



Software Requirements Specification

for

Meet-Now

Version 1.0 approved

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21/09/2023**

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Introduction

Purpose

This document is prepared in order to determine a software requirement specification for **MeetNow**.

MeetNow is a facetime application where people can facetime each other, hold group meetings as well as text other people. It aims to provide an environment where each of these can be done at the same time, hence forming an application that can suffice the complex needs of this new online-savvy generation.

We first give the purpose and scope of this document and then the overall description of the platform. In addition to this, features of the platform, such as connecting to a video chat, texting, and enabling video/audio only features are described. Once this is done, we move to the specific requirements of this application, ending with the functional and non-functional requirements.

Document Conventions

This Document was created based on the IEEE template for System Requirement Specification

Intended Audience and Reading Suggestions

Individuals and groups seeking seamless and high-quality video communication for social, professional, or collaborative purposes. This versatile platform accommodates students, professionals, gamers, friends, and family members, offering a wide range of features to facilitate easy and engaging online interactions. Whether for meetings, gaming sessions, study groups, or social gatherings, this application caters to a diverse array of users.

Product Scope

The internet is becoming more and more a part of how people communicate with each other — this has created a need for places online where people can gather and talk. In line with the Network Effect, it is easier to find and engage with people on it. It's a self-perpetuating cycle. Those looking to grow an engaging community should seek out the largest players in a given social media circuit. With more communities comes greater variety and choice for users trying to find like-minded people to socialize with, further feeding the cycle.

References

Discord, Retrieved from
<https://discord.com/>

Overall Description

Product Perspective

MeetNow is a self contained product which aims at bringing to its users the functionality of both the video chat as well as text messaging at once, all packed in an easy to use, light-weight interface.

Specific groups of people like gamers are expected to be the main target for day-to-day usage while other groups/organisations can also use it for specific purposes.

Product Functions

- The system should allow a user to log in.
- Create Video Chat Functionality (SocketIO and MongoDB)
- Creating Video Group Call RoomsCreate Real Time Communication System between users.
- Friends / Friends Invitation System

User Classes and Characteristics

There will be two levels of users for our system. The first will be the general user that will be using our software to interact with other general users. They will only see the front end of the system. The second level will be the system developers. They will be able to edit the functions of the software, depending on whether they think the site is safe, compatible with respective software, the speed at which the site can be worked, and how useful the software is to users.

Operating Environment

PC or Laptops

- Windows 7,8,10
- Mac OS X
- Linux

Smart TV's, Smartphones, Tablets (Android or IOS) etc.

Design and Implementation Constraints

First, platform compatibility is vital, necessitating development for multiple operating systems such as iOS, Android, and web browsers. Additionally, ensuring low-latency, high-quality audio and video requires robust server infrastructure and global data centers for efficient data transmission. Privacy and security are paramount, imposing strict encryption protocols and continuous monitoring for potential vulnerabilities. Scalability is another challenge, as the application must accommodate fluctuating user loads gracefully. Finally, adhering to industry standards and regulations, like GDPR for data protection, imposes constraints on data handling and storage. Balancing these constraints is crucial to delivering a seamless and secure "Meet Now" experience.

User Documentation

It is very easy to use MeetNow. Login with your credentials. Choose the way you want to communicate with your friends . Either through text channels or video channels .

Assumptions and Dependencies:

Friends in your server can see you're in there, and pop in to talk , or share their screen , with features such as Share your screen, Mute your mic, Adjust advanced audio settings, Exit the channel, and many more. Create separate channels for all the topics your group likes to talk about. These are separate spaces for talking over text .

External Interface Requirements

User Interfaces

Sign-up/Sign-in Interface:

- Sample Screen: Login and registration forms.
- GUI Standards: Use a simple, user-friendly design with a logo and clear input fields.
- Buttons: "Sign In," "Sign Up," "Forgot Password."
- Error Messages: Standard pop-up alerts for incorrect login credentials.

Dashboard:

- Sample Screen: A home screen displaying upcoming meetings and recent activity.
- GUI Standards: Use cards or tiles for meeting entries.
- Buttons: "Create Meeting," "Join Meeting," "Settings."

Meeting Creation Interface:

- Sample Screen: A form for scheduling meetings.
- GUI Standards: Calendar widget for date and time selection.
- Buttons: "Schedule Meeting," "Add Participants."

Join Meeting Interface:

- Sample Screen: Meeting lobby with video and audio controls.
- GUI Standards: Minimalist design with prominent "Join Meeting" button.
- Buttons: "Join Meeting," "Mute," "Start Video."

Video Call Interface:

- Sample Screen: Grid layout with video feeds of participants.
- GUI Standards: User icons for muting/unmuting, screen sharing, and chat.
- Keyboard Shortcuts: E.g., "M" to toggle mute, "S" to share screen.

Chat Interface:

- Sample Screen: A chat window with participant names and message input.
- GUI Standards: Conversation-style chat with timestamps.
- Buttons: "Send," "Attach File," "Emoji Picker."

Hardware Interfaces

- Android TV and mobile devices
- Apple: Apple TV, iPad, iPhone, iPod Touch
- . Laptops, PCs

Software Interfaces

- **macOS** - Intel Core Duo 1.83-gigahertz (GHz) or higher processor; 512MB RAM
- **Microsoft Windows** - Hardware Requirement: x86 or x64 (64-bit mode used by Internet Explorer only) 1.6- gigahertz (GHz) or higher processor; 512MB RAM
- **Android** - Version 2.3 and above. (HDR playback is available on the LG G6, LG V30, Samsung Galaxy Note 8, and Sony Xperia XZ1. 4K and HDR playback is available on the Sony Xperia XZ Premium)

Communications Interfaces

MeetNow Application requires an internet connection to install new plugins, update already installed ones and update some of its components.

System Features

The following below illustrates the functional requirements for the product by system features :

4.1 User Registration and Profiles

4.1.1 Users can create accounts, providing personal information and contact details.

4.2. Video Facility

4.2.1 Users can start a video call with someone, or join a particular group, provided they have the necessary details/permissions to do so

4.2.2 Users have the functionality to screen share as well as switch to voice only mode

4.3 Text Chat Facility

4.3.1 Users can text other people on the platform (even concurrently while on another video chat)

4.3.2 Users can share images and documents in the chat as well

4.4 Showing current status of known users

4.4.1 Users can see their friends who are currently online

4.3.2 Users can see the last seen of their fellow known users

Other Nonfunctional Requirements

Performance Requirements

Here are some performance requirements for the Meet Now Facetime application

Scalability:

- Requirement: The system should support concurrent meetings with at most 4 participants in each meeting room.

High Reliability:

- Desired Speed: Swift resolution of any disruptions, minimizing downtime.
- Requirement : The application must have a minimum uptime of 99.99%.

Video Resolution:

- Requirement: Support HD video quality (720p) as a minimum standard.
- Desired Speed: Immediate adjustment to the highest possible resolution based on available bandwidth.

Frame Rate:

- Requirement: Maintain a minimum frame rate of 30 frames per second (fps) for smooth video playback.
- Desired Speed: Consistent frame rate with minimal fluctuations.

Instant Messaging:

- Requirement: Provide instant message delivery with a maximum delay of 1 second.
- Desired Speed: Sub-second message delivery in most cases.

Safety Requirements

Safety requirements for the Meet Now Facetime application include safeguarding against unauthorized access and ensuring data encryption to prevent potential data breaches. Compliance with data protection regulations such as GDPR is mandatory to protect user privacy. Meeting content and user information must be securely stored, and the application should undergo regular security audits to maintain safety standards.

Security Requirements

The Meet Now Facetime application must adhere to stringent security and privacy requirements. It should implement end-to-end encryption for all communication, ensuring the confidentiality of user data. Strong user identity authentication, including multi-factor authentication options, must be provided to prevent unauthorized access. Compliance with data protection regulations like GDPR and achieving industry-standard security certifications is essential to safeguard user information.

Software Quality Attributes

For the Meet Now Facetime application, quality characteristics of paramount importance are reliability and robustness, with a focus on providing uninterrupted communication. Reliability should target a 99.99% uptime, ensuring users can always access meetings. Robustness should encompass graceful handling of network fluctuations to prevent call disruptions, enhancing user experience and trust in the application.

Business Rules

In the Meet Now Facetime application, operating principles dictate that meeting hosts have the authority to control and manage meetings, including muting participants, recording sessions, and starting or ending meetings. Participants, on the other hand, can engage in discussions and use features like screen sharing or chat within the boundaries set by hosts. These principles ensure effective meeting management and user interactions.