INTRANET CHATTING-THE JAVA BASED PROJECT

A Project Work

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

BACHELOR OF ENGINEERING

IN
MOBILE COMPUTING

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DECLARATION

I, **HARDIK / SAI SANDEEP / JACOB VARGHESE** , student of "Bachelor of Engineering in Computer Science and Engineering MOBILE COMPUTING" session: 2019-2023 , Department of Computer Science and Engineering, Apex Institute of Technology, Chandigarh University, Punjab, hereby declare that the work presented in this Project Work entitled 'INTRANET CHATTING –THE JAVA BASED PROJECT" is the outcome of our own bonafide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics. It contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma ofthe university or other institute of higher learning, except where due acknowledgment has been made in the text.

Date: 27 April 2021

Place: Chandigarh University

ABSTRACT

Communication is very much essential and the importance of it is increasing from time to time along with the evolution of human needs. 21st century is marked for information. The need for the information is increasing above the limits of expectation. In the collection, storing and retrieval of this information is very crucial. Computers are the ones used effectively for this purpose.

In large organizations, information has to be accessed at a pace from one department to another department to avoid red-tapism and bottle-necks. For this we need to establish some kind of

good communication access among the departments, which can be done in present days only through network Communication.

There are different ways to communicate between the computer systems. One popular way is through LAN (Local Area Network). It provides most cost-effective and high-performance among all other options.

The Intranet chatting project is very simple yet powerful application. The features offered by this intranet Communication software are comparable with most commercial applications. The main aim of this project is to provide '*controlled communication between networked PCs'*. Different access levels will aid the communication controlling.

ACKNOWLEDGEMENT

A project is a job of great enormity and it can't be accomplished by an individual all by them. Eventually, we are grateful to several individuals whose professional guidance, assistance and encouragement have made it a pleasant endeavour to undertake this project.

It gives us great pleasure in expressing our deep sense of gratitude to our respected Founder Chairman **,** for having provided us with great infrastructure and well-furnished labs.
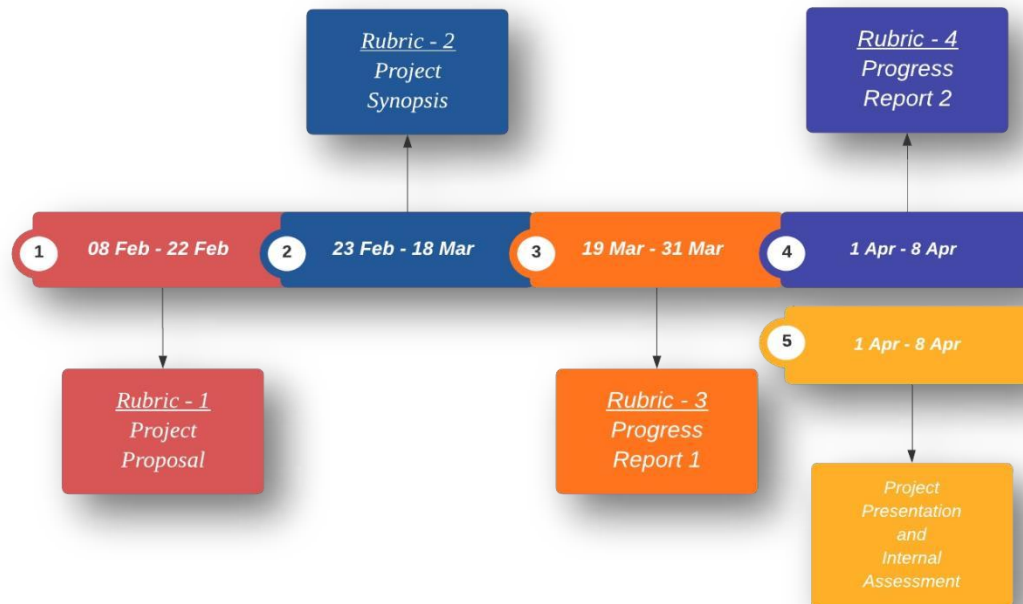
Guidance and deadlines play a very important role in successful completion of the project on time. We also convey our gratitude to our internal project guide, **PROF. VIPIN TIWARI,** for having constantly guided and the development of the project.

Finally, a note of thanks to the Department of Computer Science Engineering, both teaching and non-teaching staff for their co-operation extended to us. We thank our parents for their constant support and encouragement. Last, but not the least, we would like to thank our peers and friends.

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GAANT CHART

INTRODUCTION

Problem Definition

The Intranet is a by-product of the Internet, or specifically that part of Internet called as the World Wide Web or WWW. The Internet is called as the mother of all networks, and rightly so, because thousands of computers network, with millions of hosts is connected to the Internet. The Internet is a huge reservoir of information, information that has been supplied by companies, professionals and individuals. Most of this information can be accessed for free. The global nature of the Internet is ideal for business as it gives the customer the best in terms of price and quality. The WWW binds together various documents with links using a scripting language called as HyperText Markup Language or HTML. The development of the web browser has boosted the usage of the Internet to unprecedented levels.

Gradually, thoughts turned to using this technology in offices and college campuses. Thus was born the concept of Intranet. Since the Internet used TCP/IP, as it's standard protocol, TCP/IP became the primary protocol of the Intranet. But this was a problem since a majority of the companies were using Novell NetWare's IPX protocol or Microsoft's NETBEUI protocol on their local area networks. This problem was solved with the development of software that allowed machines running IPX or NETBEUI to communicate using TCP/IP also. Now the same tools required for developing and user Internet-based applications could be used to develop and use Intranet-based applications. One of the biggest advantages of the Internet has been a standardization of protocols.

Even though the Internet and Intranet is practically the same thing, the former being only larger, there are some subtle differences between the two.

Intranet Chatting software tool has been designed keeping in view of all the technical aspects, to suit the proposed requirements using the current technology.Network communication software

does not include any external memory hungry **.dll** or **.exe** files. It even doesn't adapt any third party controls. It exploits the Usage Of sockets of the system.

Combining these powerful, state of art, burning technologies with tightly integrated database, the intranet chatting software will meet the proposed solution of providing controlled communication between PC s in a LAN environment.

The intranet chatting software has been modularized into following modules…

    a) User Creation
    b) Chat server process
    c) Messages

Modules

a) User Creation:

 The user must be registered with the System to use The Intranet chatting software connected within a net work. For User Registration he will get a Registration screen .The user should fill necessary data with the Registration applet and the data can be stored within a Database.

b) Chat Server Process:

 This is the Software requires to integrate chatting within a LAN connected Network . This piece of program acts as centralized one between the chatting users. clients get

connected to this server .It identifies all the clients while chatting Chatserver Process must be in running mode.
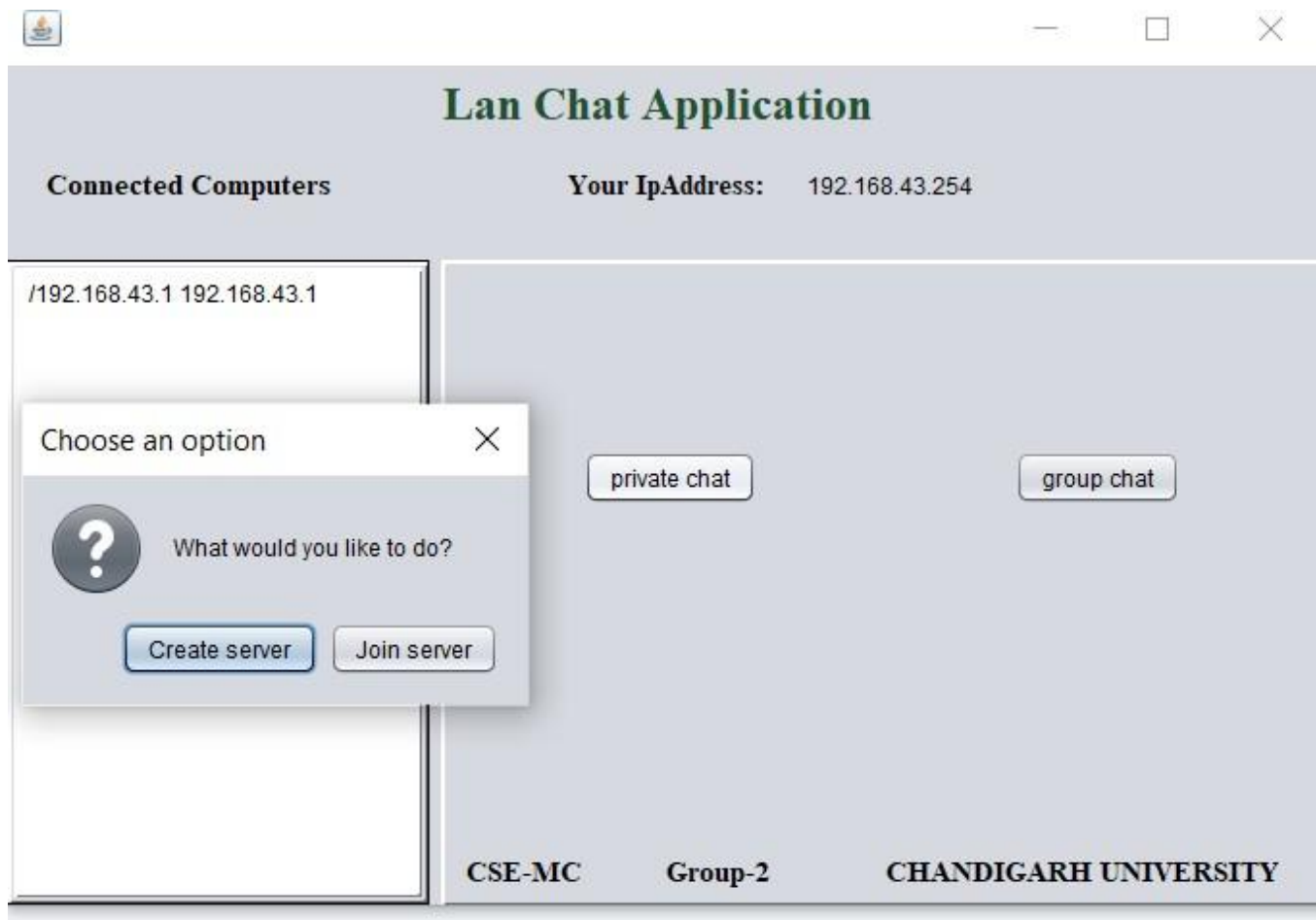
c)Messages:

The Valid user can get connected to the system and is liable to send /receive messages and can be stored within a database for future references.
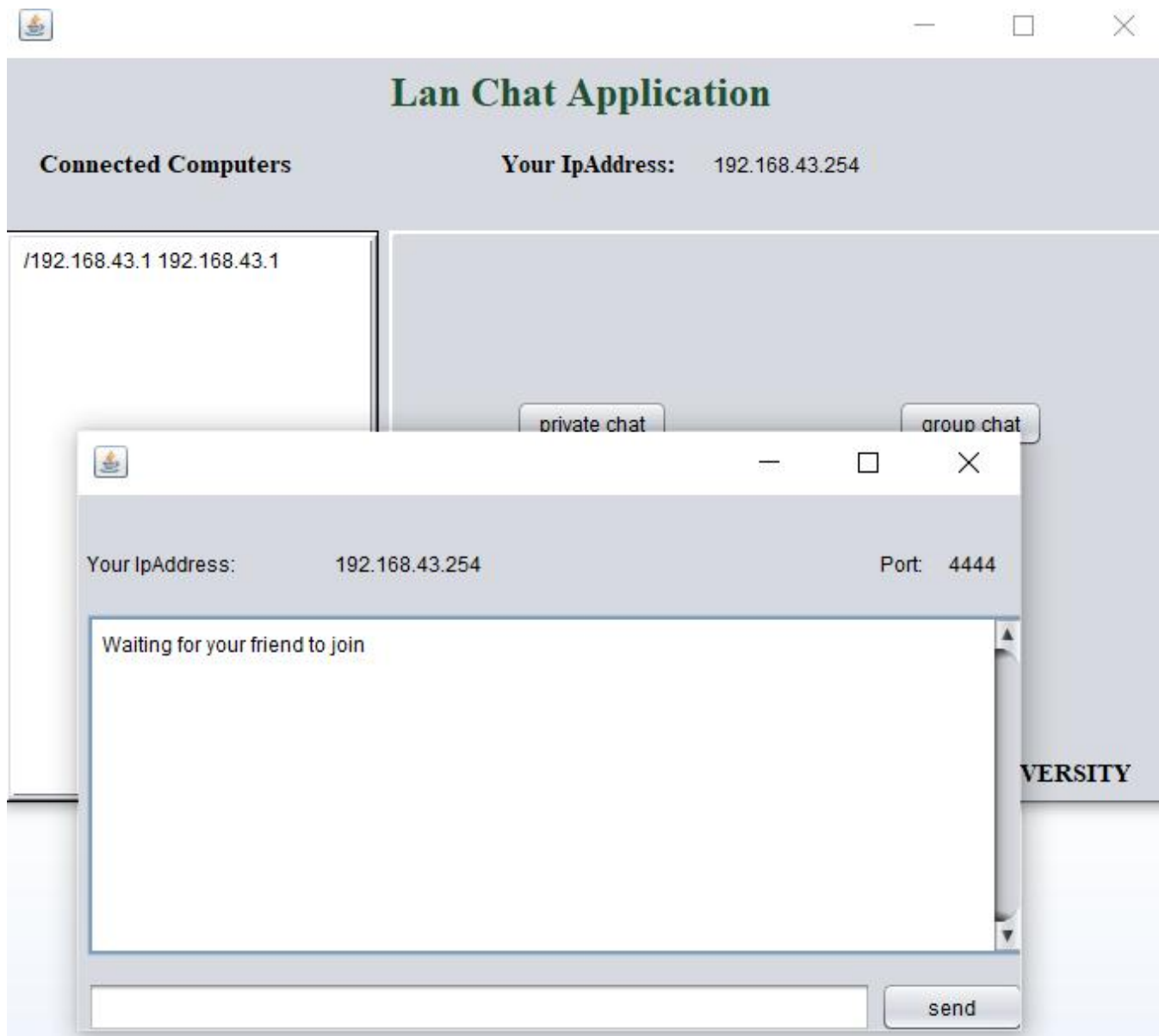
Main Window:

Main window pops up.

fig1.4(Main Window)

Lan Chat Application

Connected Computers

Your IpAddress: 192.168.43.254

/192.168.43.1 192.168.43.1

Choose an option ✕

? What would you like to do?

[Create server] [Join server]

[private chat]

[group chat]

CSE-MC **Group-2** **CHANDIGARH UNIVERSITY**

Lan Chat Application

Connected Computers

Your IpAddress: 192.168.43.254

/192.168.43.1 192.168.43.1

private chat

group chat

VERSITY

Your IpAddress: 192.168.43.254

Port: 4444

Waiting for your friend to join

send

Lan Chat Application

Connected Computers   **Your IpAddress:**   192.168.43.254

/192.168.43.1 192.168.43.1

private chat   group chat

CSE-MC   **Group-2**   **CHANDIGARH UNIVERSITY**

Ask your friend for these values   ✕
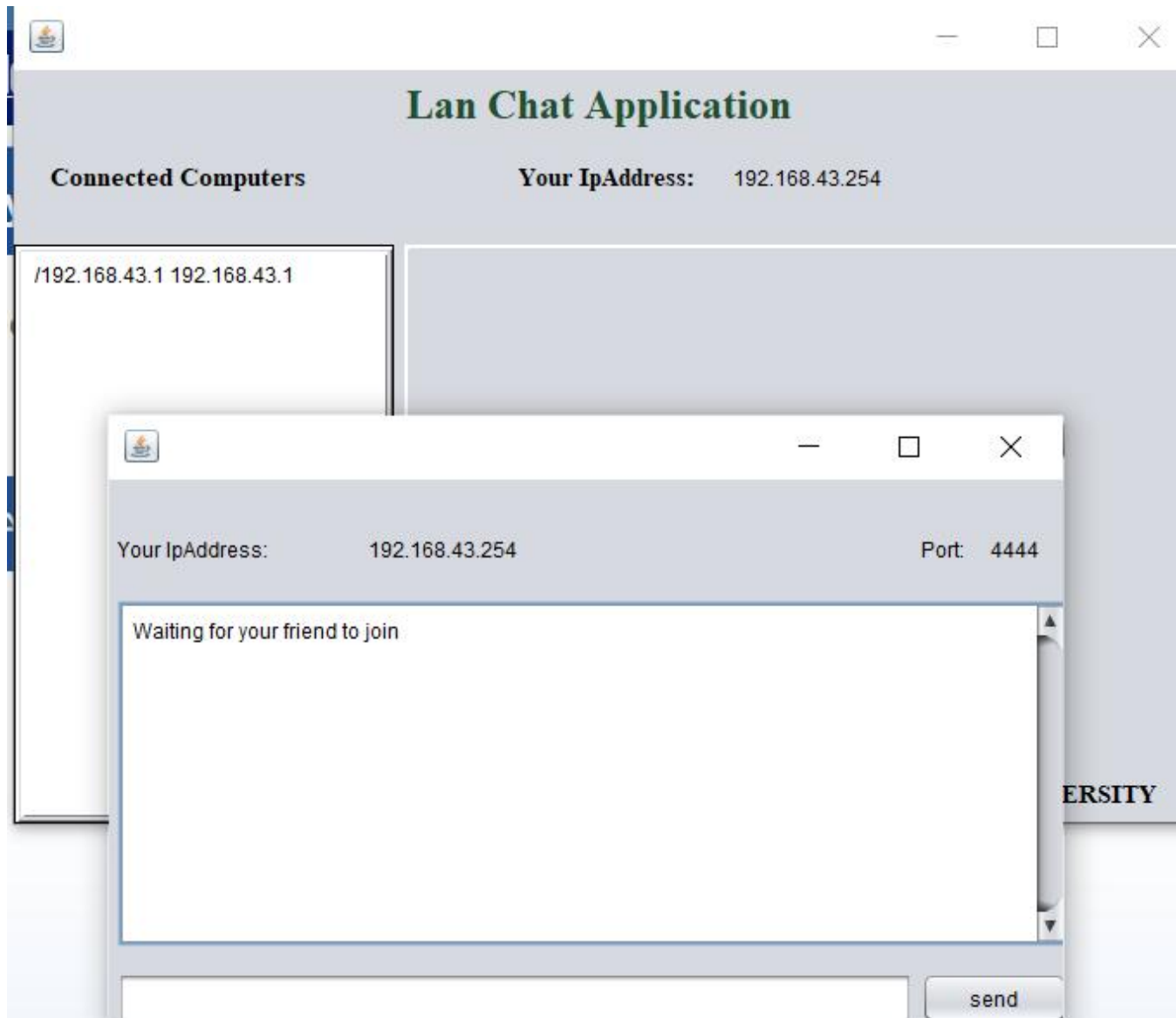
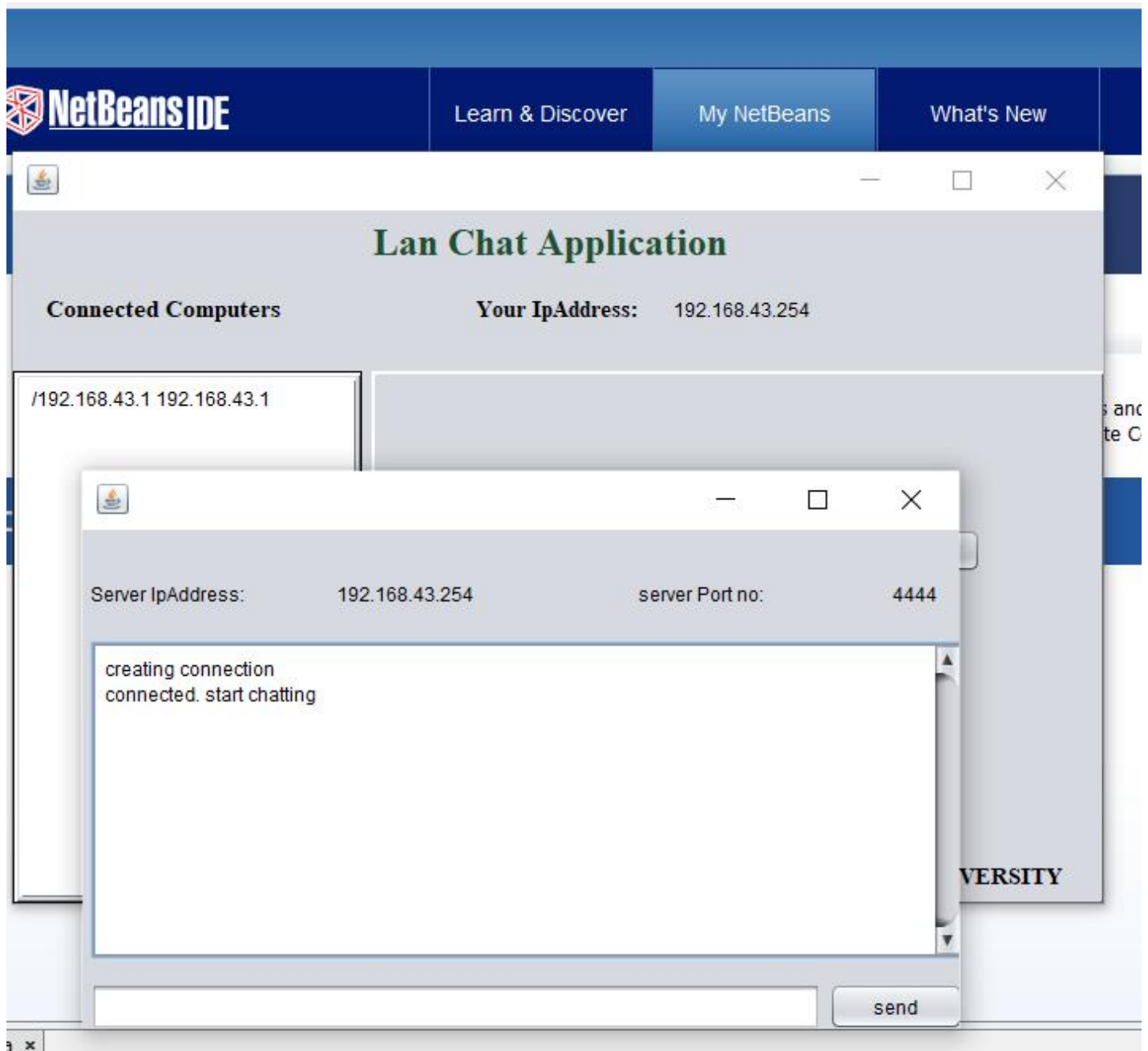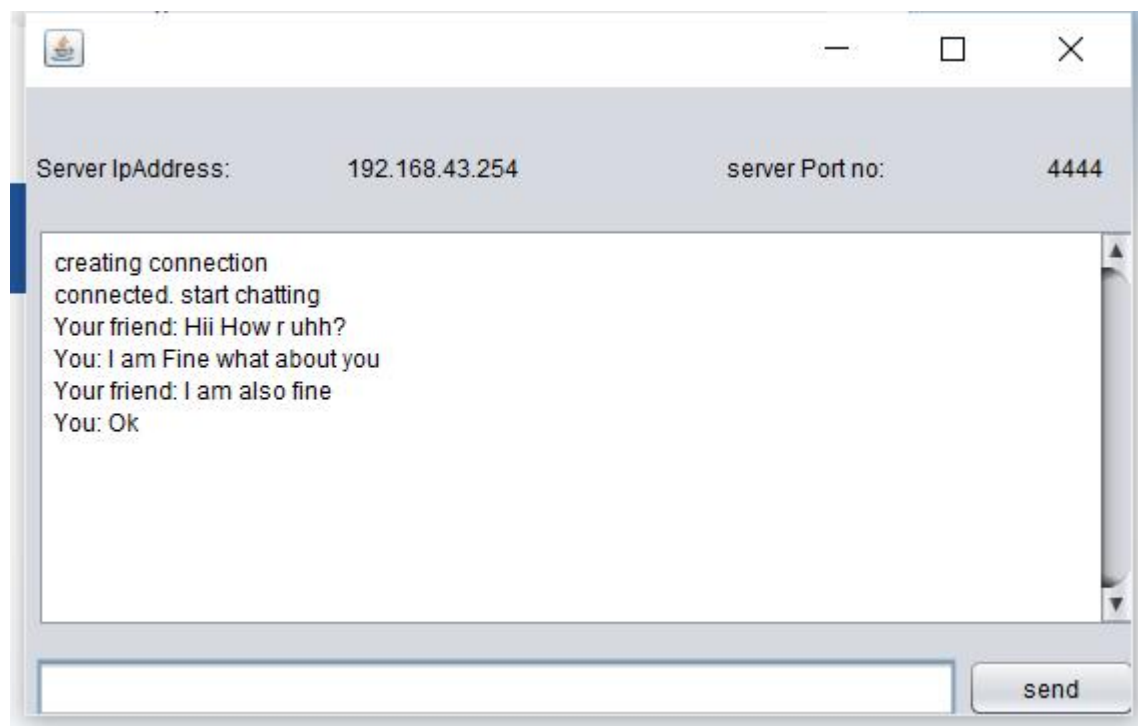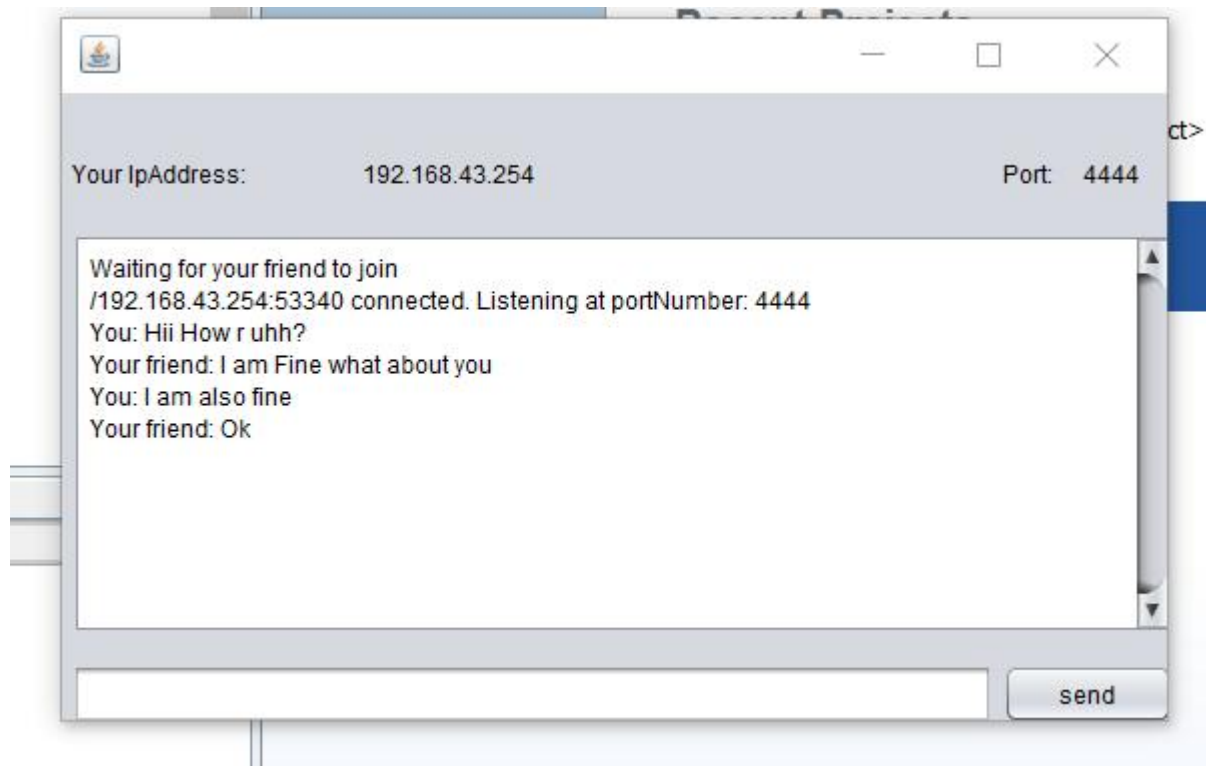❓   Enter your friend's IpAddress: 192.168.43.254   Enter your friend's Port Number: 4444

OK   Cancel

SYSTEM REQUIREMENTS-

Intranet Chatting System is a network-based application. When we talk about hardware andsoftware, we have to mention the requirements on both the Client and Server part.

- JDK 1.1 Java Webserver, running on any platform..

- JDBC drivers installed.

- Efficient enough to deal with multiple threads of processing.

- Operating system: Windows 98, MS-DOS

Hardware Specification: -

CPU   : Pentium 2.0

RAM   : 32 MB

Hard disk   : 1.74MB

Monitor   : SVGA color monitor

Keyboard   : 105 standard and mouse.

Server   : Any Java enabled Web server.

Software Specification :-

Operating system: Windows 98, MS-DOS

Backend   : MS-Access

Language   : Java2.0 (JDBC)Java script

Driver   : Microsoft ODBC for oracle.

Browser   : Internet Explorer4.0

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LITERATURE SURVEY

Existing System

- When the existing system was studied, it was found having some problems, existing system was very time consuming and was not very efficient. The drawback of the existing system has resulted in to the development of new system, which is very user friendly and effective. Existing system was also very low in performance. While developing the new system all requirements of the end user was taken into consideration. These have been maximum efforts towards overcoming the drawbacks of the existing system, while the new system was designed & developed.

- There is no private chatting option had been available. □

- Client can connect with the server with internet. □

- The Performance of existing system is very low. ·

Proposed System

- The system to be developed here is an Chat facility. □

- It is a centralized system. □ □

- All local clients are connected to the centralized server via LAN. □

- There is a two way communication between different clients and server. □

- This chat application can be used for group discussion..

- User friendly and interactive Application.

PROBLEM FORMULATION

The manual system is suffering from a series of drawbacks. Since this application is not able to send anytype of multimedia file like any image or any type of video. This is purely based on chatting through messages.In future other facilities such as video call, voice messages can be added in this system.

It is hard to take record of every person in the list for their passwords and their login id's. What we have come across is another method of loging in the system i.e, through the IP address and the port number. Portnumber can be changed by the server it all depend on the server which port number he/she want to use. The client should have the port number and the ip address otherwise he/she cannot interact or chat with the server.

OBJECTIVES

Chat server is a network based application which having two faces: one for the server side and one for theclient. Our chat server has been developed with optimized technique to make fast and of less size.

Even though, it's a small application, but eligible to meet client side requirements. It's having many pages source code, one for the server and can be placed on any system which you want to make a server. For working as client side, you have to place the client code to other computer, which will act as client side.

At the same time, there can be more than one client which can be handle by the TCP connection. In order to handle with networking concepts, we have used number of java built in features to have optimized codes like threading, networking console, Input and Output console, collections, streams and much more. Among all, it'sthe application which can be run, using the concept of LAN and all clients need to be connected to server or use their dedicated IP address to receive and send messages through broadcasting central server.

METHODOLOGY

- Gather data and knowledge about the previous approaches / existing models .

- Research regarding relevant domains and papers for enriching domain knowledge.

- Implementing Java Swing, Java Applet, Socket programming.

- Adding IP configuration to the system for a better communication.

- Adding dataset to those programs for working of the system.

- Adding additional functionalities to the system.

- Asking the User whether he/she is the Server or the Client.

CONCLUSIONS AND DISCUSSION

- The system that we developed was implemented and tested with real data and were found to be error free. Also it is found the system will work successfully. We have tried to make the system maximum user friendly

- All the necessary validations are carried out in this project, so that any kind of users can make use of this software. It is simple and user friendly.

- Since this system is implemented in Java, it is platform independent

- It reduces time consumption.

- This can be simultaneously accessed from more than one system.

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