and other participants.

2. Screen sharing:

Enables participants to share their computer screen with others, ideal for presentations, software or website demonstrations, and document collaboration.

- Tools include screen selection, pause/stop sharing, and multi-participant screen sharing for improved collaboration.



VIDEO CHAT FEATURES

3. Meeting controls:

This typically includes buttons for

- starting and ending the meeting
- muting and unmuting
- turning on and off the video feed
- Controls for screen sharing, whiteboard & chat

4. Sharing:

- The invite feature in a video chat application allows users to invite others to join a video call or meeting.
- The ability to generate a unique link or code that can be shared with others to join the meeting.



VIDEO CHAT FEATURES



5. Chat and messaging:

- Allows users to send and receive text-based messages in real-time while also participating in a video call.
- The messaging feature is useful for a variety of scenarios, such as sharing links or resources during a call, asking questions or making comments during a presentation, or simply chatting with colleagues or friends during a video call.

6. Collaborative Whiteboard:

- Allows multiple users to work together on a shared digital canvas.
- This feature enables users to create, draw, write, and annotate on a virtual whiteboard in real-time.



UI FEATURES

- Create Room
- Join Room
- Enter Name
- Video and Audio Controls
- Chat Window
- Screen Sharing
- Multi-Participant View
- Whiteboard
- Invite



APPLICATION LAYER PROTOCOLS

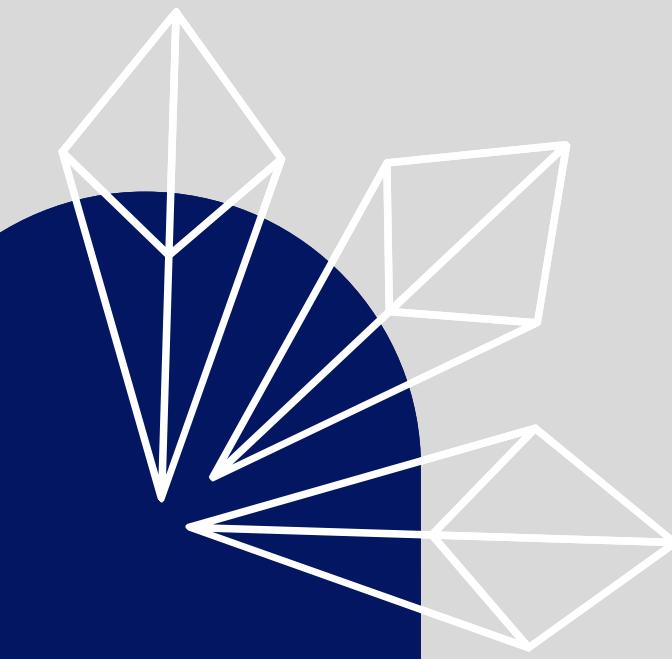
1. WebRTC (Web Real-Time Communications)

It is an open-source protocol that enables real-time communication over the internet using standard web browsers without the need for any plugins or software installations.

- The audio and video are of very high quality. Sending and receiving data are isolated with less delay. It is useful and safe. It is open to use.

2. Socket.IO

Built on top of WebSockets, it is a real-time, event-driven communication protocol that provides additional features and benefits for video conferencing and other real-time communication applications.



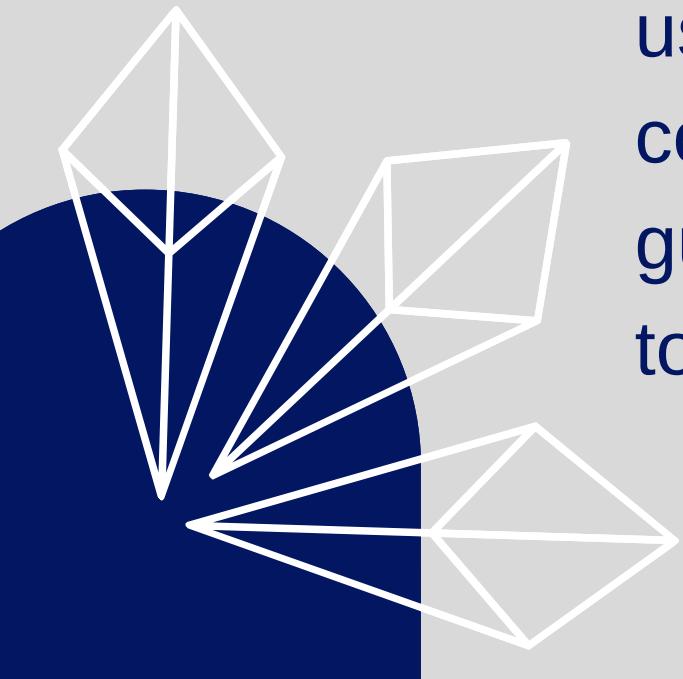
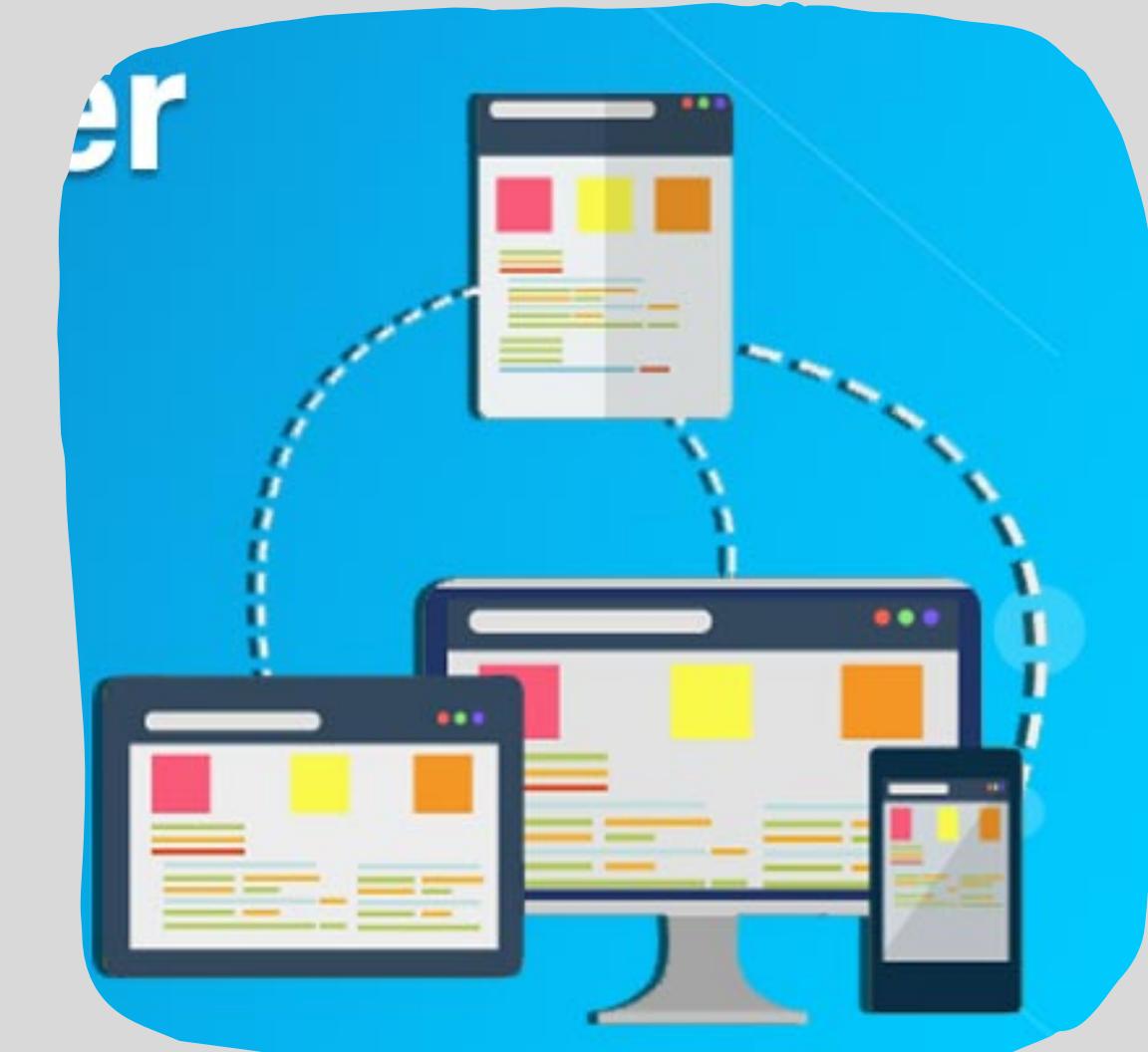
TRANSPORT LAYER PROTOCOLS

1. TCP (Transmission Control Protocol)

TCP is a reliable protocol used for video conferencing that guarantees data packet delivery but may introduce latency for real-time audio and video streams due to its connection-oriented nature.

2. UDP (User Datagram Protocol)

UDP is a connectionless protocol commonly used for real-time audio and video streams in video conferencing due to its low latency, but it doesn't guarantee the delivery of data packets, making it prone to errors caused by lost packets.



Github Repository Link



<https://github.com/dyra-12/video-chat-webapp>

*Thank
you!*