ACKNOWLEDGEMENT

We have taken many efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organizations. We would like to extend my sincere thanks to all of them.

We are highly indebted to "**Prof. Sohil M. Gambhir**" for their guidance and constant supervision as well as for providing necessary information regarding the Design Engineering Project Titled "**Decentralized Chat Web App**". We would like to express my gratitude towards staff members of Computer Engineering Department, Government Engineering College - Rajkot for their kind co-operation and encouragement which helped us in completion of this project.

We even thank and appreciate to our colleague in developing the project and people who have willingly helped us out with their abilities.

Upadhyay Alpa
Monpara Ayushi
Siddhapura Palak
Kalsariya Nayan

ABSTRACT

In this technical era security is the main thing and targeting the security we are developing chat web app which is decentralized. By providing end-to-end encryption we are ensuring the security and let users take benefits of this chat web app. Chat web app allows users to do chatting, video calling and provides destructive mode. This whole system is decentralized that provides direct client to client communication. This system is compatible with all platforms like laptop, android, iOS, tablet.

List of Figures

List of Tables

INDEX

INTRODUCTION

The project decentralized chat web app developed in php is used for chat and video call. User can use this website anywhere, anytime and can send message to anyone. It also provides video calling.

Website is developed by taking care of user's need. It must be able to fulfill all the needs of users. Our system provides user friendly GUI to use this chat web app. Every kind of users like student, teacher, any kind of company, Government or secret agencies. These all users can use this chat web app to communicate with each other or to send any kind of secret or sensitive information which no one can see expect receiver. It provides destructive mode which it provide a timer until that time only message will be visible.

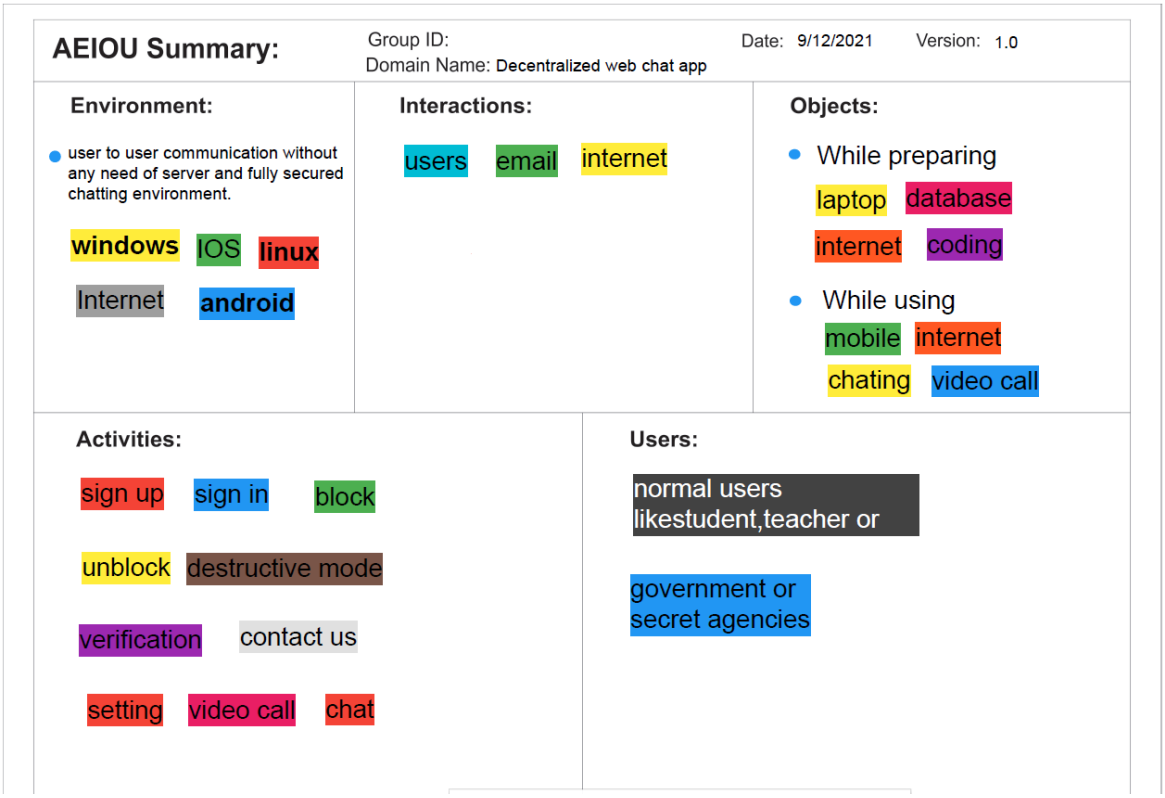
- **Design Thinking Process**

Many times users also has observed that they feel so much irritated when they really want to share something urgent but application or website is down because of server issue and users really get disturbed. So focusing in this thing we have developed decentralized chat web app which is decentralized there will be no server in between communication. It will provide direct client to client communication and will be available 24x7 hours.

It will provide everything that a centralized system can provide.

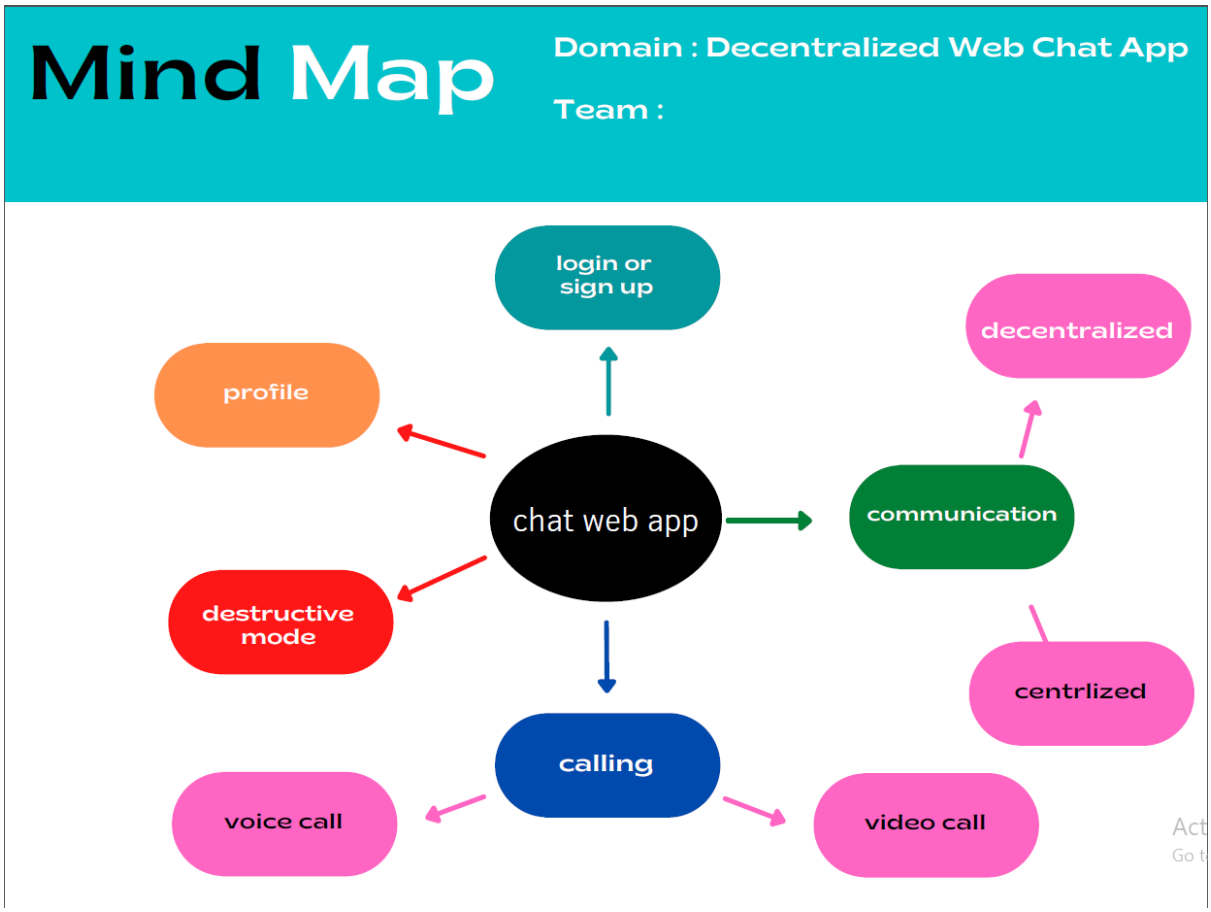
- **Easy user friendly GUI**
- **Client to client communication**
- **Video calling**
- **End-to-end encryption**
- **Destructive mode**
- **Authentication and verification**

AEIOU SUMMARY



- **Environment:-** Windows, ios, linux, internet, android etc..
- **Interaction:-** users, email, internet etc.
- **Objects:-** laptop, database, internet, coding, mobile, chating, video call etc.
- **Activities:-** sign up, sign in, block, unblock, destructive mode, verification, contact us, setting, video call, chat, etc.
- **Users:-** Normal users like student, teacher and Government or secret agencies, etc.

Mind Mapping



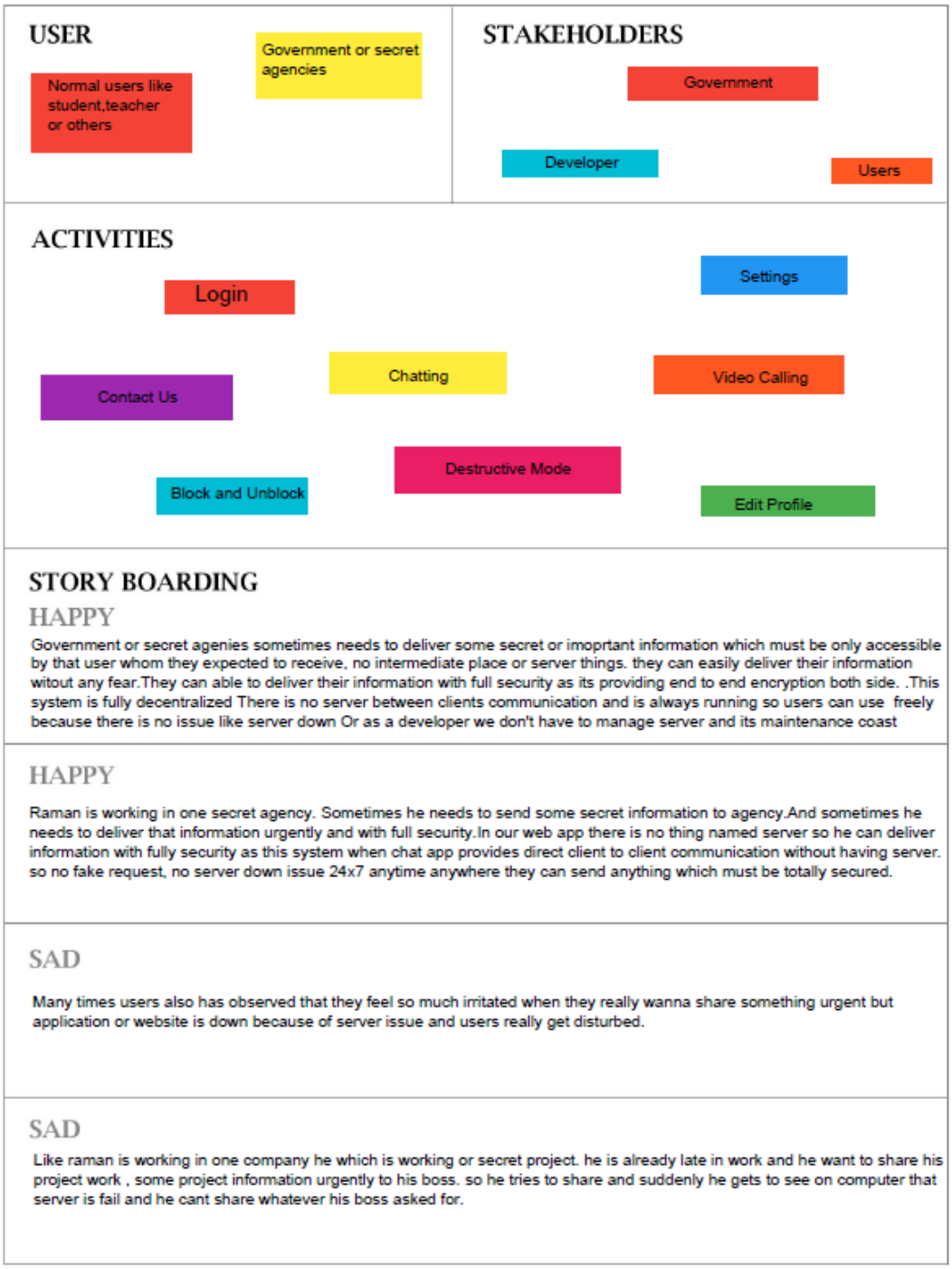
Sign up is the main module in this application. The new user has to do sign up process to access the application in online. The sign up process include phone number, password. Once the sign up is completed successfully user can able to access this web app.

This module will allow access to all the consumption features of the system such as chating, video calling, etc….

Empathy Mapping Canvas

Design For **Design By**

Date **Version**



User:- normal users like student, teachers and Government or Secret agencies.

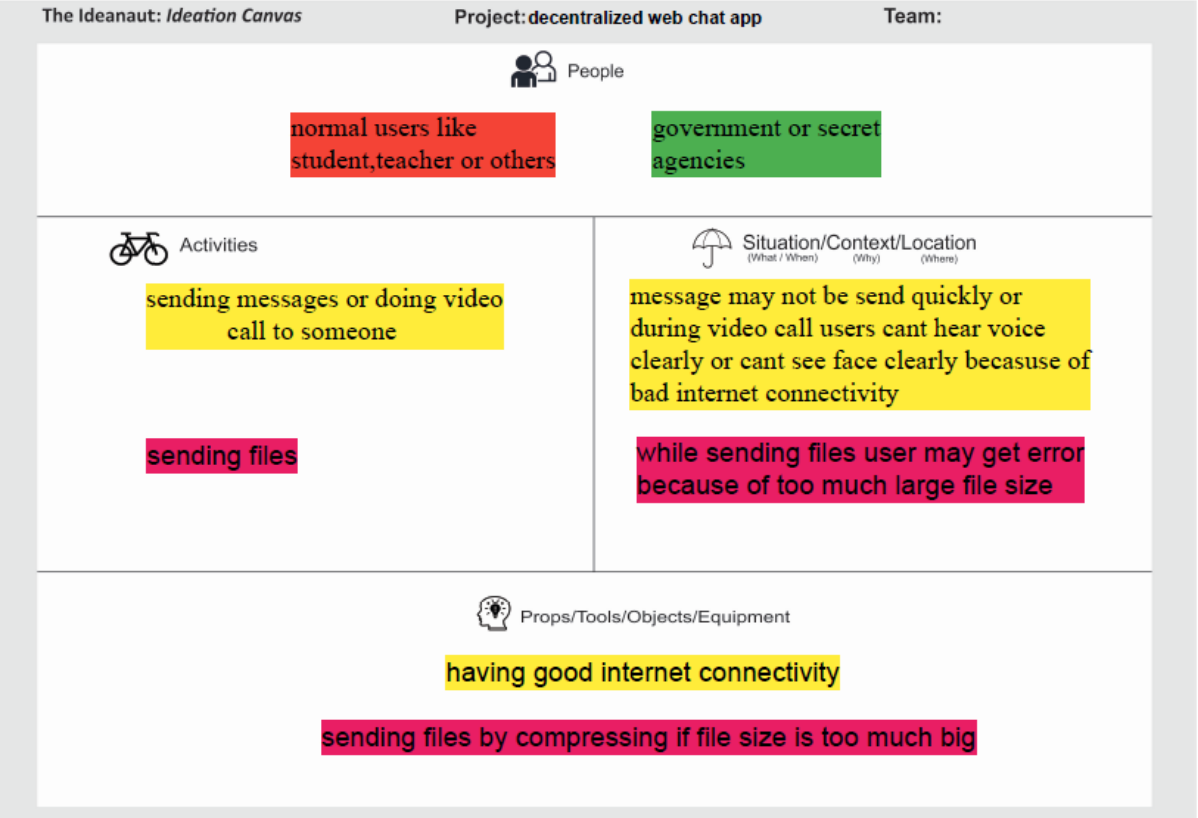
Stackholders:- Government, developer, users.

Activities:- Login, chating, video calling, settings, destructive mode, block and unblock, contact us, edit profile.

Limitations of system

- One user can talk to only one user. There is no option like group chat.

Ideation Phase



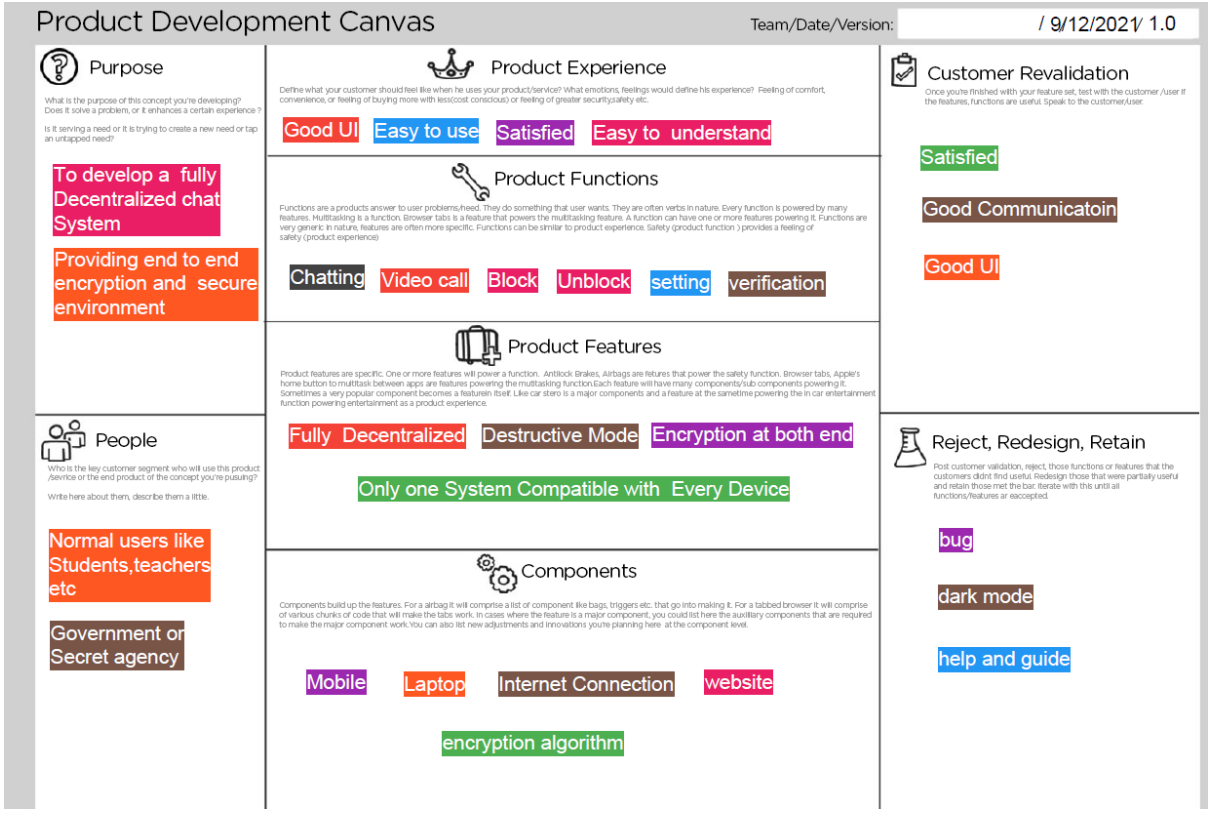
People:-normal users like student, teacher or others and Government or secret agencies.

Activities:- sending message or doing video call to someone, sending files

Situation:- message may not be send quickly or during video call users cant hear voice clearly or can't see face clearly because of bad internet connectivity, while sending files user may get error because of too much large file size.

Objects:- Having good internet connectivity, sending files by compressing if file size is too much big.

Product Development Phase



Purpose:- To develop a fully decentralized chat system, providing end to end encryption and secure environment.

People:- Normal users like teachers, students etc and government or secret agency.

Product Experience:- Good UI, easy to use, satisfied, easy to understand.

Product Functions:- chatting, video call, block, unblock, setting, verification.

Product Features:-Fully decentralized, destructive mode, encryption at both end, only one system compatible with every device.

Components:- Mobile, laptop, internet connection, website, encryption algorithm.

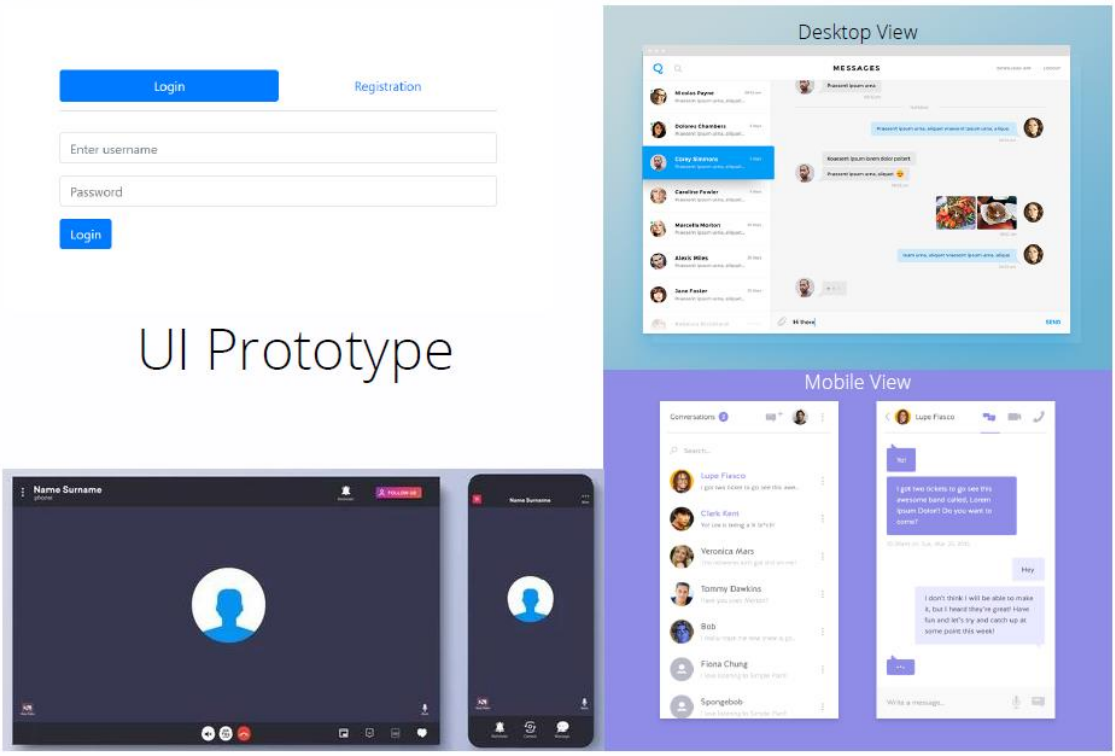
Customer revalidation:- satisfied, good communication, good UI.

Reject:- Bug, dark mode, help and guide.

Prototype Canvas

prototype : decentralized web chat app

Date:9/12/2021
Version:1.0



Decentralized chat web app

login or signup page, where users will have to create account or have to login their existing account

Main Page of Chat, here users can see their chat with everyone,can goto particular chat section or to setting

Particular Chat Page, here users can do message to someone or also can do video call

Now in setting sectoin users can edit their profile, and some other general setting they wanna do like change password or deleting profile and so on...

Log out

working prototype of Decentralized chat web app

Conclusion

It is concluded that web app works well and satisfy the end users. This app is tested very well and errors are properly debugged. The app is simultaneously accessed from more than one system. This system is user friendly so everyone can use easily. We have tested security also. The whole documentation provided so user can easily understand how system is working.

REFERENCES

- Php
- Laravel official website
- YouTube for encryption related algorithm