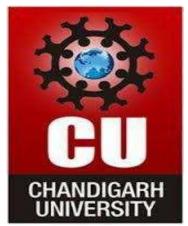# Chatting Application Using JAVA

Submitted in partial fulfillment of the requirements for the award of degree of

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INTRODUCTION :

This document is the requirements document of a chat application project. The purpose, the scope, the users and stakeholders,the use cases, the functional and nonfunctional requirements, and the milestones of the application.

Purpose and Scope

The purpose of the chat application is to allow users be able to the chat with each other, like a normal chat application. The users will be able to chat with each other, most likely only from user to user, no group chatting will be developed, unless there is time to do so. The chat application will be written in java, but due to the lack of experience in java, while developing the application, practicing techniques with java and working on it as much as possible will help hone some java skills and be more ready to develop the application.

For the scope of the project, the project will be tested as the program is being developed. A database for the users registered will be developed and tested, a menu will be developed and tested, a client/server interface will be developed and tested, and GUI's will be developed and tested, for the users' benefits. When the chat application is near completion, more testing will be done in order to make it less buggy or more user friendly.

Feasibility Study:

The functionality of the chat application is to give the ability to chat with whoever is online on the application. The users and stakeholders will be a small group for now, The use cases will be what is available to the user, and the functional/nonfunctional requirements will be covered, as well as the milestones of the chat application.

Users and Stakeholders

This section will deal with the users and stakeholders. The users will be using the chat application and the stakeholders will develop, maintain, and test the chat application.

Myself

I will be developing, maintaining, and testing the chat application through its phases of development.

Users

The users will be anyone who has the chat application and registers for it.

Use cases

These are the use cases for the client of the chat application. The server has access to all of these cases as well.

Main Menu

When the client runs the chat application, the client will see the main menu, which will welcome them, At the main menu, the client will have the choice to register for the chat application, login to the chat application, or exit it.

Register/Login/Logout

The user must register in order to login, the user must login in order to send messages to those who are online, and must be able to logout if the user wants to logout.

Online menu

After the client is logged in, the client can choose to send a message, only if another client is online, check who is online, and be able to logout when the client wants to, which will be by logging out by hitting the logout button or by hitting the exit button.

Users Online

4When the client wants to see who is online, the client clicks the "who is online" button in

the online menu, and the client can choose who to message, by double clicking the name.

Message

When the client wants to message the user, the client clicks on the name, the user can send a message to another online user. Some character limitations for typing might be put into place, only if it is necessary.

Chat history

When the client wants to see the chat history, the user will be able to do so. The user will be able to clear the history if the user wants to.

Methodology/ Planning of work :

This section will cover the functional requirements of the chat application.

Login Menu function

This functional requirement is for prompting the user with the option to register for the chat application, logging in, or exit the program. It will take the form of a GUI

Register function(Login Menu aspect)

This aspect of the login menu will ask the user for the name, username, and password of the client. It will check if the username has been taken and will close if the username is not taken and will go back to the main login menu.

Login function(Login Menu aspect)

This aspect will ask for the username and password. Errors will occur if a space is left blank, the username doesn't exist, or the password doesn't match with the username. If the username and password matches, you are online and able to message anyone else online.

Exit(Login Menu aspect)

This aspect will close the chat application.

Online Menu function

This function will give the option of seeing who is online, the option of sending a message to whoever is online, and the option to logout.

Who is online(Online Menu aspect)

This aspect will show who is online and will give the user the ability to click on a user and send a message to that user.

Send a message(Online Menu Aspect)

This aspect will give the user the ability to send a message to whoever they want who is online and selected by the user.

Logout(Online Menu aspect)

This aspect will give the option to logout of the chat application and will go back to the login menu..

Module & work plan :

Following are the project schedule :

S.no	Task	Start date	End date	Duration
1.	Create our server frame and adding images	13-09-21	20-09-21	1 week
2.	Adding mouse event in the image	20-09-21	27-09-21	1 week
3.	Adding action on send button	27-03-21	04-10-21	1 week
4.	Creating client class frame	04-10-21	11-10-21	1 week
5.	Implementing socket in server class	11-10-21	22-10-21	1.5 week
6.	Implementing socket in client class	22-10-21	02-11-21	1.5 week
7.	Adding functionality to send message	02-11-21	11-11-21	1.5 week
8.	Final testing	11-11-21	18-11-21	1 week
9.	Overoll checkup and end of project	18-11-21	25-11-21	1 week

Innovations in Project :

Software and Hardware Requirements :

Software rquired :

1. JAVA

2. NetBeans IDE

Hardware rquired :

1. A working pc or a laptop

Bibliography :

java reference _https://www.javatpoint.com/java-tutorial

Java reference_ https://www.javatpoint.com/java-applet

 development study material_ https://www.udemy.com/course/java-in-depth-become-a-complete-java-engineer/