Prisma : For Professional Team Work

Software Engineering Project

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Overview

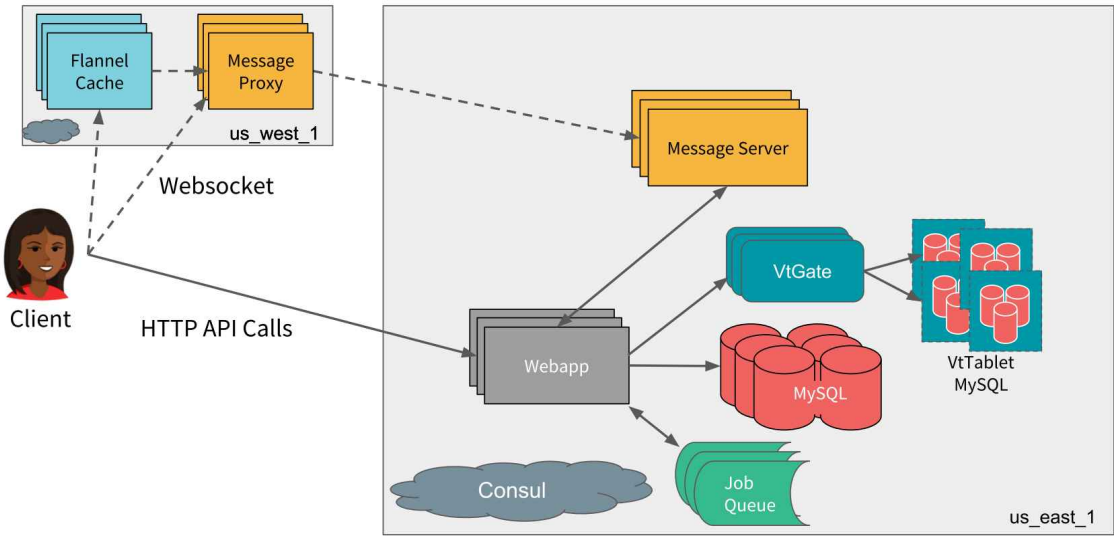
'Prisma' is a team communication software which is a workspace that will connect you with the people and tools you work with everyday, no matter where you are or what you do. With 'Prisma', you get real-time messaging through calls and chat, a searchable record of all your files and conversations, and integrations with a growing number of handy bots and apps. Now everyone can finally be on the same page and get their work done.

Objectives of the project

- A project management tool for teams to pull off the work smoothly.
- To encourage communication between team members, clients through public or private channels or DMs rather than sticking to old methods like mails/calls.
- To strengthen client relationships to provide top-tier enterprise support and drastically decrease response time.
- A platform to integrate with tools like Jenkins, GitHub and more for code reviews and deployment.

- **Organized conversations**: Can bring order and clarity to work - *Customer C** will know exactly where to go to reach the right people with messages, calls and more.
- **Channels:** *Customer C* can create them for every project, topic, or team. When there's a channel for everything, users can focus on the conversations and work that matters most to them.
- **Less Response Time:** Every new message is weighted alike, it's easy to grab specific someone's attention with a notification when in need of a quick response.
- **Light Atmosphere:** The emojis, stickers, GIF are also added In Slack to provide a better user experience and attract the users with its familiar look to most of the social media or texting apps.
- **Work Being Easy:** Can send,pin,browse,save messages and files in real time to build collective insights along the way.

- **Built-in voice and video calls:** Instantly join calls without leaving your conversations by connecting your video conferencing service of choice.
- **Collaboration:** Work faster with external clients, vendors and more by working in a channel.
- **Backup:** While switching from one device to another , 'Prisma' automatically and instantly syncs the messages, files and documents in all channels and messages.
- **Analytics Board:** *Customer C* can view data of the history of their workspace. They can easily find and sort information to understand more about the messages, channels and members in the organization.
- **Search:** *Customer C* can search in the team's conversation history to find the relevant messages and files also to find other channels and people you may be interested in.
- **Keyboard Shortcuts:** *Customer C* can also use keyboard shortcuts to help navigate with minimal effort.



*Customer C: any member of any team in any organization.

We have chosen a little complex project considering the duration of four months and team size. Through this project we aspire to learn and dig deep into the algorithms and libraries of different languages and also use the acquired skills to their best. We are attempting to implement all knowledge and concepts inter-woven to give a more user-friendly software.

Outline Plan

- Main actors of the system are:
  - Admin
  - User
- User can do all the following function:

Work in channels

- Join and create a Channel
- Add people in channel
- Convert a channel to private or public
- Share channel and allow other organizations to join the channel

Message feature and tools

- Download, delete, store, posts files
- Send,read,edit and delete messages
- Use emoji reactions
- Use mention in conversations
- Save and share messages and files
- Send emails to ‘prisma’
- Browse and download files from ‘prisma’
- Use file storage in ‘prisma’

Audio and Video Calling

- Voice and Video call security and Troubleshooting

Feasibility Analysis

Feasibility Analysis is done in order to evaluate utility of the proposed project /system. It is an important part of the Software Project Management Process. We use it to measure the software product in terms of how much beneficial product development will be for the organization in a practical point of view. It helps in analysing whether software products will be right in terms of development, implantation, contribution of project to the organization etc.

Visibility Plan

We will contact customer C through mail and will have a draft for all the necessary features of our software. We will store all the information of our interactions for feedback purposes and the demands of the customer.

Interactions through planned meetings will help us ,team members to proceed in the project and keep up the balanced environment. We will be using github to store our code to avoid any drawbacks. We will be following the waterfall model in our project.

Financial Feasibility

The online chat system is an efficient means of communication as it provides information that is convenient, easy and cheaper for the users. It helps in boosting online sales, ensures higher customer satisfaction and cost reduction

Chat applications are more popular these days due to its efficiency and portability. Since chat applications are much cheaper than any other mode for communications, the number of chat application users are increasing every time. In an effective and efficient way, chat applications have proved to be user-friendly to the users.

The tools required for development of the project are easily available and require no extra cost. Thus, the implementation and development cost is economically feasible.

Technical Feasibility

The project is a complete web-based application.The main technologies and tools associated are:

- HTML
- CSS
- MongoDB
- Express
- Node js
- React

It is evident that the necessary hardware and software are easily available and the technical skills required are manageable. So from these it's clearly understood that the project is technically feasible.

Risk Feasibility

Risk feasibility can be discussed in several contexts:

- **Estimated size of the product in the line of codes:**
  - Being a website with many numbers of users, the project will contain a significant amount of code lines. Also it contains multimedia exchange that may increase the size of the code.

- **Estimated size of product in several programs:**
  - Though the website supports many users, it will be constructed as a single website with a single login page rather than having many numbers

of sites for different users. Depending on the access rights, the contents will be shown or hidden.

❖ **Risk associated with runtime:**

- The tasks are clearly identified before the implementation phase. During the course of implementation of the said tasks, we'll refine specifications to make our software better suit the target customers.

❖ **Risk associated after delivery:**

- The requirements are identified beforehand. Being a general product (not specific to a single user) the requirements will be changed only if new functionalities are added to the system.

❖ **Customer-related risks:**

- The project is a general type of product. Customers may reject reasonable compromises and provide feedback to our product. Thus, before implementing the system in an organization, there will be some basic modifications required.

- **Risk associated with Reusability:**
  - We'll closely follow software development paradigms and best practices like Modularity to make code reusable and efficient. We may use inbuilt libraries to further optimise our code base. So, the reusability of the program would be high and the size of the program will be within manageable levels.

❖ **Technology risks**

- All the technologies are very well established and old enough (but not obsolete).
- For development of this Software, we do not require creation of any new algorithms input or output technology. Existing algorithms will be used to boost the performance of the Software and make it scalable.

Resource and Time Feasibility

Resources required for the proposed project :

- Programming Device
- Programming Tools like VSCode, Git
- Programming individuals
- Web and Hosting services (usually freely available)

And the time required to store and process this information is negligible for the modern-day processors which work at very high clock speed.Thus, it's evident that this system has the required resource and time feasibility.

Considerations

- **PERFORMANCE:**
  - The project requires a very low bandwidth, hence the performance will not degrade with increasing number of potential users. At the development stage, a free hosting service will be used. But when installing the system to a real environment, it will be hosted in a much more reliable server to increase the performance.

  MongoDB will provide the adequate speed for database transactions.

- **SECURITY:**
  - Users will have to authenticate using the username and passwords. Depending on the access level each user will gain the functionality of the system. Passwords can be changed by the user.

- **USABILITY AND EASE OF USE:**
  - The interfaces are designed to make it easy for any potential user to get familiar with the system in no time.

❖ **AVAILABILITY:**

- The system will be available throughout the 24 hours. Mean time to failure and mean time to repair will be decided to increase the availability. With a paid hosting space, the availability can be guaranteed to great precision.