Video Conferencing Application
SRS Document
Software requirements specifications

1. Introduction

    1.1. Purpose : The purpose of this project is to learn how to manage a software project and improve an already existing video conferencing application.

    1.2. Intended audience and reading suggestions : The focus will be on a video conferencing application which is used by people who want to meet online and it is open for use by everyone as there are no constriction for usage.

    1.3. Project scope : We will learn how to work in a team,how to manage a project, give an estimation to tasks, work with scrum, divide the work evenly between team members.Also, this will be extremely useful for people who don't have time or place to meet in person and it will be easy to share information and work on everything freely.

    1.4. References and sources : https://krazytech.com/projects/sample-software-requirements-specificationsrs-report-airline-database , https://mirotalk.herokuapp.com .

2. Overall discription :

    2.1. Product perspective : A video conferencing application stores the following information:
    The name of the roomand the name of the participants.

    2.2. Product features :
    - Giving the opportunity to hold important meetings in different countries short for money, effort, work and time
    - High image & video resolution
    - Clear voice when using the microphone
    - Should be easy app to use not complex .
    - Multilanguage app
    - Easy transfer between participants
    - Allowing high number of people to attend the same meeting
    - Free app for more and fast spread
    - Allow screen sharing
    - Fast and efficient connection with the internet
    - Allowing to share documents , messages , files , links and videos between participants

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2.3. User class and characteristics : Users should be able to choose a room name, choose their own name, give microphone and camera access, share files, share room link, and exit the room whenever they want.

2.4. Operating environment :
- This application will run on heroku.
- Javascript is the language used to code it.

2.5. Coding constraints :
- Write as few lines as possible.
- Use appropriate naming conventions.
- Always write comments.
- Segment blocks of code in the same section into paragraphs.
- Use indentation to marks the beginning and end of control structures. Clearly specify the code between them.
- Don't use lengthy functions. Ideally, a single function should carry out a single task.
- 9. Use the DRY (Don't Repeat Yourself) principle. Automate repetitive tasks whenever necessary. The same piece of code should not be repeated in the script.
- Avoid Deep Nesting. Too many nesting levels make code harder to read and follow
- Avoid long lines. It is easier for humans to read blocks of lines that are horizontally short and vertically long.

3. System features :
3.1. Functional requirements :
- The user should write the room name and click join room.

- Popup should be showed asking the user for access to the microphone and the camera

- If the user doesn't allow access to the microphone then he is redirected to another interface to try again.

- If the user allows access to the microphone and camera then he will enter his name.

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- After the user enters his name The system provides a link to the session which the user can share to let others join. (there should be three buttons " copy URL, Email invite, Close")

- If the user chooses copy url then he should send the url link to other participants to join.

- If the user chooses email invite an email will be sent to the other user containing the link to the session.

- The other user should click on the link to join the room.

- There should be Buttons such as invite others to join, microphone, video, screen sharing, recording, chat, captions, raise hand, whiteboard, share file, setting and leave room are clicked to enable or disable these functionalities.

- If the user wants to leave the session, he will press leave room.

- After pressing leave room, Popup should appear to ask the user if he is sure.

- If the user presses yes then he is redirected to a page to rate the experience

- After rating the session, the user should press on "Exit" button to return to the main page.

- If the user presses no when asked to leave the room then he will be returned to the session.

4. External interface requirements :

 4.1. User interface requirements :

 4.1.1. There will be screens showing every participant.

 4.1.2. The upper part includes :

 4.1.2.1. Timer.

 4.1.2.2. Participant name.

 4.1.2.3. Camera icon.

4.1.2.4.   Mic icon.

4.1.2.5.   Take a snapshot button.

4.1.2.6.   Full mode button.

4.1.3. The left side includes :

4.1.3.1.   Screen sharing

4.1.3.2.   File sharing.

4.1.3.3.   Camera turn off/on.

4.1.3.4.   Mic turn on/off.

4.1.3.5.   Invitation link.

4.1.3.6.   Recording.

4.1.3.7.   Chat.

4.1.3.8.   Settings.

4.1.3.9.   Leave room.