Cobber Chat

Course Name	**CSC 345 – Fall 2020**
Team Name	**GSSK**
Team Members	**Team Member 1 – Kinsey Younggren** **Team Member 2 – Shristi Chapagain** **Team Member 3 – Gansaikhan Shur** **Team Member 4 – Sachin Karki**

Executive Summary

Purpose

Cobber Chat is going to be a messaging platform where one person can talk to another on a different computer. Cobber Chat is going to allow people to communicate with each other on a low traffic platform, as well as it will be a challenging project for our group which would allow us to learn about computer networks in depth. Anyone could beifit from this project

Synopsis

This project is for someone to talk to someone else that has a computer that does not want to use or sign up for big companies. This is for anyone that would want to use it. Some people might like it better than other messaging platforms because it is simple, and has low traffic of people.

Background

Problem

Many Messaging platforms are high traffic areas and could crash with making this messaging platform it has fewer people using it so it is low traffic. Also, this helps us understand networking better and we could talk back and forth on something we made. With others it would be somewhere where they can talk to their friends for fun.

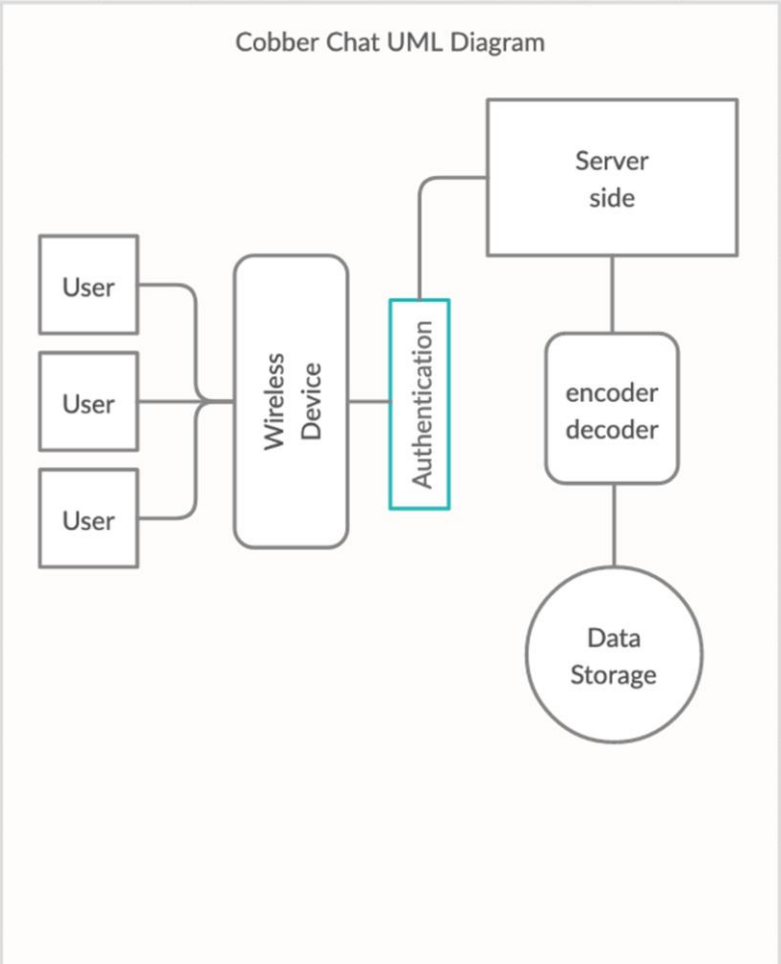
Project Plan

Milestone Summary

- Milestone 1: get group together and make a contract.
    - Completed
- Milestone 2: Figure out what final project is going to be and plan it out.
    - Completed.
- Milestone 3: Make a sketch of what the project is going to look like on the computer and how it is going to work together.
    - Completed
- Milestone 4: Have a good start on the project.
    - Completed
- Milestone 5: Figure out what is left of the project and dived up the work among us and continue working.
    - Deadline: October 29
- Milestone 6: Close to a little more than halfway done.
    - Deadline: November 16
- Milestone 7: Have the final project and presentation done.
    - Deadline: December 9

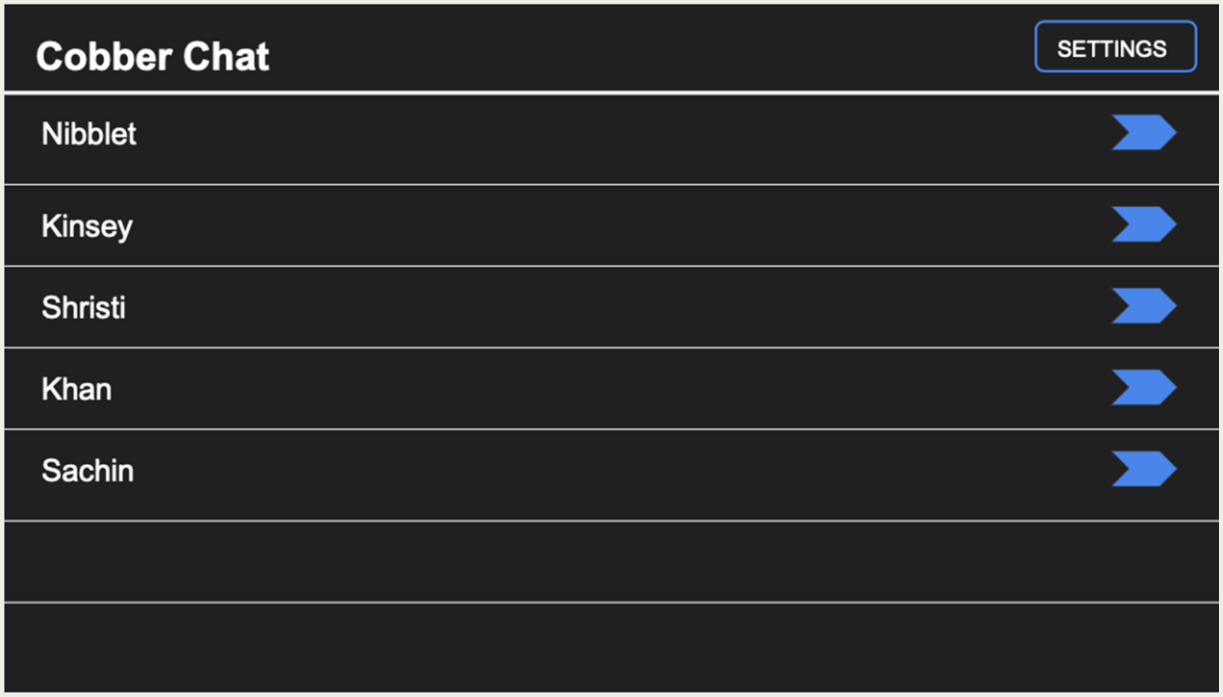
Milestone 1 and 2 Details

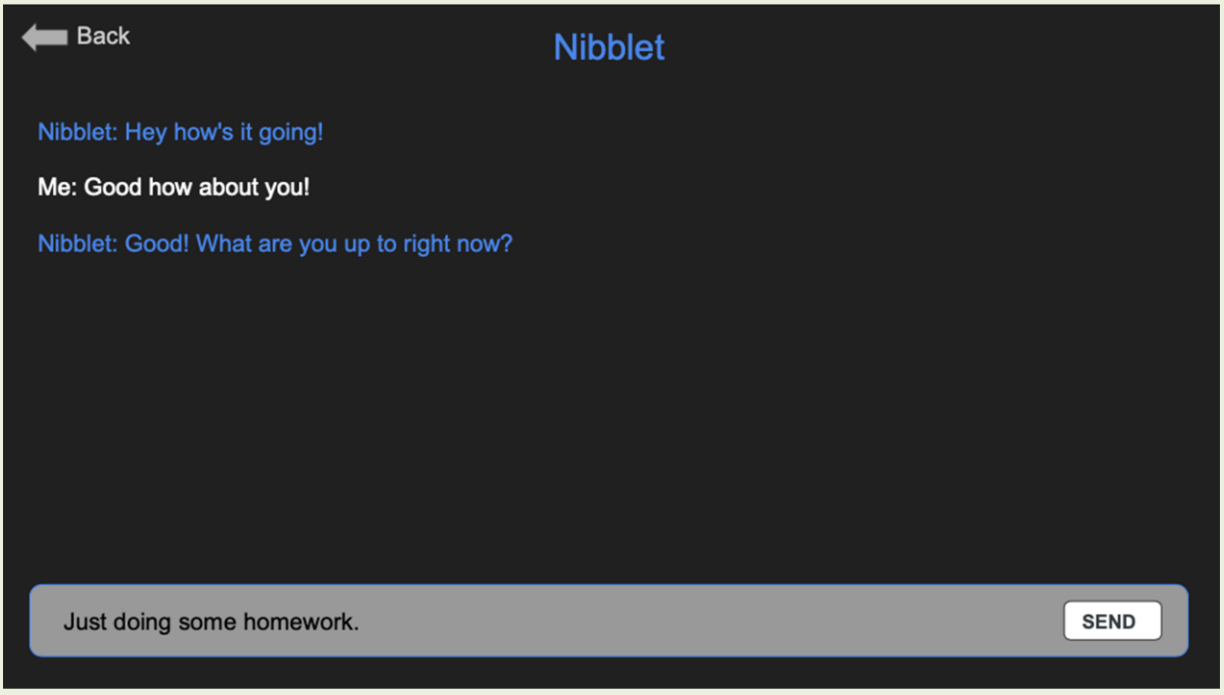
- Milestone 1
    - Team lead: Shristi
    - Worked on making a group contract and see when we are all available for team meetings
    - Meetings on Monday at 2
    - Assigned people for team leads for each milestone
    - Completed: September 10
- Milestone 2
    - Team lead: Kinsey Younggren
    - Figured out final project
    - Made a Network Topology Diagram
        - By: Gansaikhan Shur



Milestone 3 Details

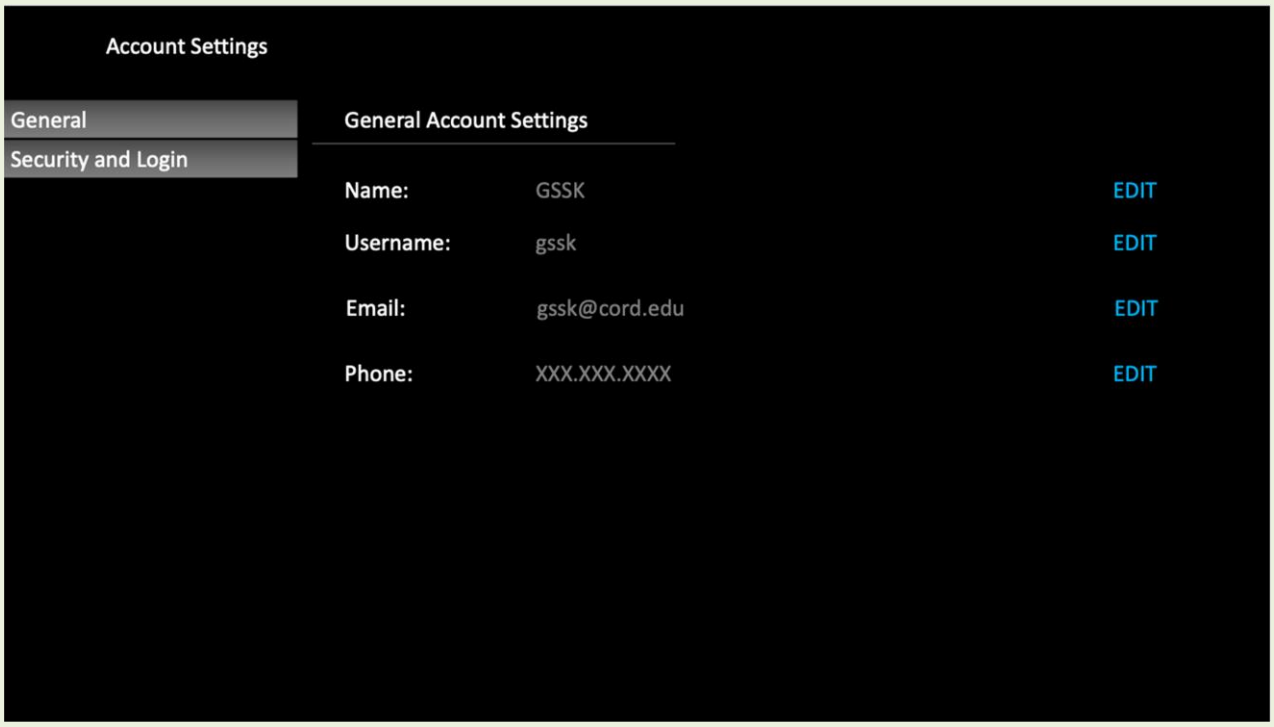
- Milestone 3
    - Team Lead: Khan
    - Designed and Sketched our website and how the data storage and retrieval part would work.
    - Kinsey

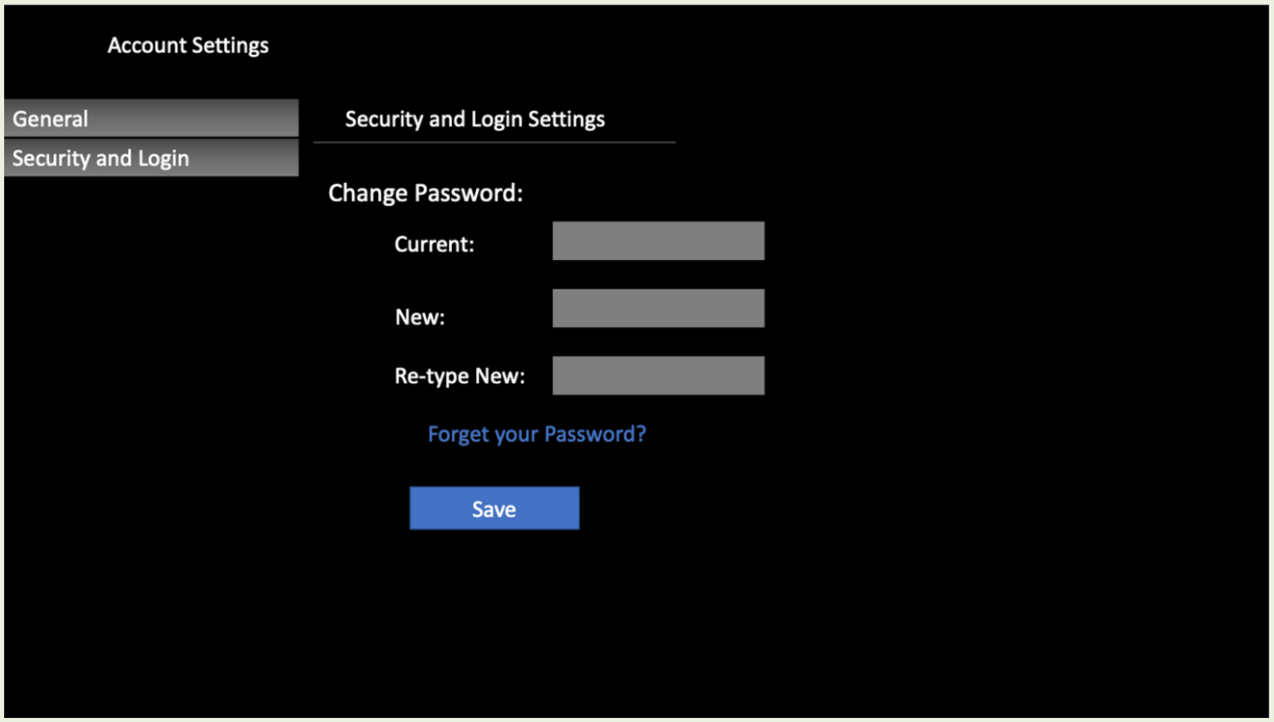




Milestone 3 Details

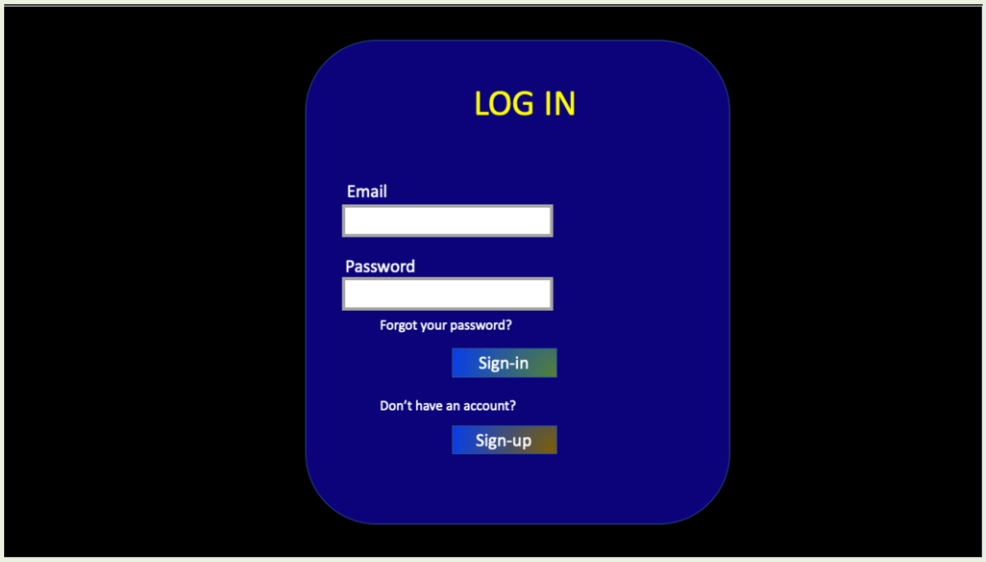
- Milestone 3
    - Shristi





Milestone 3 Details

- Milestone 3
    - Sachin

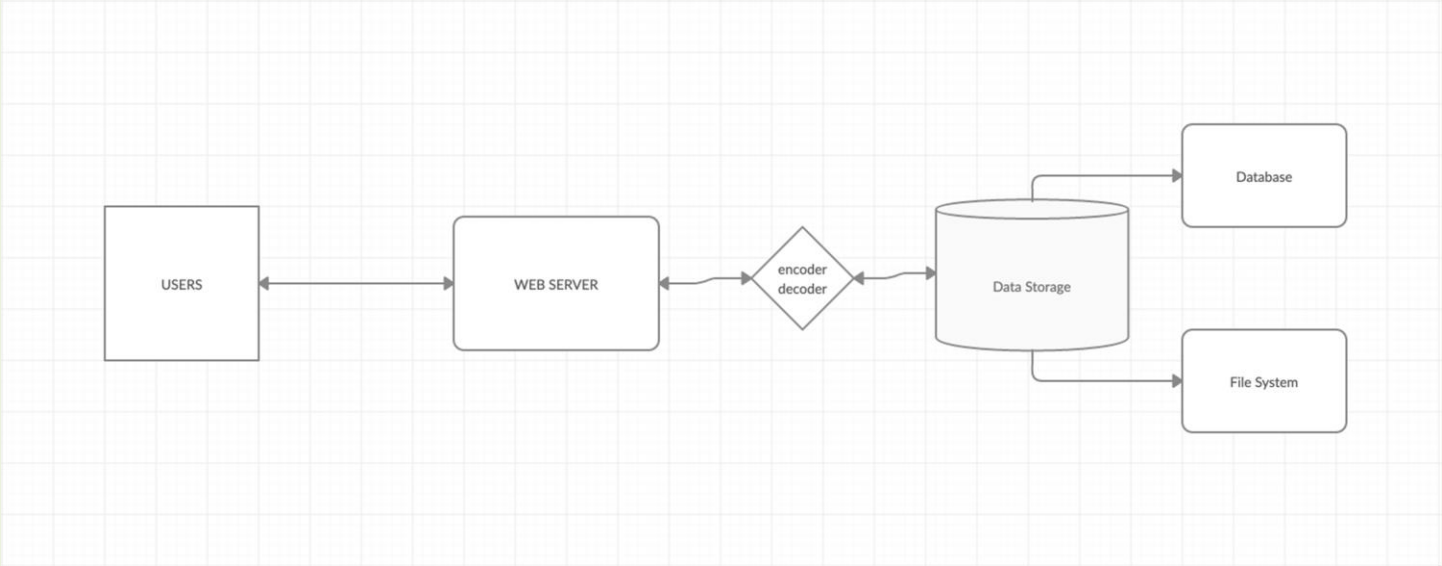


A log in page

- Khan

Milestone 3 Details

- Milestone 3




```
[
  {
    username: "Username",
    password: "superhard_password"
    friends: [
      {
          friend1: {
            {
                name: "Linda",
                conversation: [
                  {
                      date: "10/10/2020",
                      time: "4:21PM",
                      text: "We're over.",
                      status: "seen"
                      ]
                  }
            }
          };

          friend2: {
                name: "John",
                conversation: [
                {
                    date: "10/10/2020",
                    time: "10:21PM",
                    text: "k whatever",
                    status: "unseen"
                }
```

- Milestone 3

USER ID	PASSWORD	File Location	Friends
USER1	YouCantGuessLmao	"./usr/{}/txt/".format(USER_ID)	User2, User3, User5
USER2			
USER3			
USER4			
USER5			

A sample database table

Milestone 5:

Work Plan

Milestone 5

Milestones		Description:	Deadline
Network Setup/ Front-end complete		Setup the entire network and link every pages together so that it actually gives a feel of an application	11-Nov
Progress Update		Milestone-6 for the progress update	17-Nov
Back-End Complete		Back-end complete, which has sessions, chats for all the users, and some functionalities to modify the settings	25-Nov
Testing/Debugging		Debugging the entire apllication so that eveything works well.	5-Dec
Final Presentation		Milestone-7 Final Presentation	11-Dec

Categories:	Tasks	Description	Assigned to:	Deadline
Front-End Development				**5-Nov**
	Login Form, Making it similar	Making the login page similar to the other pages	Sachin	5-Nov
	Modify settings page	Adding more functionalities in the settings page.	Shristi	5-Nov
	Chatbox for different users	Making sure that there is just one page to chat with every users	Kinsey, Khan	5-Nov
	Link every pages together	Making sure we can efficiently navigate our whole application	Shristi	5-Nov
Network Setup				**9-Nov**
	Figure out to setup a network within computers	Setting up our custom ports for communication between our computers	Khan, Kinsey	9-Nov
		Connecting our computer on the same network using the ip address of the host	Everyone	9-Nov
		If nothing works out, web host will be for the last option which will definitely help in communication between the computers.	Everyone	9-Nov
Back-End Development				**20-Nov**
	Store login/ signup credentials, sessions	Start sessions and look for ways to store the login and signup credentials in the database.	Sachin	20-Nov
	Updating account settings	Accessing the information of users from sigup/ login and also making sure they can update those.	Shristi	20-Nov
	Storing messages in the database	Store every messages in a file/ database, and also fetching those to see the history of messages for all people.	Khan, Kinsey	20-Nov
Encrytion/ Decryption				**10-Nov**
	Encrypting Passwords	Encryting the passwords to avoid the admin to login as any users	Shristi, Sachin	10-Nov
	Encrypting Messages	Encrypting messages so that not even admin can see what the private messages are between two users on the application	Khan	10-Nov
Debugging/Testing	Debugging the entire network application	Debug our individual pages, and everyone meets virtually to see everything works as expected.	Everyone	**1-Dec**

Milestone 6:

Team Lead: Kinsey

GSSK Cobber Chat

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***Abstract*—Introduction, Work completed, Work to do, What is Going Well, Challenges and Potential Resolutions, Short Reflection, and Conclusion.**

I. Introduction

Cobber Chat is a messaging app on your computer browser where you can talk to your friends over the internet, and not have it be a big communications app where it might crash on you. We chose this project because we saw it a good fun project to do together as a group, also we thought it would improve our computer science skills.

II. Work Compleated

The work that has been completed so far is making the individual pages for the website. Another thing is making a database for all the information to go including encrypting and decrypting messages etc.

III. Work To Do

There are a few things left to accomplish, one thing left to do is putting all the different pages together and have one page go to the other seamlessly. Lastly the main thing to do is make it accessible to anyone on the internet.

IV. What is going well

Meating together over zoom has gone well and our communication, if someone cannot make the time we set up to meet it is easy to find a different time to meet all together. The making of the different pages went well on Visual Studio. Another thin

V. Challenges and Potential Resolutions

Some things that are difficult is working on making the website visible to anyone who wants to access it.

VI. Short Reflections

A. Kinsey Younggren

Working on this project has been fun. It has helped me learn more about networks and web applications also learning about how to web, networks, and databases work together all in one.

In this project is not as much about networks as I thought it would have been.

B. Gansaikhan Shur

Working on Cobber Chat, I have enjoyed learning about the standards of different types of encryption. Cobber Chat uses Advanced Encryption Standard (AES) and I liked learning about and implementing it in our project.

Overall, I enjoy working on this project a lot. However, I believe this project does not constitute a lot of the networking aspects I wanted it to have at the beginning of the semester. But, the logic of storing messages, passwords, encryption and decryption, hosting the application, and the one to one chatting feature allows us to understand computer networks in certain ways.

C. Shristi Chapagain

What I enjoy:
I am learning a lot about networks because of this project. In the beginning, we looked at setting up our own ports or sockets, then changing the plan to using one computer as a server and other computers connect to the server within the same network using the IP address. We then changed our plan to use hosting services. I have enjoyed working together with students with different skills.

What I don't enjoy:
This project inclines more towards web applications rather than core computer networks, and using hosting services might not give us in-depth knowledge of how exactly the computers are connected and communicating with each other.

A. Sachin Karki

What I enjoy: I have learned a lot of teamwork and good communication. I learned new things from others and learned twice by teaching to others. I have learned about using our classroom knowledge to develop a huge project. I learned new things such as database and website implementation and using networks for making an overall web application.
What I don't enjoy: I am new to the web application. So, I need to learn everything in a short amount of time which is pretty stressful to me. Besides this, I don't think I don't like anything about this project.

II. Conclusion

In conclusion this has been a fun project to work on together with this group of people. This project is a web application where you can chat to one another. There are a few more things left to do. As a team we have learned a lot from this project and there are a few thigs that we would like to learn more about Networking.

Project Resources

Date	Name/URL	Note
9/27/2020	https://docs.oracle.com/cd/E19263-01/817-6440/topology.html	Helped on the topology diagram.