A Project Report On

aBp Online Chatting

Submitted to The

Department of Mathematical and Computational Sciences
National Institute of Technology Karnataka

In Partial Fulfilment of The Requirements For The Award Of the Degree

of

Master of Computer Applications

Session: 2017-2018

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CERTIFICATE

This is to certify that the project report entitled "**aBp Online Chatting**" for the fulfillment of the requirements for the award of the degree of **Master of Computer Application**s, session **2017 - 2018** at **National Institute of Technology Karnataka**, Surathkal is carried out by **Avinash Kumar Gupta** and **Vikash Kumar** and **Ankita Arya** at **NITK Surathkal** under my supervision & guidance. The matter embodied in this project is genuine work done by the students and has not been submitted to any other University or Institute for the award of any degree to the best of my knowledge.

Signature of Project Guide

Mr. Santhosh Chandu Pawar

Ms. Usha Kirana SP

Date:

Mathematical and Computational Sciences Department (NITK)

DECLARATION

We are undersigned **Avinash Kumar Gupta, Vikash Kumar** and **Ankita Arya** hereby declare that the project entitled "**aBp Online Chatting"** submitted by us in partial fulfilment of the requirements for the award of the Degree of **Master of Computer Application** and is conducted under the guidance of **Mr. Santhosh Chandu Pawar & Ms. Usha Kirana SP** (**Department of Mathematical and Computational Sciences**). It is our original work and has not been copied from any other source or project.

Date: Signatures:

ACKNOWLEDGEMENT

The completion of any project brings with it a satisfaction, but it is never complete without thanking those people who made it possible and whose constant support has crowned our effort with success. We would like to thank our guider **Ms. Usha kirana SP** and **Mr. Santhosh Chandu Pawar sir** for their expert guidance, encouragement and valuable suggestions at every step. I heartily express my gratitude to my honorable HOD **Dr. B.R. Shankar** who has been a constant source of inspiration for us. I also would like to thank all the staff member of **department** of **MACS** for providing us with the required facilities and support towards the completion of the project. I am extremely happy to acknowledge and express our sincere gratitude to our parents for their constant support and encouragement and last but not the least, friends and well-wishers for their help and co-operation and solutions to problem during the course of the project.

CONTENT

	CHAPTER NAME	PAGE NO.
1.	Introduction	2
2	System Analysis	3
	2.1: How Does Online Chat Work?	4
	2.2: Types Of Chat	4
3	Existing Problems	
	3.1: The Disadvantages Of The Existing System	4
	3.2: Problem Statement	5
	3.3: Proposed System	5
4	Er Diagram	6
5	Data Flow Diagram	8
	5.1: Context Level DFD	8
	5.2: First Level DFD For Chat Users	9
	5.3: Continue First-Level DFD For Chat Users	10
	5.4: Second-Level DFD For File Upload	10
	5.5: Second-Level DFD For Chat User Registration	11
6	Table Structure	12
7	Hardware And Software Requirement	14
	7.1: Hardware Requirements	14
	7.2: Software Requirements	
8	Experimental Result	15
	8.1: System Designs-Screen Shots	15
9	Future Scope & Enhancement Of Project	24
10	Conclusion	25
11	References	26

1. INTRODUCTION

Online chat is a form of communication that utilizes computer programs that allow for two-way conversations between users in real time (events that occur in cyberspace at the same speed that they would occur in real life).

The Web based Chat system is being developed to allow chatting facilities between users on the internet. In addition to text chatting the software will also provide file sharing services. The user can also see all of the messages entered by the other users. Conversations are then carried on by reading the messages entered by the other users in the chat box and responding to them. The project is being developed with an aim of providing an environment where users can collaborate on a system which requires collaboration between a number of users who need to share resources jointly.

When starting to use an online chat, it is oftentimes required for a user to create an account one way or another to authenticate the nickname the user wants to use. For example in Skype the user needs to login with a registered account within the application interface before chatting, all contacts being linked to the account of the user

The project is being developed using the Java programming language. Oracle 10G express edition is being used as the database. The project will be hosted on Glass Fish 4.0 server. Java Server Technologies like Servlets, JSP, and Beans etc will be used.

Since the requirements may increase in future, the system can be easily modified accordingly, as the system has been modularized. The future expansion can be done in a concise manner in order to improve the efficiency of the system.

2. SYSTEM ANALYSIS:-

Identification Of Need:

When bandwidth is very low, text messages is sometimes lost, as there is unreliable transmission of packets. Important things to consider when building the chat application are that:

- Clients must be able to send and receive text messages. No messages should be lost.
- Client must be able to send a private text messages to another client reliably without being lost or sent to an incorrect client.

The usability, performance, and responsiveness of the system will then be evaluated over low bandwidth environments using multiple users.

Preliminary Investigation:

Live chat has been around for more than a decade, but only recently have companies discovered its profound effect on website conversion rates. A recent eMarketer paper cited live chat as being directly related to 38% of online purchases. And, 62% of consumers who have used live chat said they would be more likely to purchase again from the merchant who provided the service. Why does live chat make such a huge difference in conversion rates? It has been suggested that live chat is the only way to provide real human interactionduring an online purchase. In other words, customers need questions answered and a sense of reassurance that can be provided only through live chat.

2.1 How does online chat work?

The technologies that allows users to converse in real time via typed messages are the chat servers and the chat clients. These special servers allow the messages to be quickly received and posted so that the chat clients can receive the messages and display them in the window on the users' computers. Fortunately, most chat clients are relatively inexpensive shareware programs, and there are a number of chat servers that let the user connect to them for free. Online chat could be an alternative to meeting in a traditional classroom. While all of the participants would still be able to freely converse with one another, they would carrying on the conversation from the comfort of their own home, thus avoiding the expense and inconvenience of traveling to another place.

2.2. Types of Chat:

1. Synchronous Chat: Text only web based synchronous forum that enables in the same online "room" typing their comments to each other. As soon as the user clicks "enter" his/her text message appears immediately on the screen of all users who are in the "room." Messages appear in the order in which they were entered.

2. Asynchronous Chat: Asynchronous Chat is way of saying Forum, Message Board or Bulletin Board.

3. EXISTING PROBLEMS:

3.1. The disadvantages of the existing system are :-

0. File versioning is not available.

1. Any one can send you message, If you don't want eventhen.

2. There is no limit to these profiles. Most of them are created by stalkers or marketers looking to gain more friends and use it for their marketing purposes.

3. We can not send defferent data with same file name.

4. send audio and video messages upto size upto (approximately) 16Mb**.**

5. We can not print the chat history directly .

3.2. PROBLEM STATEMENT :

1. **GROUP COMMUNICATION**

   We all want to communicate with a group of friends at one time but Further chat applications was able to connect only one client and server at one time There is a two way communication between different client and server .This chat application can be use for group discussion it allows user to find other logged in users .

2. **PLATFORM INDEPENDENT**

   All chat applications are platform dependent we can not use it different platforms. This aBp online chat system application can operate on any system irrelevant of the underlying operating system.

3. **UNLIMITED CLIENTS**

   Further chat applications are only efficient for a limited no. Of users, to increase the no. Of users it faces some server problems. N no of users can be connected without any performance degradation of the server.

3.3. PROPOSED SYSTEM:-

The aim of proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system. The system provide proper security and reduse manual work.

1. The “Chat Systems “objective is to provide a system which allows users to register into the system. Then users will login to the system and use the system.
2. The users will exchange text messages with each other. Besides this they can also share files of all types.
3. The system will provide security to all members and all content on the server.
4. The chat system will be of use for groups which need to work on a set of shared documents in a group.
5. The Chat system also Provide the User Guide Line with efficient way and attractive look.
6. The System also provide the printing option, if user want to keep personnel and private messages in a hard copy.

4. ER DIAGRAM OF E-Chatting:

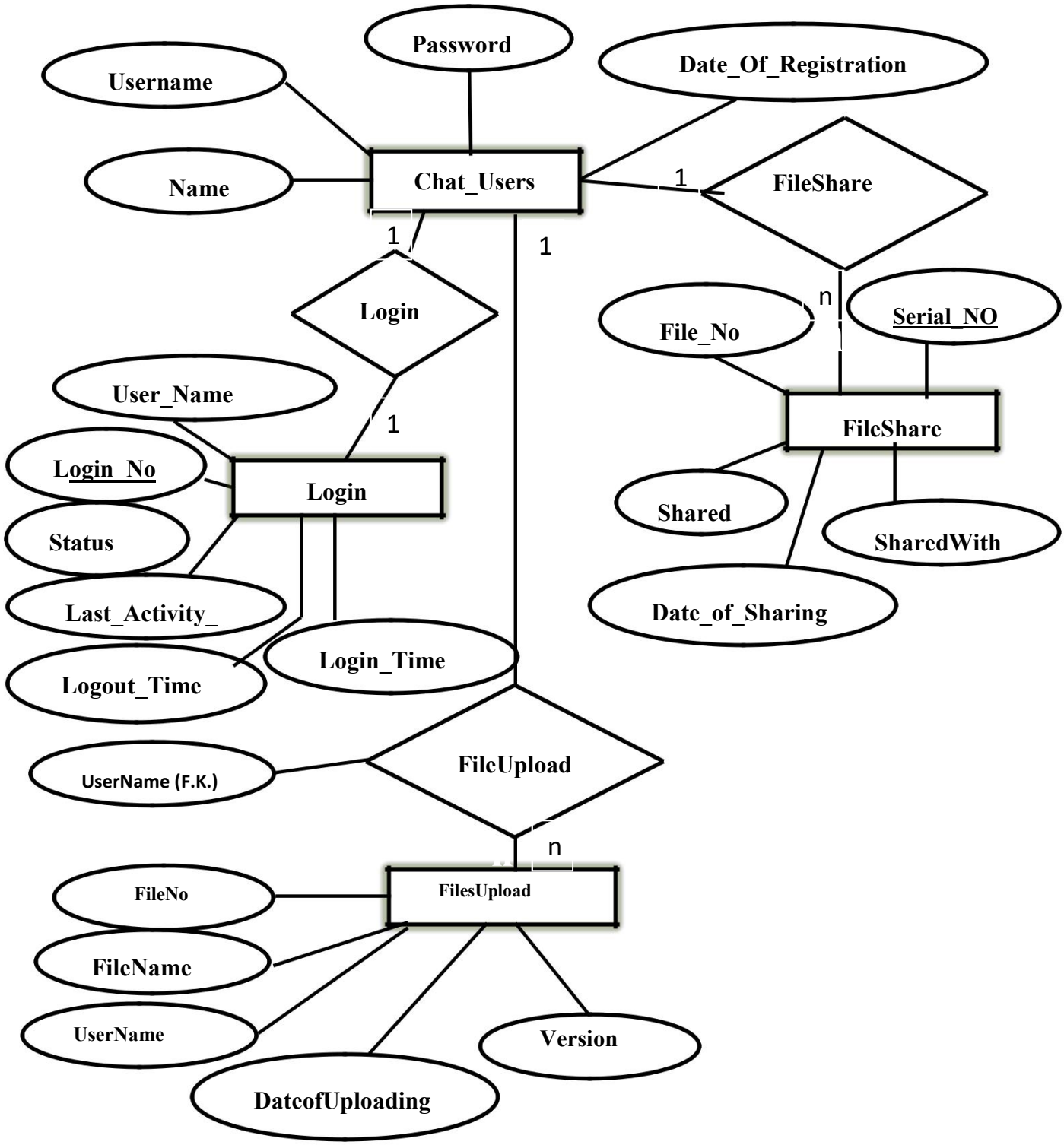


Fig: Er- 4.1

CONTINUE ER DIAGRAM OF E-Chatting :

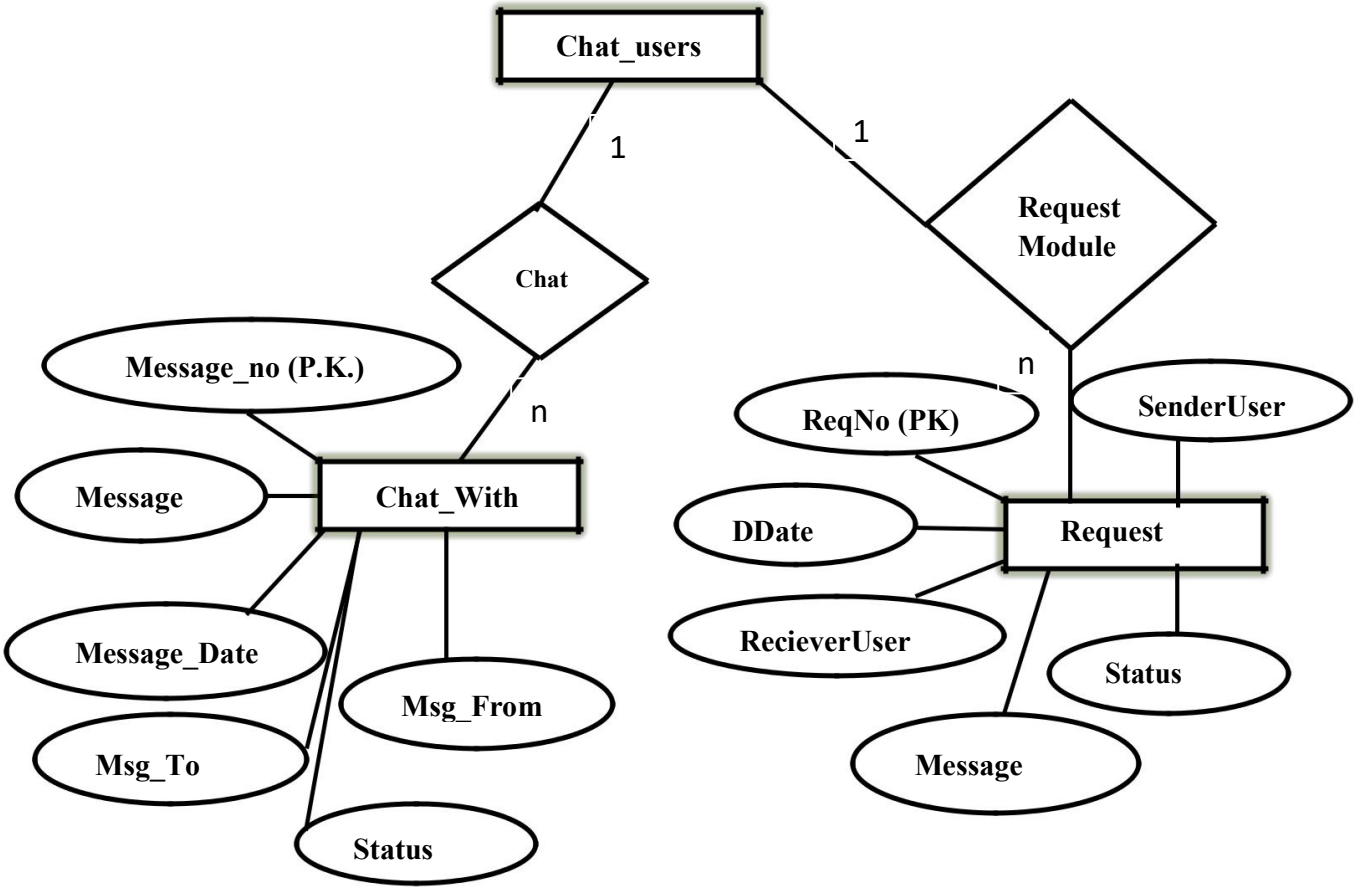


Fig: Er-4.2

5. Data Flow Diagram:-

A Data Flow Diagram(DFD) is a diagram that describes the flow of data and the processes that change or transform data throughout a system. The Data Flow Diagram reviews the current physical system, prepares input and output specification, specifies the implementation plan etc.

5.1. CONTEXT LEVEL DFD:-

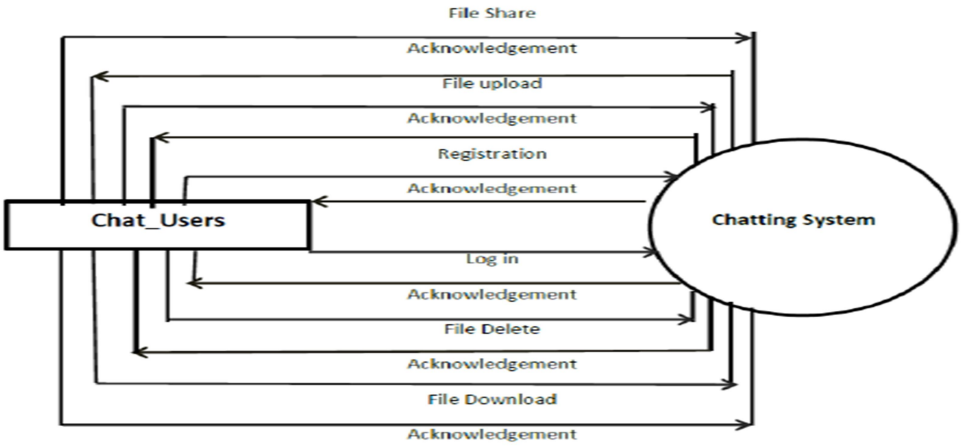


Fig: DFD- 5.1

5.2. FIRST LEVEL DFD FOR CHAT USERS:-

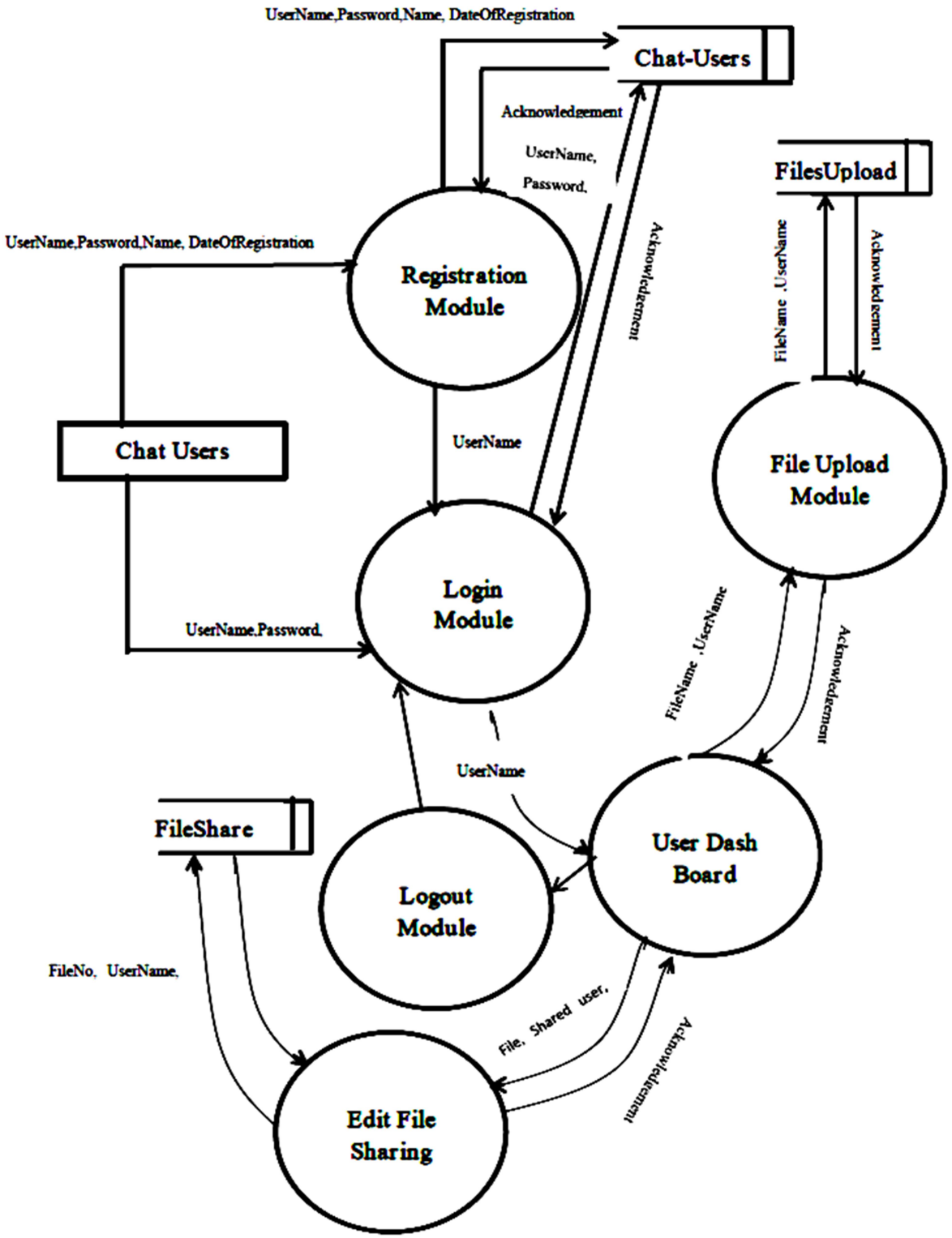
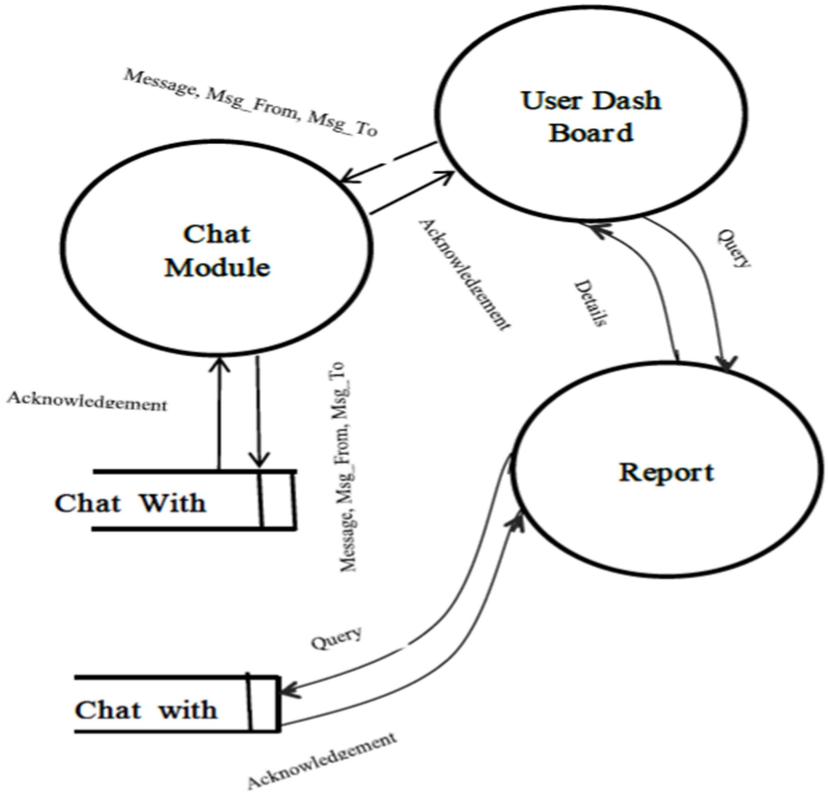


Fig: DFD- 5.2

5.3. CONTINUE FIRST-LEVEL DFD FOR CHAT USERS:



5.4. SECOND-LEVEL DFD FOR FILE UPLOAD: -

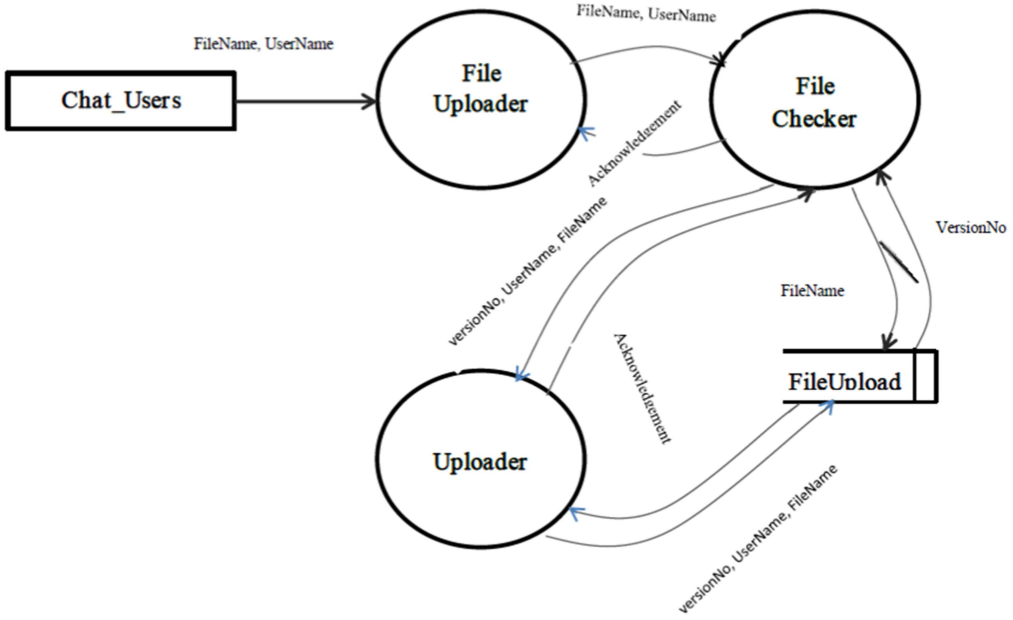


Fig: DFD- 5.3

5.5. SECOND-LEVEL DFD FOR CHAT USER REGISTRATION:

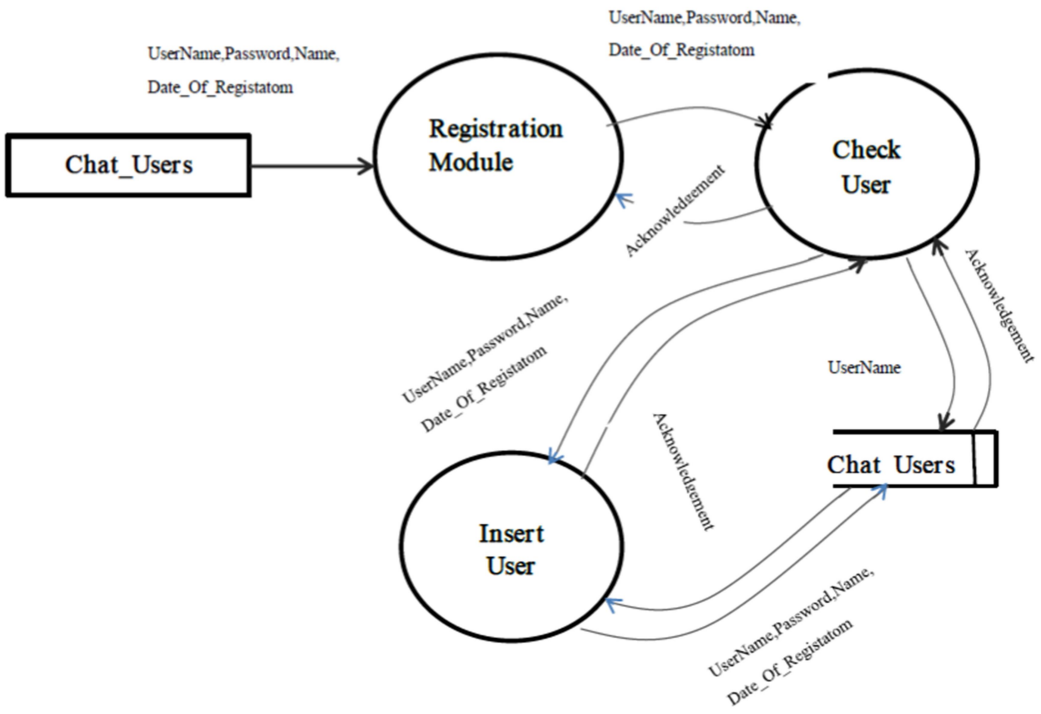


Fig: DFD- 5.4

6. Table structure

1.Chat_users:

Field name	Data type	Constraints	Description
User_name	Varchar(20)	Primary key	Username of owner
Password	Varchar(8)	Not Null	Valid Password for login
Name	Varchar(20)	Not Null	Name of User
Date_of_Registration	Date	Not Null	Date of Registration

Fig: TABLE-6.1

2. Login :

Field name	Data type	Constraints	Description
Login_no	Number	Primary Key	Serial number is unique
User_Name	Varchar(20)	Foreign Key Chat_Users(User_Name)	Unique Id of User
Login_Time	Date	Not Null	Date and Time of User Login
Last_Activity_Time	Date	Not Null	Last activity time of user login
Status	Varchar(20)	Not Null	Login session id
Logout_time	Date	Not Null	Date and Time of User Logout

Fig: TABLE-6.2

3. Files:

Field name	Data type	Constraints	Description
File_No	Number	Primary key	Serial number of files
FileName	Varchar(10)	Not Null	Name of Uploaded File
Version	Number	Not Null	File version
DateOfUploading	Date	Not Null	Date of File Upload
User_Name	Varchar(20)	Foreign Key Chat_Users(User_Name)	Username of owner

Fig: TABLE-6.3

4. FileShare :

Field name	Data type	Constraints	Description
Serial_number	Number	Primary key	Unique id of Shared File
File_No	Number	Foreign Key Files(File_No)	Serial number of files
DateOfSharing	Date	Not Null	Date of Sharing File
SharedBy	Varchar(20)	Foreign key Chat_Users(User_Name)	Name of User by which File is shared
SharedWith	Varchar(20)	Foreign key Chat_Users(User_Name)	Name of user the File is Shared With

Fig: TABLE-6.4

5.Chat_with Table

Field name	Data type	Constraints	Description
MessageNo	Number	Not Null	Serial number of message send by users
Message	Varchar(50)	Not Null	Message send by user to each other
MessageDate	Date	Not Null	Date of the Message ,when msg send by user
MessageFrom	Varchar(50)	Not Null	Sender of the Message
MessageTo	Varchar(50)	Not Null	Receiver of the Message

Fig: TABLE-6.5

6.Readreport:

Field name	Data type	Constraints	Description
Readno	Number	Primary Key	Serial number of messages
Senderusers	Varchar(50)	Foreign key Chat_Users(User_Name)	User name who send the message
Receiveruser	Varchar(50)	Foreign key Chat_Users(User_Name)	User name who receive the message
Status	Varchar(10)	Not Null	Status of message

Fig: TABLE-6.6

7.Request:

Field name	Data type	Constraints	Description
Reqno	Number	Primary Key	Serial number of request Sent
Senderusers	Varchar(50)	Foreign key Chat_Users(User_Name)	User name who send the friend request
Receiveruser	Varchar(50)	Foreign key Chat_Users(User_Name)	User name who receive the friend request
Message	Varchar(10)	Not Null	Message
Status	Varchar(10)	Not Null	Status of Request
Ddate	Date	Not Null	Date of request sent

Fig: TABLE-6.7

8.Fileupload

Field name	Data type	Constraints	Description
Fileno	Number	Primary key	Serial Number of Uploaded Files
Filename	Varchar(50)	Not Null	Name of files
Version	Number	Not Null	Version Number
Date_of _Uploading	Date	Not Null	Date of uploading file
Username	Varchar(20)	Foreign key Chat _Users(User_Name)	User name who uploaded file

Fig: TABLE-6.8

7. HARDWARE AND SOFTWARE REQUIREMENT:-

7.1. HARDWARE REQUIREMENTS:

Definition of Hardware: -

The Physical components of a computer are known as Hardware. Such, physical components may be electronics, electrical, magnetic, mechanical or optical. These include Microprocessors, Integrated Circuit(ICs), Hard Disks, Floppy Disks, Optical Disk, Color Monitor, Keyboard ,Printer and Plotter etc.

Minimum Hardware Requirement:-

- Processor: Intel dual core or above
- Processor Speed: 2GHZ or above
- RAM: 512 MB RAM or above
- Hard Disk: 20 GB hard disk or above

7.2. SOFTWARE REQUIREMENTS:

Software is a set of series of instructions or programs that tell the Hardware what to do. It is a combination of instructions and data that forms the building blocks of application such as Word Processor, Computer Game or Spreadsheet. The Main purpose of software is to process the data into information.

Minimum Software requirement:-

- Front end: JSP, HTML, JAVASCRIPT, CSS
- Back end: Oracle 10g
- Operating system: windows 7, windows 8.1
- Application software: NETBEANS, JDK1.7
- Server: Glass Fish 4.0

8. EXPERIMENTAL RESULT:-

8.1. SYSTEM DESIGNS-SCREEN SHOTS:

The design provides us a group of button driven by event handlers to ease transactions within the System. The database is mapped to the desktop of the user(s) computer. It require a user's name and password (as provided by the database administrator –which can be created in the Oracle 10g "Username and Password" text field that provide the security).

- FRONT LOOK Design
- User Guideline Design
- Registration Page Design
- Login Page Design
- User Dashboard Design
- Chat Page Design
- File Sharing Design
- Friend Request Design
- Printing(Chat History) Design

FRONT LOOK USER INTERFACE:

This is the front look of ABP Online Chat System.It provides the user facilities for registration, login, to know about us, to contact us and user guidelines.

Fig: 8.1

USER GUIDELINE USER INTERFACE :

User Guideline will help the user in operating the system.User can click on view button to view the steps of the options provided.

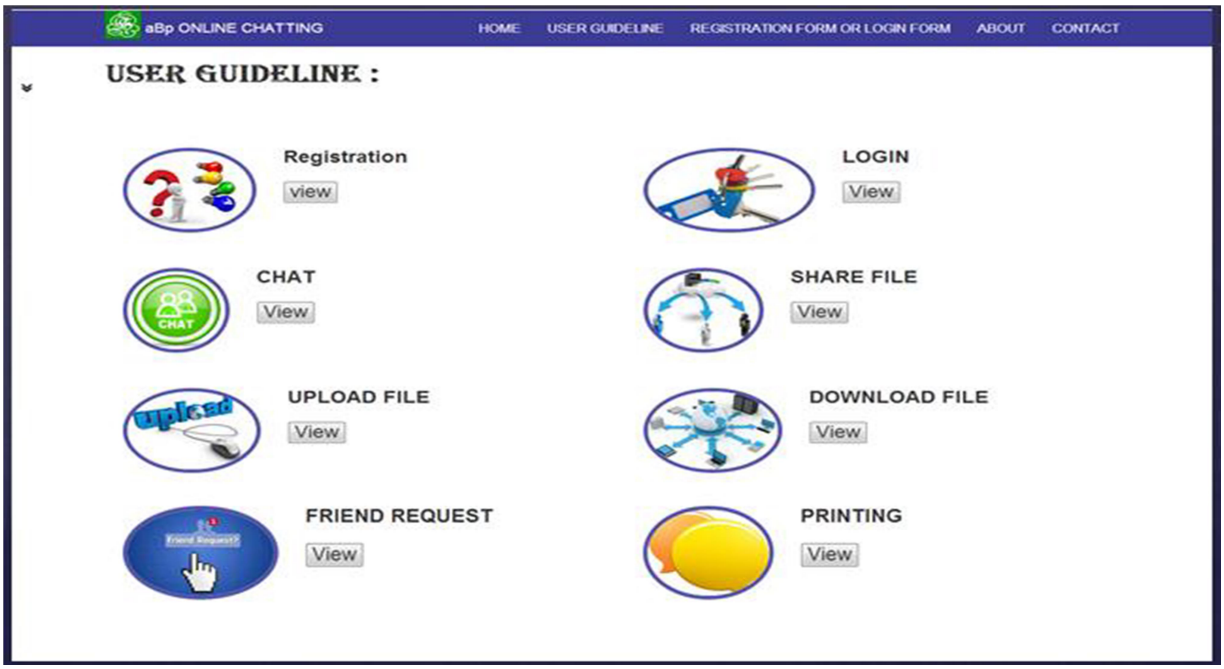


Fig: 8.2

REGISTRATION FORM AND LOGIN FORM:

This will provide the user facilities for Registration or Login.If user is new he has to register first.To register click on REGISTRATION button.If user is already registered he can login by clicking on LOGIN button.

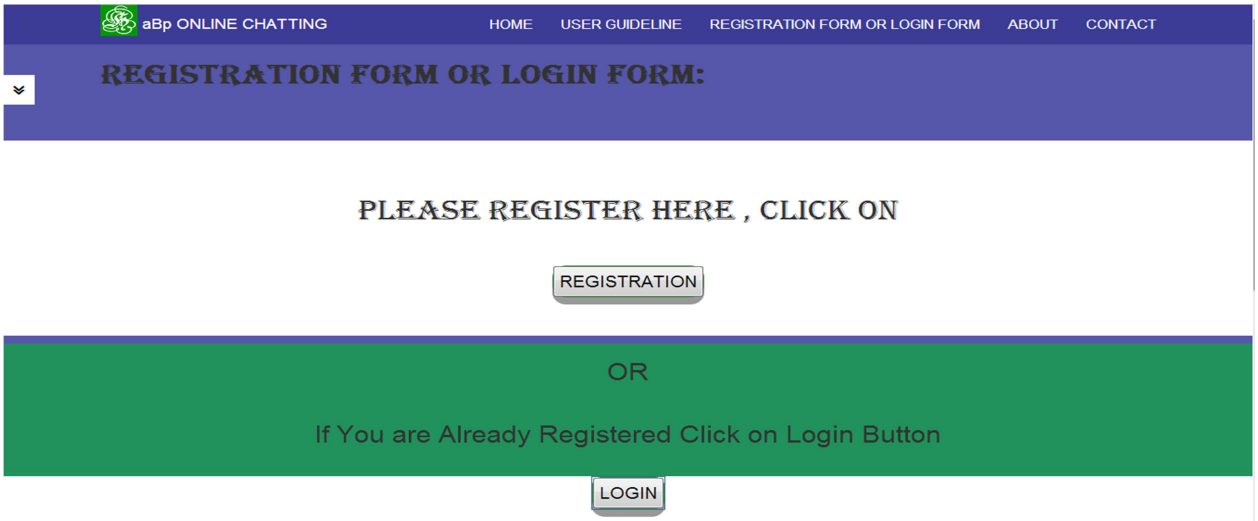


Fig: 8.3

REGISTRATION USER INTERFACE:

Click on SAVE button ,if you are successfully registered,a dialog box will appear displaying a message “YOU ARE SUCCESSFULLY REGISTERED”,if not an error will be displayed. If username is not unique,an error will be displayed.

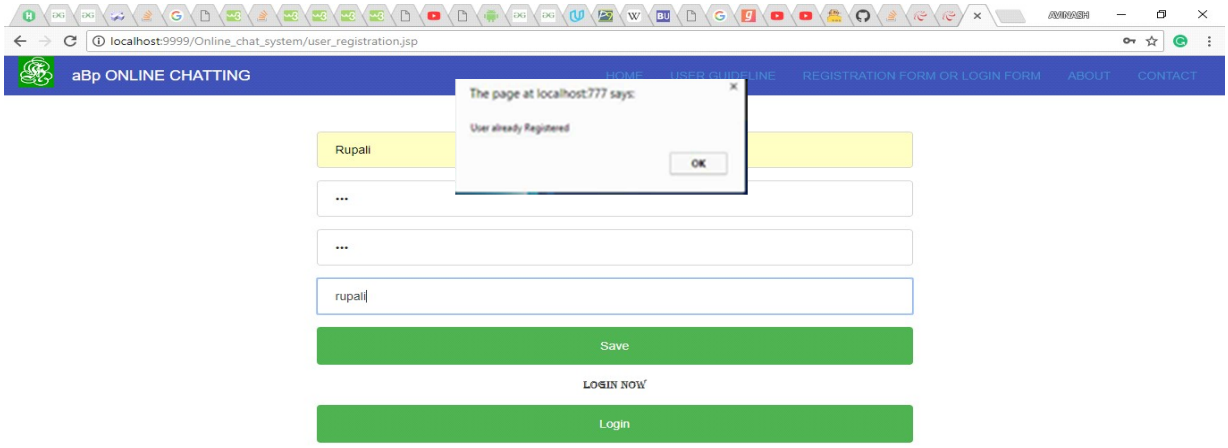


Fig: 8.4

LOGIN USER INTERFACE:

If USERNAME and PASSWORD is correct then user dashboard will open.

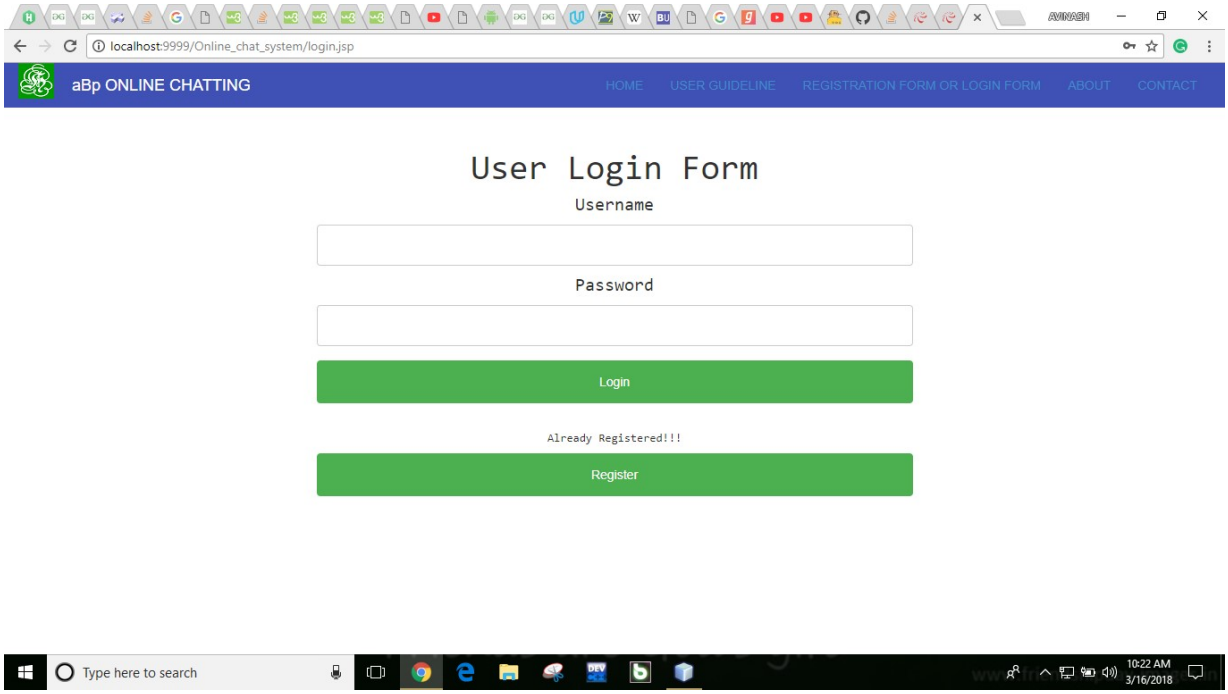


Fig: 8.5

USER DASHBOARD:

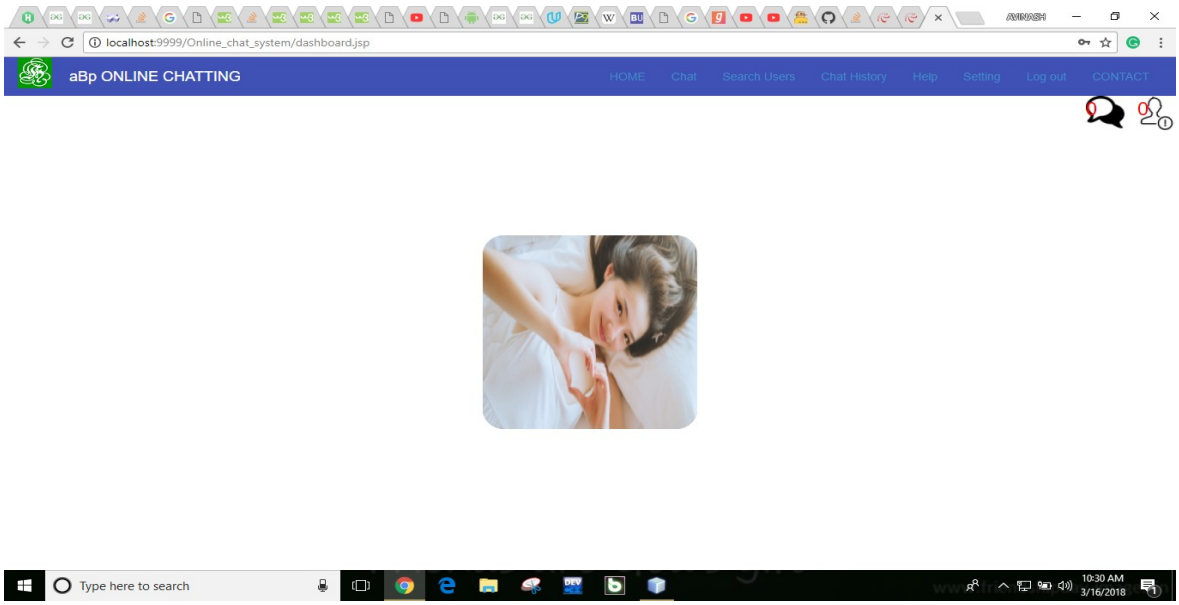


Fig: 8.6

USERNAME OR PASSWORD IS INCORRECT:

If username or password is incorrect ,an error will be displayed.

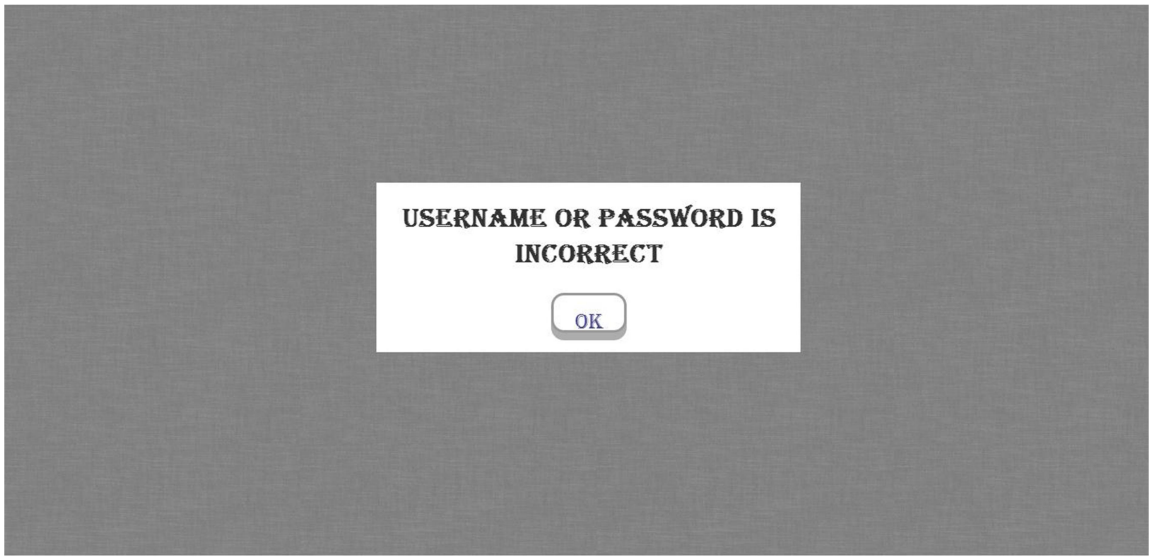


Fig: 8.7

SETTING PROFILE PICTURE ON USER DASHBOARD:

To set the profile picture go through the below options:

Setting->ChangeProfilePic->Choose file->Submit

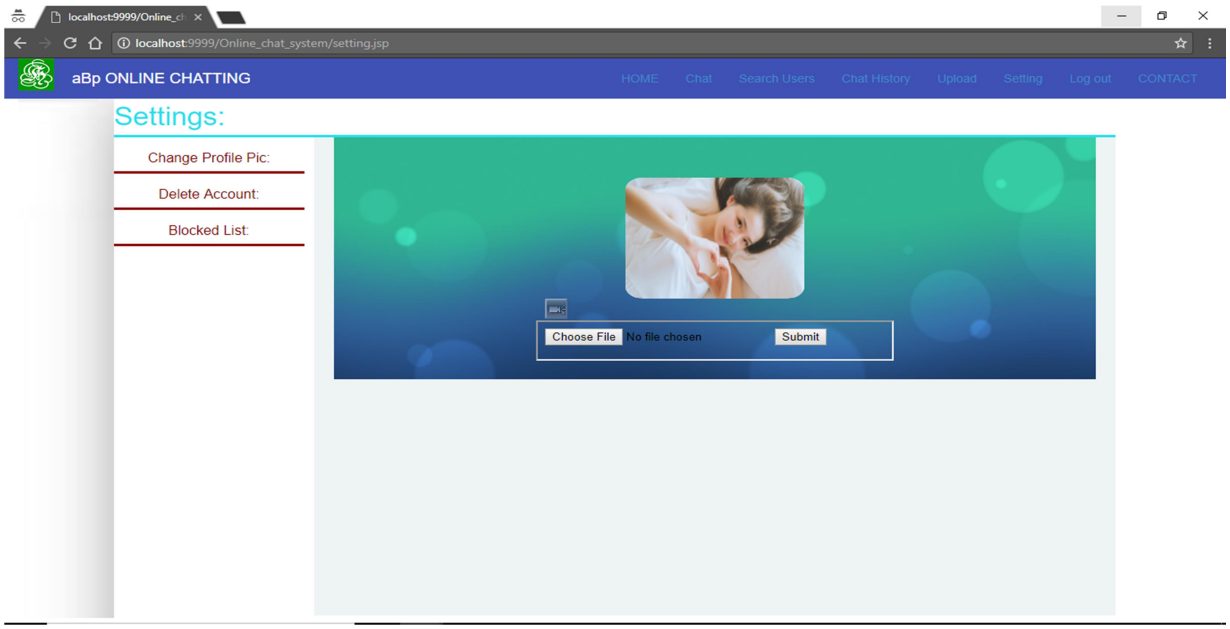


Fig: 8.8

CHATPAGE:

This will provide the user facility of chatting.

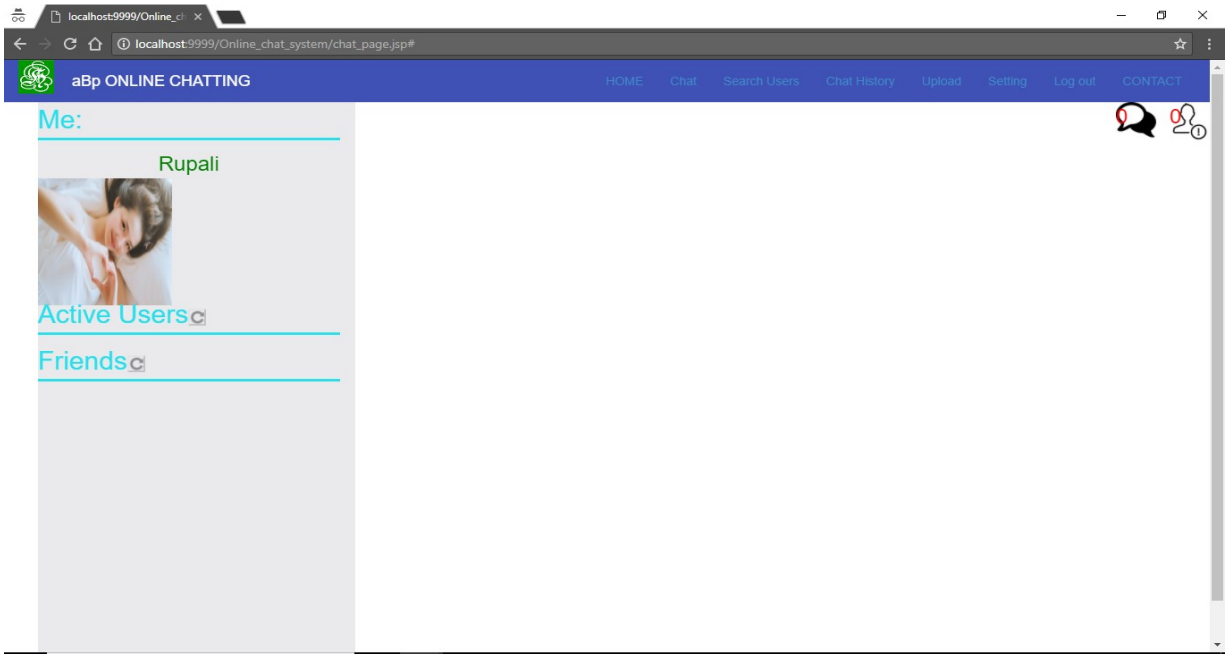


Fig: 8.9

SENDING FRIEND REQUEST:

User can send friend request to other users.To send friend request go through the following options: Search User->Type the username->Search->Send friend request.

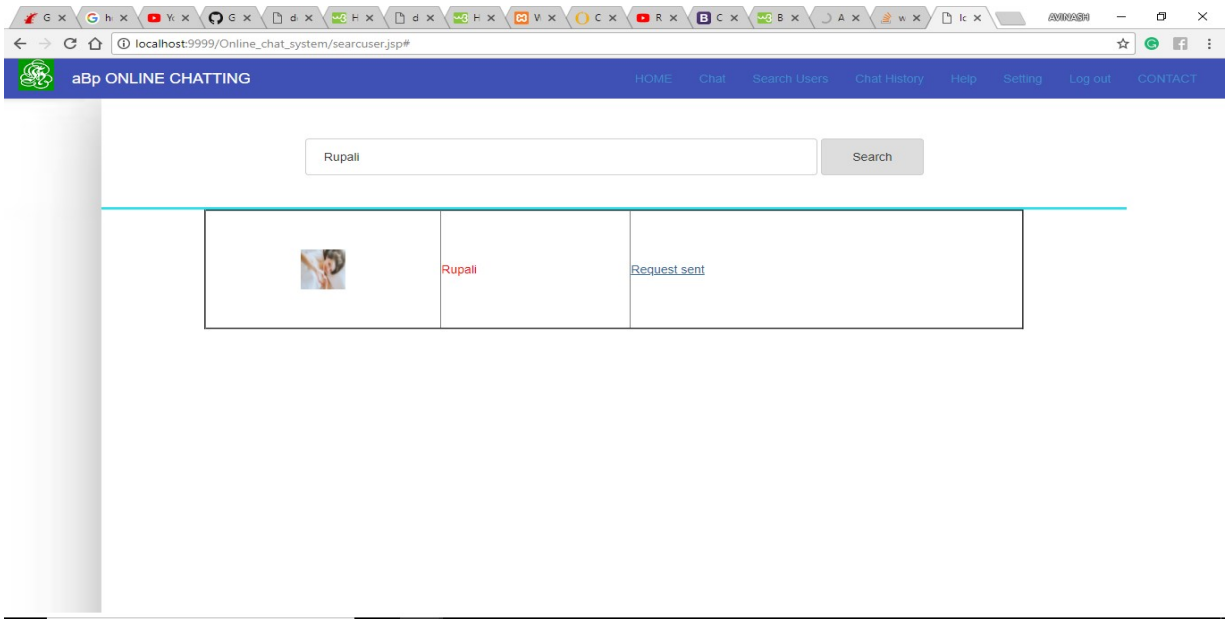


Fig: 8.10

ACCEPTING FRIEND REQUEST:

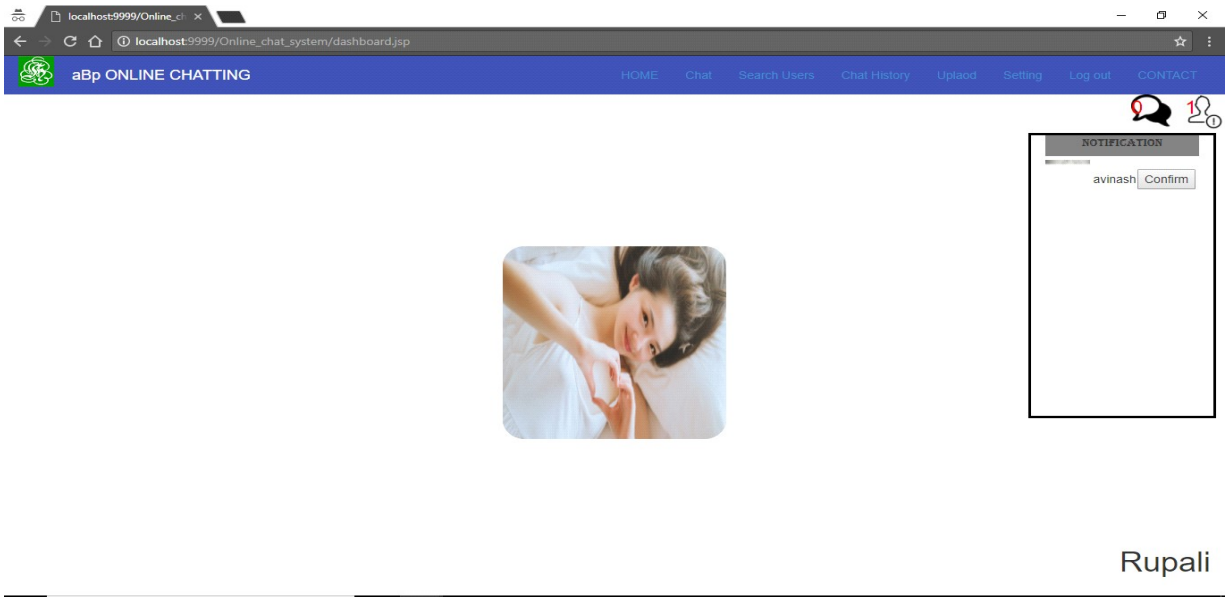


Fig: 8.11

SENDING MESSAGE:

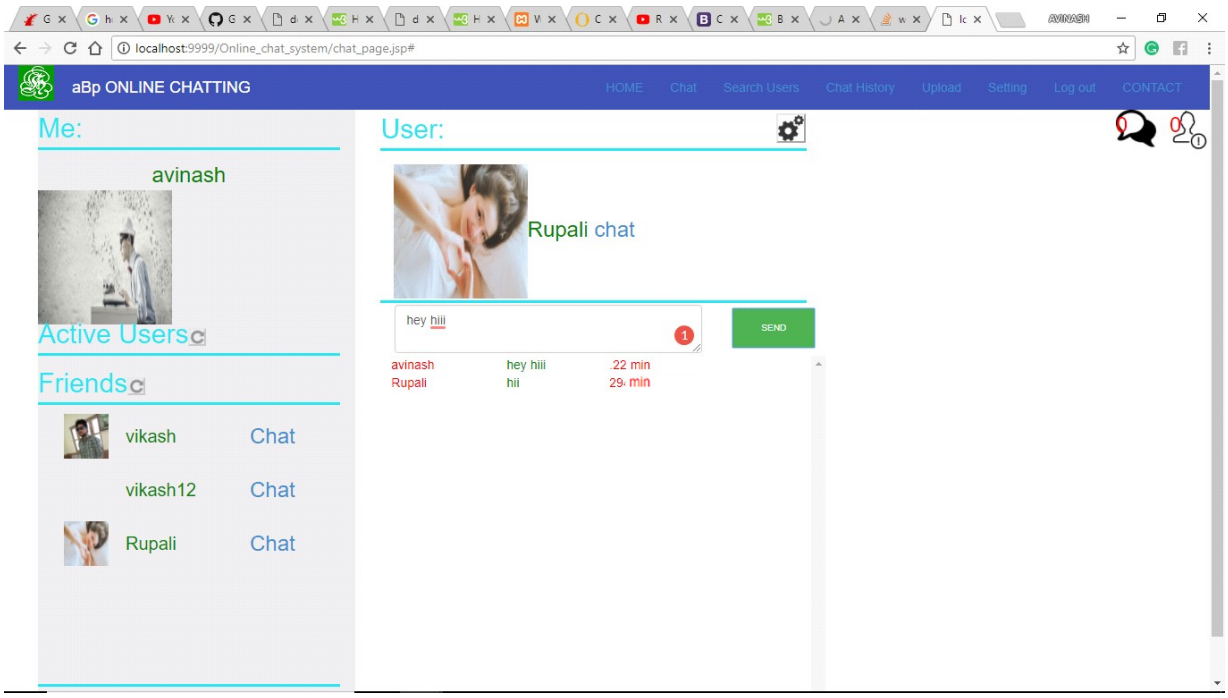


Fig: 8.12

UNFRIEND AND BLOCK USER INTERFACE:

User can unfriend any friend from list of friends. To unfriend the user go through the following options:

Chat Page->Friends->Select friend to unfriend->Click on right corner button->Unfriend/Block

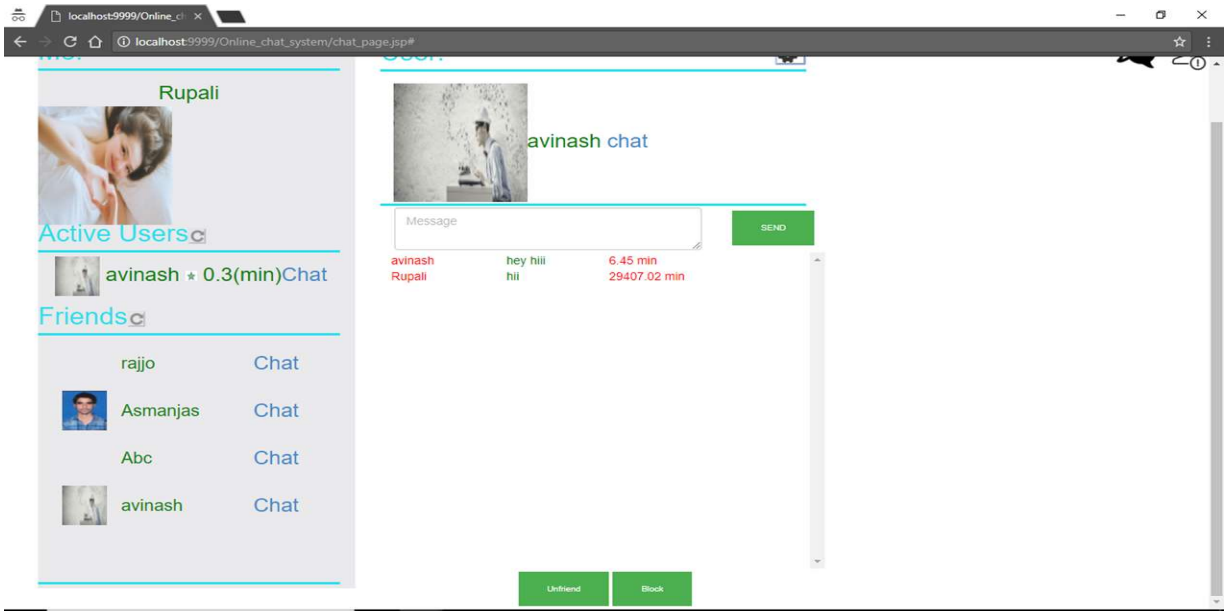


Fig: 8.13

LIST OF BLOCKED USERS

User can also see the list of blocked users and unblock them.To see the list go through the following option:

Setting->Blocked List

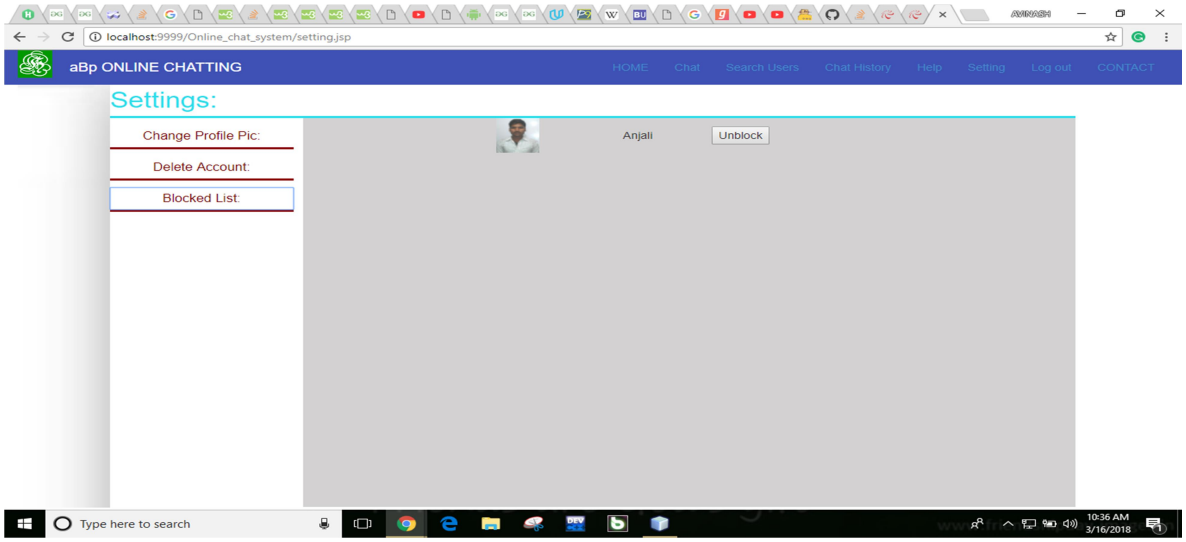


Fig: 8.14

FILE UPLOADING USER INTEFACE:

User can upload files and can share with friends.

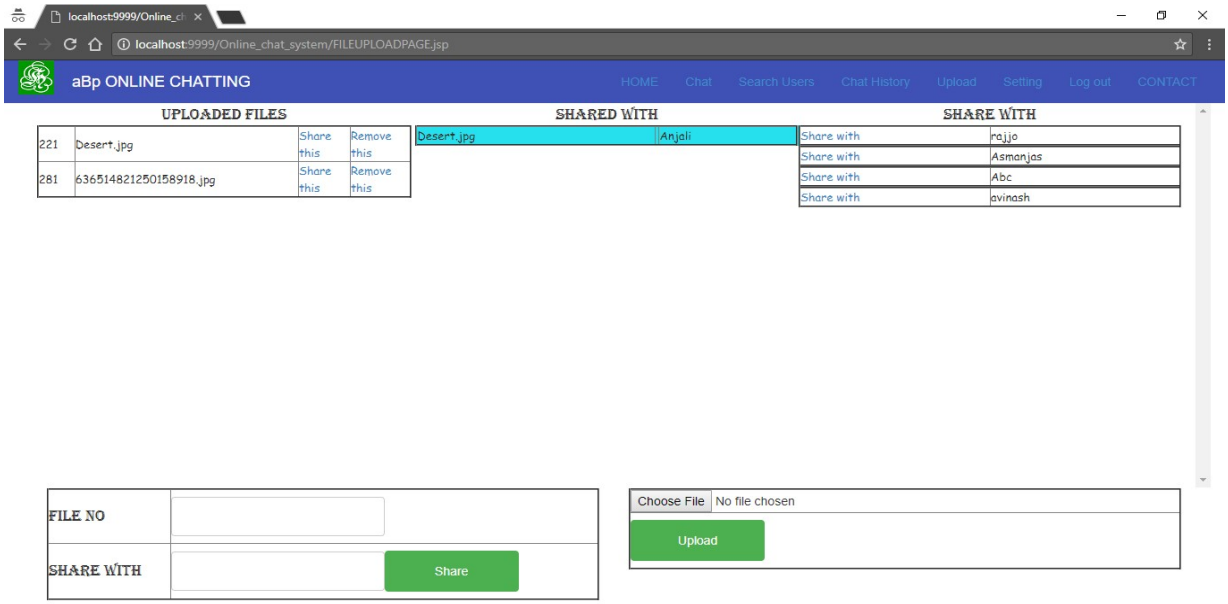


Fig: 8.15

CHAT HISTORY USER INTERFACE:

User can view the chat history.

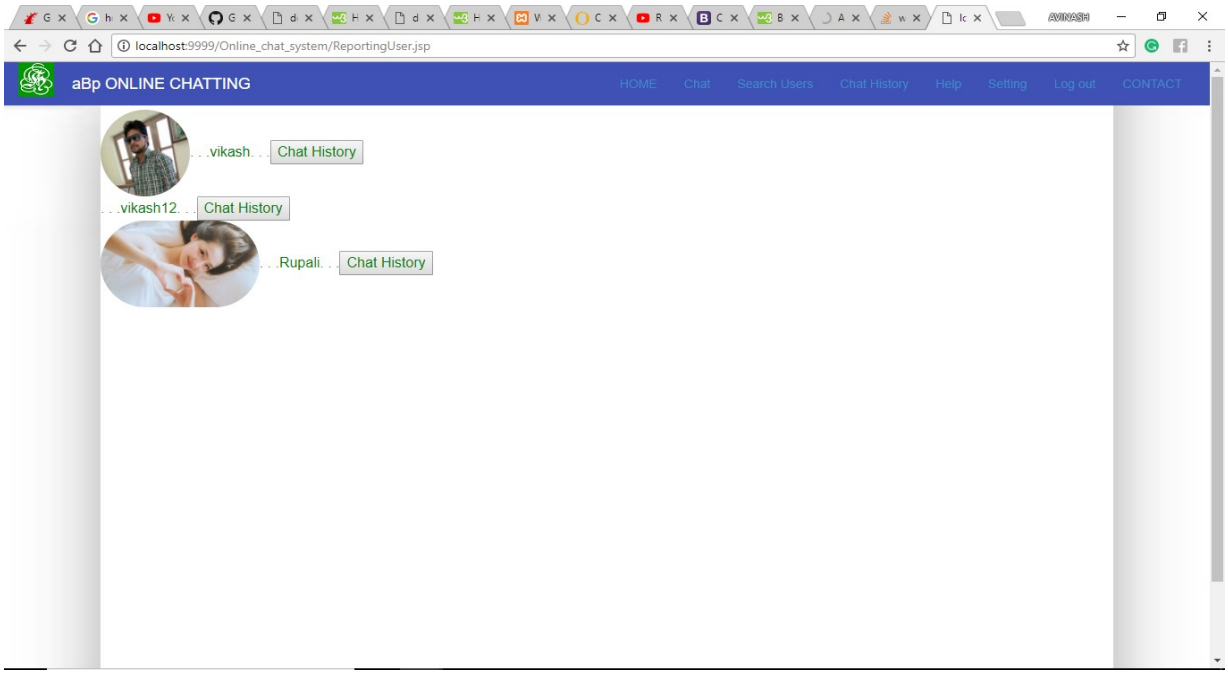


Fig: 8.16

CHAT HISTORY PRINTING USER

User can print the history.

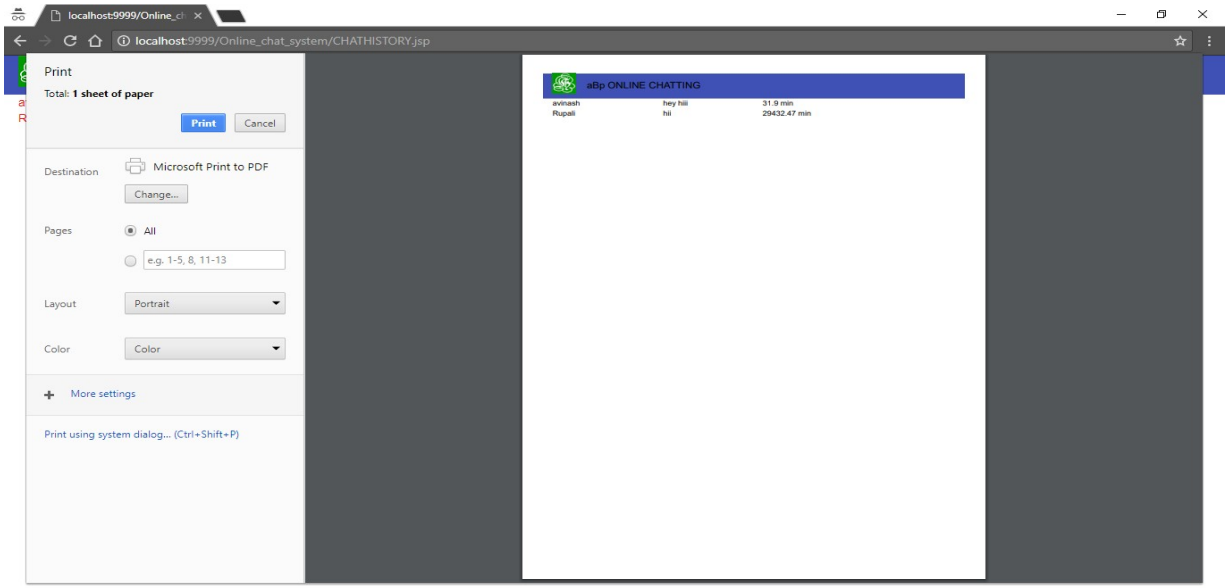


Fig: 8.17

9: FUTURE SCOPE & ENHANCEMENT OF PROJECT:

This system is very flexible so that the maintenance and further amendments based on the changing environment and requirements can be made easily. Any changes that may lead to the system failures are prevented with security measures. The project will support for multi user environment, that is more than one user can access simultaneously.

It can be further developed to include more operations and analysis, as changes are required in the system to adapt to the external developments. Further enhancements can be made to the system at any later point of time.

Coding procedures can be modified according to the needs of the user. The system code is also well designed that it will form the basis for further enhancement and also new operations can be included in the system. The reports can be represented in all necessary formats Added options can be design in reports. **An android version is under consideration.**

CONCLUSION

These days everything on the Internet is going social. As more and more people are becoming accustomed to sites like Facebook and Twitter, the demand for social features is on the rise. People want to be able to communicate with one another, share content easily and feel as if they are a part of the content they are consuming. The Chat Application can be used later be enhanced to create chat rooms where many people can discuss things in a group. This would be particularly useful in groups where a few loud people dominate a discussion. It can also be used in a class room environment where students can ask their doubts anonymously if we interface that chat with a similar application on a computer.

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