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IMPLEMENTATION OF INTRANET CHATTING IN JAVA

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ABSTRACT

In today's modern world, many programming as well as scripting languages are present. Java is one of them which has already made its dimension particularly clear that it will rule the scenario of computer science. Internet as well as Intranet is clearly illustrated in this paper. The concepts of Object Oriented Programming is clearly mentioned in this paper. Software is basically the collection of programs in an organized sequence. The entire working of the software (intranet chatting) is clearly illustrated in this paper. This all will definitely contribute to research sector in some extent.

Keywords: Intranet, Internet, Chatting, Client, Server.

I. INTRODUCTION

"Intranet" [1] is a network that is private in essence and it is depicted within an organization. Another term that is "internet" [2] is different from the intranet. One should not be confused between them. Gateways are responsible for the functioning of Intranet. The main aim of gateway is the traffic regulation between 2 different networks. The origin of intranet is in between 1994-1996 whereas internet originated in 1950s.
Intranet is depicted in Fig.1 whereas internet is depicted in Fig.2.

Fig.1. Intranet

A large number of Internet protocols are used by the intranet, such as Transmission Control Protocol/ Internet Protocol, Hyper Text Transfer Protocol etc.

Fig.2. Internet

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Tunneling [3] is another concept used in the context of Intranet. Chatting can be done in both domains that is intranet as well as internet.

II. RESEARCH BACKGROUND

A. JAVA

Java is a programming language that is being used by the developers to create the application for PCs or other devices. It was developed at Sun Microsystem by James Goslings. Its logo is illustrated in Fig. 3.

Fig.3. Logo of JAVA

B. Object oriented programming concepts

Java follows Object Oriented Scenario. It can be depicted with the illustration given below as Fig.4.

Fig.4. Concepts of Object Oriented Programming

- **Data Abstraction** – In this, the background details are concealed and only the essential details are mentioned.
- **Encapsulation** – The wrapping up of data and functions into a single unit is termed as encapsulation. An Example of it could be depicted as- In a company there are many departments for example accounts, sales, manufacturing etc. Now a person in the manufacturing department wants to meet a person in the sales department, so directly he cannot meet him, he must be issued with a memo.
- **Inheritance** – It is a concept in the concern to the Object Oriented programming, in which properties are inherited. Let's take an example, bike is a vehicle and vehicle come in the category of automobiles. That means bike inherit the properties of vehicles and vehicles inherit the properties of automobiles. Various kinds of inheritance are Single Inheritance, Multiple Inheritance, Multi-Level inheritance, Hybrid Inheritance and so on.
- **Polymorphism-** It comprises of 2 words. One is poly that means many and morphism means methods. The combined word is many methods. Function Overloading is a very fine example of Polymorphism.

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C. Intranet chatting

Chatting [4] is one of the prior applications of Intranet. In this the client as well as server plays a major role. This application is made in java. Orbit client [5] and orbit server [6] play a prior role in this. Fig.5 & 6 illustrates the server as well as client respectively.

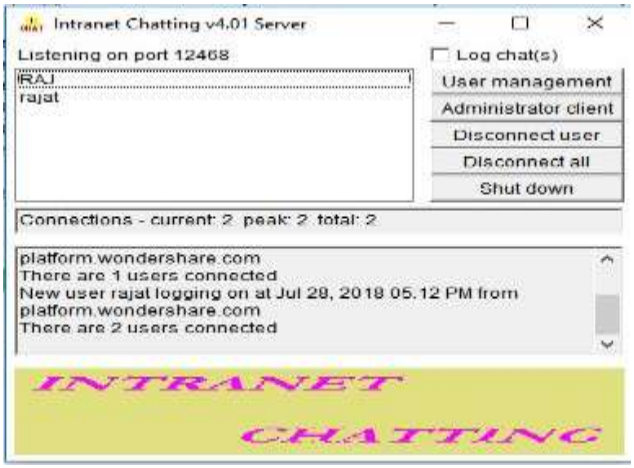

Fig.5. Server of Intranet Chatting

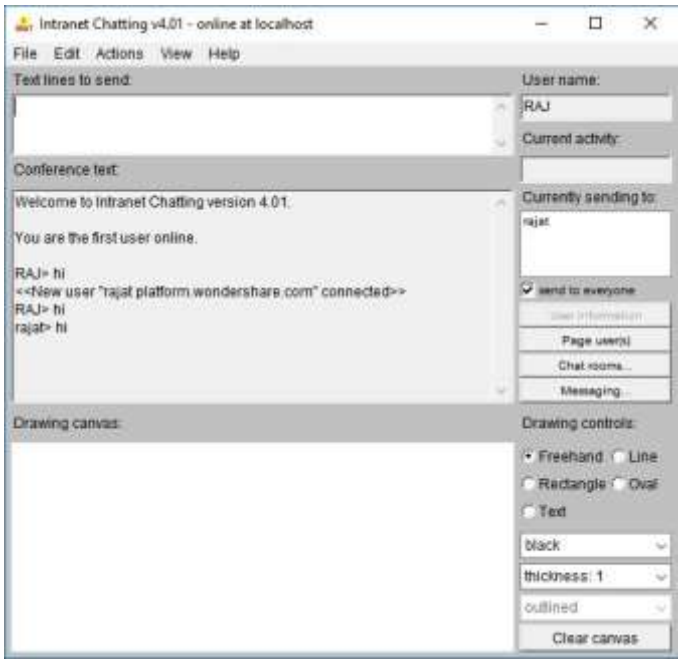

Fig.6. Client in Intranet Chatting

III. STEP BY STEP WORKING OF INTRANET CHATTING

Step by Step working includes-

- Server Started
- Client started in another window
- Client login to server
- Message Communication
- Disconnect

Server Started

It is depicted in Fig.7. User management [7], administrator Client [8], all the connections as well as disconnections are maintained by it.

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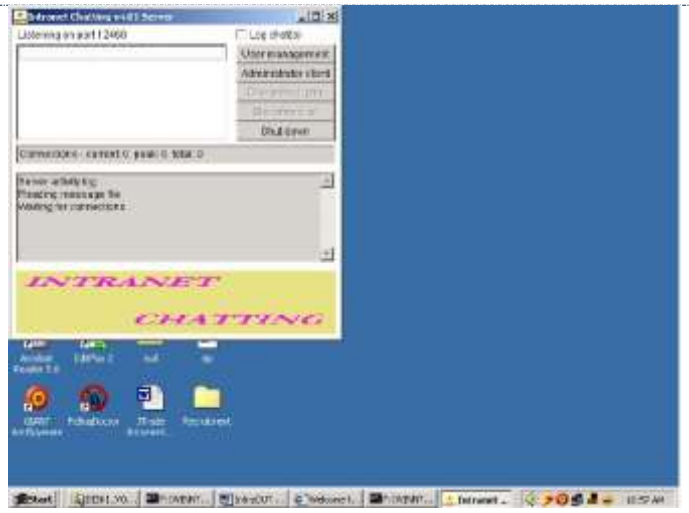

Fig.7. Server Started

Client started in another window

The client will be started after the server. It is depicted in Fig.8. It contains the canvas [9] section which takes the care of drawing. It has a conference text box [10] which contains all the messages. Drawing controls are also mentioned in this client window. Different clients can communicate with each other through a trusted 3rd party connection [11]. Many number of clients can communicate with each other on a single screen/window.

Fig.8. Client started in another window

Client Login to Server

After the client is opened in another window, the clients can login themselves with the help of a username as well as password. It can be depicted in Fig.9.

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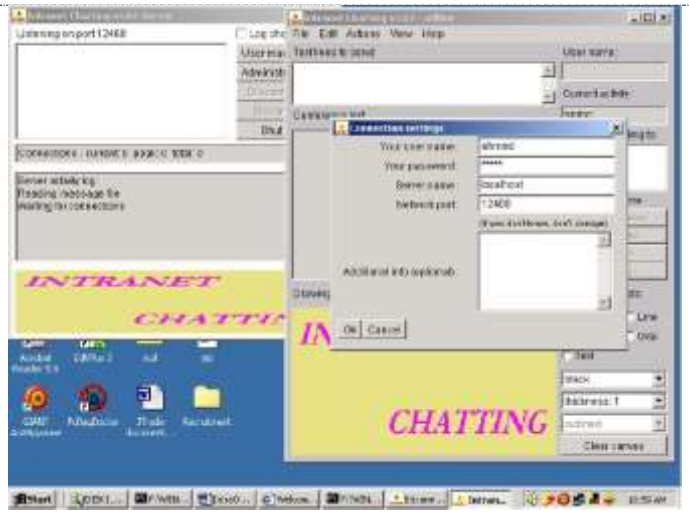

Fig.9. Client's login to server

It includes the server name also, here we can use it as local host. Localhost [12] is a hostname that depicts that this computer is used. Network Port [13] is also mentioned in the login window.

Message Communication

Communication is a two-way process [14]. The Client communicates to other clients. It is depicted in Fig.10.

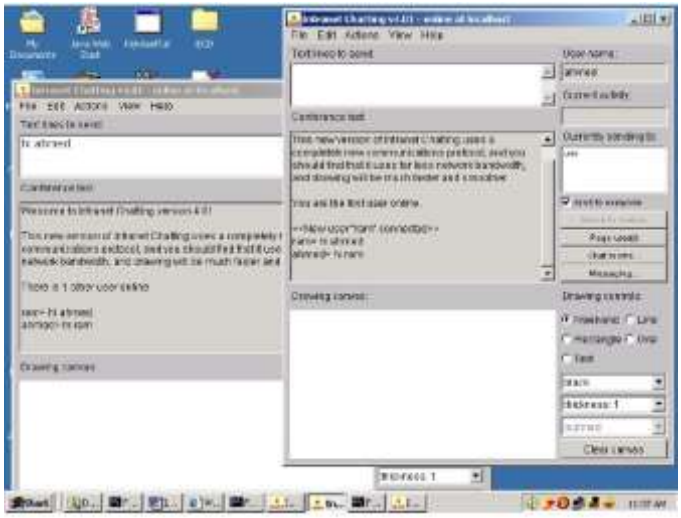

Fig.10. Communication

It also supports canvas feature that is used for drawing shapes and pictures. It is depicted in Fig.11.

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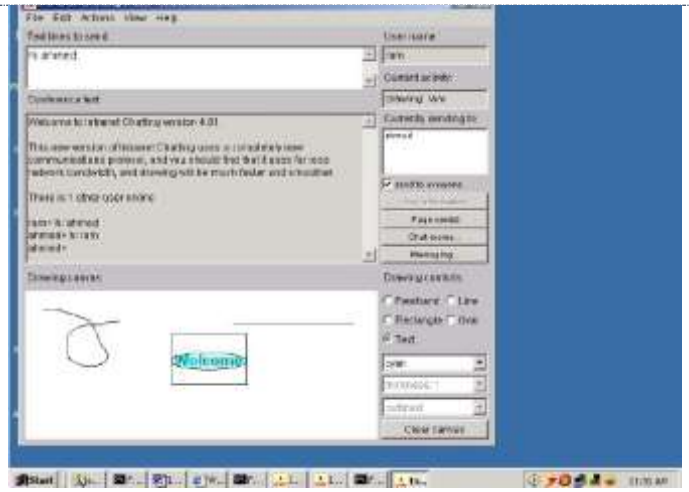

Fig.11. Drawing in Canvas box

Disconnection

After all the communication has been done, the clients can disconnect their connections. It can be depicted in Fig.12. This is the last step of the communication procedure as after this the chatting gets over.

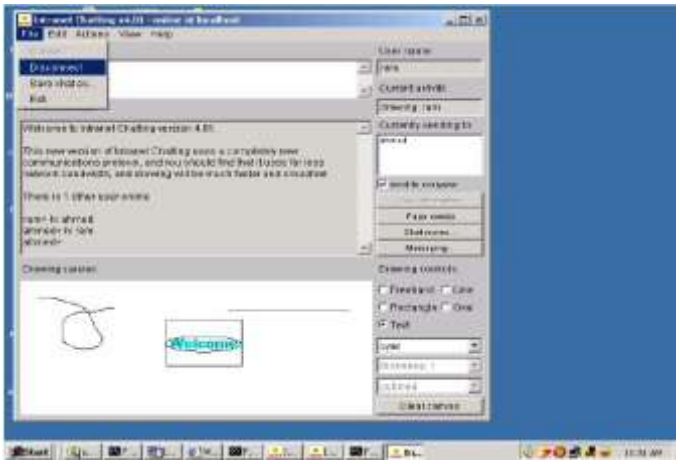

Fig.12. Disconnection

IV. CONCLUSION

From my point of view, this intranet chatting software is very important. It is useful in many ways. It followed a client-server approach. It can be very useful for any organization. Its entire step by step working is illustrated in this paper. Java is used in this context. The history of java is also mentioned in this paper. All this will certainly contribute to the research sector.

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