

**K L UNIVERSITY**  
**FRESHMAN ENGINEERING DEPARTMENT**  
**A Project Based Lab Report**  
**On**  
**MESSENGER**

**SUBMITTED BY:**

| I.D NUMBER | NAME                     |
|------------|--------------------------|
| 2200031514 | ROHIT KUMAR SINGH        |
| 2200031750 | KATAKAM DEVAYANI         |
| 2200031839 | CHITTEMSETTY NITIN KUMAR |
| 2200031961 | ADITYA BARI              |

**UNDER THE ESTEEMED GUIDANCE OF**

<FULL NAME>

<DESIGNATION>



**KL UNIVERSITY**  
Green fields, Vaddeswaram – 522 502  
Guntur Dt., AP, India.

## DEPARTMENT OF BASIC ENGINEERING SCIENCES



### CERTIFICATE

This is to certify that the project based laboratory report entitled “<TITLE>” submitted by Mr./Ms. <name> bearing Regd. No. <REGD.NO> to the **Department of Basic Engineering Sciences, KL University** in partial fulfillment of the requirements for the completion of a project in “Computational Thinking for Object Oriented Design - 22SC1203” course in I B Tech II Semester, is a bonafide record of the work carried out by him/her under my supervision during the academic year 2020-21.

PROJECT SUPERVISOR

HEAD OF THE DEPARTMENT

< GUIDE NAME>

Dr. D. HARITHA

## ACKNOWLEDGEMENTS

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I express the sincere gratitude to our director **Dr. A Jagadeesh** for his administration towards our academic growth.

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Finally, it is pleased to acknowledge the indebtedness to all those who devoted themselves directly or indirectly to make this project report success.

Name: <NAME>

Regd . No: <IDNO>

## **ABSTRACT**

Conversation is a way of using technology to connect people with ideas outside of local boundaries. The technology has been available for years but adoption has only recently taken place. Our project is an example of a chat server. It is made up of two applications - the client application, which runs on the user's web browser and the server application, running on any network servers. To start chatting the client must be connected to a server where they can conduct private and group chat. Safety measures were taken at the last moment. The latest developments in the internet have brought the world into our hands. Everything happens online from information transfer to purchasing. The internet makes the world a little round. This project is also online. This paper highlights the importance of the use of dialogue in everyday life and its impact on the world of technology. This project is for the development of a chat system based on Javascript programming language and network concept. The app allows people to transmit messages both privately and publicly .It also enables the feature to share resources such as files, photos, videos, etc. This online application is designed to communicate or chat with others online. It is more reliable and secure than any other traditional system available. Javascript, React.js and the client server concept were used to develop a web-based chat app. This app is built with the right structures for future development. It can be planted in all private organizations such as Colleges, IT parks, etc.

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## **INTRODUCTION**

Messenger Java program is a software application written in the Java programming language that allows users to communicate with each other through text messaging. The program is typically designed to mimic the functionality of popular messaging applications such as Facebook Messenger, WhatsApp, or Telegram.

The program is usually built using Java's standard libraries and tools and can be run on any platform that supports the Java Virtual Machine (JVM). To create a Messenger Java program, developers use a range of tools such as Integrated Development Environments (IDEs) like Eclipse or NetBeans, and libraries for network communication such as Apache Commons IO.

Some of the key features of a Messenger Java program include the ability to send and receive messages, create group chats, send images and videos, and make voice and video calls. The program typically uses a client-server architecture, with the server acting as a central hub for all communication between users.

Overall, a Messenger Java program provides a simple and efficient way for users to stay connected with their friends and family, and for businesses to communicate with their customers.

## AIM

The aim of the Messenger project is to provide a messaging application that enables people to easily and conveniently communicate with each other across the world.

### **Advantages:-**

**Ease of Use:** Messenger is designed to be simple and easy to use, with an intuitive interface that allows users to quickly find and connect with their friends and family.

**Multi-Platform Support:** Messenger is available on a range of platforms, including iOS, Android, and the web, making it accessible to users regardless of their device or operating system.

**Messaging Features:** Messenger offers a wide range of messaging features, including text messaging, voice and video calls, group chats, and the ability to send photos and videos, making it a versatile communication tool.

### **Future Implementation:-**

**Augmented Reality:** Messenger could integrate augmented reality technology, allowing users to interact with virtual objects in real-time during their video calls or messaging chats.

**AI Integration:** Messenger could leverage artificial intelligence to improve the user experience, providing personalized suggestions, natural language processing for voice commands, and predictive text.

## **SYSTEM REQUIREMENTS**

### ➤ **SOFTWARE REQUIREMENTS:**

The major software requirements of the project are as follows:

Language : JAVA

Operating system: Windows XP or later.

Tools: Eclipse IDE

### ➤ **HARDWARE REQUIREMENTS:**

The hardware requirements that map towards the software are as follows:

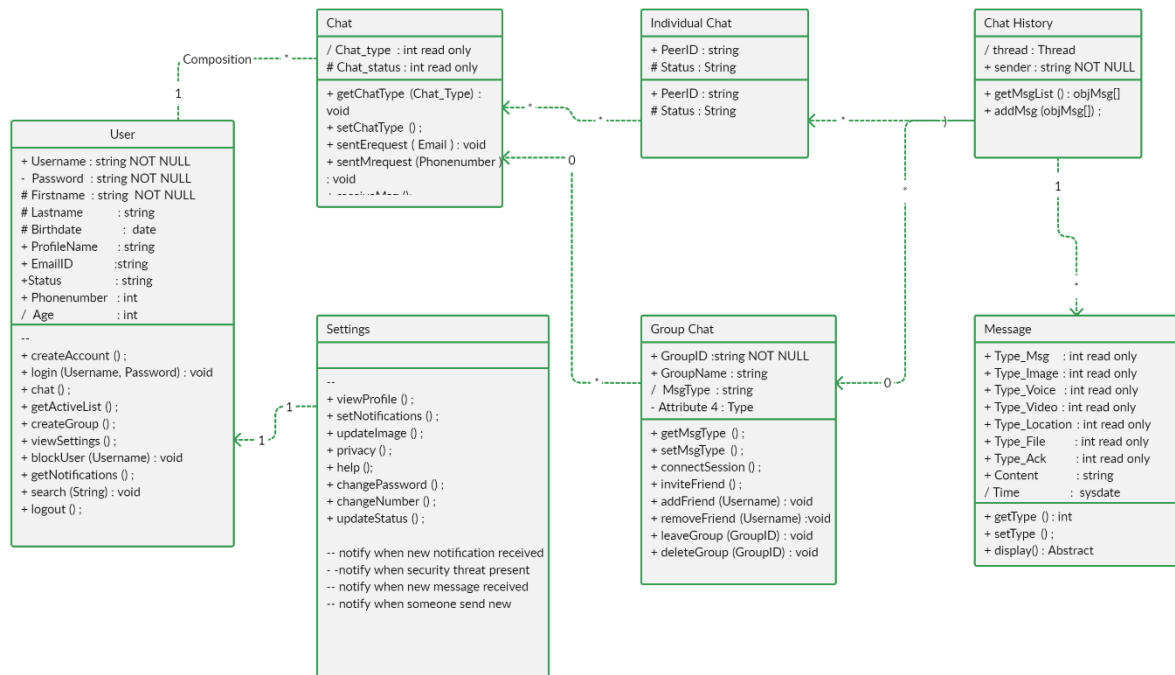
RAM : 1TB

Processor : INTEL



# CLASS DIAGRAM

Class



# IMPLEMENTATION

```
package gui;

import java.util.*;

import gui.CreateAccount;

import java.awt.FlowLayout;

import java.awt.GridLayout;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import gui.Login;


import javax.swing.ButtonGroup;

import javax.swing.JButton;

import javax.swing.JFrame;

import javax.swing.JLabel;

import javax.swing.JOptionPane;

import javax.swing.JPasswordField;

import javax.swing.JRadioButton;

import javax.swing.JTextField;

public class FirstGui {

    public static void main(String[] args) {

        Addition obj= new Addition();

    }

}

class Addition extends JFrame

{

    JTextField t1,t2;

    JButton b,b1;

    JLabel l,l1;

    JPasswordField p;

    JRadioButton m,f;

    public Addition()

    {

        JFrame r=new JFrame();

        setVisible(true);

    }

}
```

```
setSize(100,100);

setLayout(null);

setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

t1= new JTextField(10);

t1.setBounds(800,100,200,20);

p= new JPasswordField(10);

p.setBounds(800,200,200,20);

l= new JLabel("USERNAME");

l.setBounds(650,100,200,20);

l1=new JLabel("PASSWORD");

l1.setBounds(650,200,200,20);

m= new JRadioButton("Male");

f= new JRadioButton("Female");

m.setBounds(700,250,100,50);

f.setBounds(800,250,100,50);

ButtonGroup bg=new ButtonGroup();

bg.add(m);

        bg.add(f);

b= new JButton("LOGIN");

b.setBounds(725,300,200,20);

b1= new JButton("CREATE ACCOUNT");

b1.setBounds(725,350,200,20);

add(l);

add(t1);

add(l1);

add(p);

add(m);

add(f);

add(b);

add(b1);

b.addActionListener(ae -> {

        if(m.isSelected())

        {
```

```

JOptionPane.showMessageDialog(b,"you are successfully logged in"+"\\n"+"Gender:
"+"male");

        }

        if(f.isSelected()) {

JOptionPane.showMessageDialog(b,"you are successfully logged in"+"\\n"+"Gender:
"+"female");

        }

        new Contacts();

        dispose();

    });

    b1.addActionListener(ae -> {

        new Details();

        dispose();

    });

    add(b1);

    }

}

package gui;

import gui.Addition;

import java.awt.GridLayout;

import javax.swing.JButton;

import javax.swing.JFrame;

import javax.swing.JLabel;

import javax.swing.JOptionPane;

import javax.swing.JPanel;

import javax.swing.JPasswordField;

import javax.swing.JTextField;

public class CreateAccount {

    public static void main(String[] args) {

        Details sb= new Details();

    }

}

class Details extends JFrame

{

```

```
JLabel l1,l2,l3,l4;

JButton b;

JTextField t1,t4;

String user;

String pass;

JPasswordField t2,t3;

public Details()
{
    l1= new JLabel("USERNAME");

    l1.setBounds(550,200,150,40);

    l2=new JLabel("PASSWORD");

    l2.setBounds(550,300,150,40);

    l3= new JLabel("CONFIRM PASSWORD");

    l3.setBounds(550,400,150,40);

    l4=new JLabel("EMAIL ID OR PHONE NUM");

    l4.setBounds(550,500,150,40);

    setVisible(true);

    setSize(100,100);

    setLayout(null);

    setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

    t1= new JTextField();

    t1.setBounds(750,200,300,40);

    t2= new JPasswordField();

    t2.setBounds(750,300,300,40);

    t3= new JPasswordField();

    t3.setBounds(750,400,300,40);

    t4= new JTextField();

    t4.setBounds(750,500,300,40);

    b= new JButton("SIGN UP");

    b.setBounds(700,600,100,50);

    add(l1);

    add(t1);

    add(l2);

    add(t2);
```

```

        add(l3);

        add(t3);

        add(l4);

        add(t4);

        add(b);

        b.addActionListener(ae->{

            new Addition();

        });

        add(b);

    }
}

package gui;

import gui.Addition;

import java.awt.Color;

import java.awt.FlowLayout;

import java.awt.Font;

import java.awt.GridLayout;

import java.util.Scanner;

import java.awt.Font.*;

import javax.swing.BorderFactory;

import javax.swing.JButton;

import javax.swing.JFrame;

import javax.swing.JLabel;

import javax.swing.JOptionPane;

import javax.swing.JPanel;

import javax.swing.JTextField;

import gui.History;

public class Login {

    public static void main(String[] args) {

        Contacts con= new Contacts();

    }

}

class Contacts extends JFrame

{

```

```

JLabel l1,l2,l3,l4,l5,l6,l7,l8,l9,l10;

JPanel p,p1,p3,p4,p5,p6,p7;

JButton send,send1,send2,send3,send4,back,history;

int msg,msg1,msg2,msg3,msg4;

JTextField text,text1,text2,text3,text4;

public Contacts()
{

    history=new JButton();

    history.setBounds(100,100,20,20);

    history.setText("HISTORY");

    JFrame f= new JFrame("PANEL");

    f.setBackground(Color.BLACK);

    f.setLayout(null);

    setSize(200,200);

    l= new JLabel("CHATS");

    f.setTitle("WELCOME TO SITE");

    Font font= new Font("bye",Font.ITALIC,15);

    f.setVisible(true);

    f.setSize(800,800);

    p= new JPanel();

    p.setBounds(350,10,100,30);

    p.setBackground(Color.GREEN);

    p.setBorder(BorderFactory.createLineBorder(Color.black));

    setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

    back=new JButton("BACK ");

    back.setBounds(350,700,100,30);

    p1= new JPanel();

    text=new JTextField(20);

    text.setBorder(BorderFactory.createLineBorder(Color.black));

    text.setBounds(205,128,300,40);

    p1.setBounds(200,125,500,100);

    p1.setBackground(Color.cyan);

    l1= new JLabel("ROHIT SINGH");

    l1.setBounds(25,135,100,50);

```

```

l1.setBorder(BorderFactory.createLineBorder(Color.black));

send=new JButton("SEND");

send.setBounds(700,150,50,70);

l2= new JLabel("SENT");

l2.setBounds(150,255,400,30);

l2.setBorder(BorderFactory.createLineBorder(Color.white));

p3= new JPanel();

p3.setBounds(100,250,650,400);

p3.setBackground(Color.cyan);

p3.setBorder(BorderFactory.createLineBorder(Color.red));

p4= new JPanel();

text1=new JTextField(20);

text1.setBorder(BorderFactory.createLineBorder(Color.black));

text1.setBounds(205,128,300,40);

p4.setBounds(200,235,500,80);

p4.setBackground(Color.cyan);

l3= new JLabel("ADITYA BARI");

l3.setBounds(25,235,100,50);

l3.setBorder(BorderFactory.createLineBorder(Color.black));

send1=new JButton("SEND");

send1.setBounds(700,150,50,70);

l4= new JLabel("SENT");

l4.setBounds(150,255,400,30);

l4.setBorder(BorderFactory.createLineBorder(Color.white));

p5= new JPanel();

text2=new JTextField(20);

text2.setBorder(BorderFactory.createLineBorder(Color.black));

text2.setBounds(205,128,300,40);

p5.setBounds(200,335,500,80);

p5.setBackground(Color.cyan);

l5= new JLabel("SUMIT");

l5.setBounds(25,335,100,50);

l5.setBorder(BorderFactory.createLineBorder(Color.black));

send2=new JButton("SEND");

```



```
send2.setBounds(700,150,50,70);

l6= new JLabel("SENT");

l6.setBounds(150,255,400,30);

l6.setBorder(BorderFactory.createLineBorder(Color.white));

p6= new JPanel();

text3=new JTextField(20);

text3.setBorder(BorderFactory.createLineBorder(Color.black));

text3.setBounds(205,128,300,40);

p6.setBounds(200,435,500,100);

p6.setBackground(Color.cyan);

l7= new JLabel("PIYUSH");

l7.setBounds(25,435,100,50);

l7.setBorder(BorderFactory.createLineBorder(Color.black));

send3=new JButton("SEND");

send3.setBounds(700,150,50,70);

l8= new JLabel("SENT");

l8.setBounds(150,255,400,30);

l8.setBorder(BorderFactory.createLineBorder(Color.white));

p7= new JPanel();

text4=new JTextField(20);

text4.setBorder(BorderFactory.createLineBorder(Color.black));

text4.setBounds(205,128,300,40);

p7.setBounds(200,545,500,100);

p7.setBackground(Color.cyan);

l9= new JLabel("NITHIN");

l9.setBounds(25,535,100,50);

l9.setBorder(BorderFactory.createLineBorder(Color.black));

send4=new JButton("SEND");

send4.setBounds(700,150,50,70);

l10= new JLabel("SENT");

l10.setBounds(150,255,400,30);

l10.setBorder(BorderFactory.createLineBorder(Color.white));

f.add(p);

p.add(l);
```

```
f.add(p1);

p1.add(text);

f.add(l1);

p1.add(send);

p1.add(history);

p1.add(l2);

f.add(l3);

f.add(p4);

p4.add(text1);

p4.add(send1);

p4.add(l4);

f.add(l5);

f.add(p5);

p5.add(text2);

p5.add(send2);

p5.add(l6);

f.add(l7);

f.add(p6);

p6.add(text3);

p6.add(send3);

p6.add(l8);

f.add(l9);

f.add(p7);

p7.add(text4);

p7.add(send4);

p7.add(l10);

f.add(back);

send.addActionListener(ae ->{

    JOptionPane.showMessageDialog(send,"MESSAGE SENT TO"+" "+"ROHIT SINGH");

    String msg= text.getText();

    l2.setText("Thank you for ur msg:"+" "+msg+"");

});
```

```

        p1.add(l2);

        send1.addActionListener(ae->{

            JOptionPane.showMessageDialog(send,"MESSAGE SENT TO"+" "+"ADITYA BARI");

            String msg1= text1.getText();

            l4.setText("Thank you for ur msg:"+" "+msg1+"");

        });

        p4.add(l4);

        send2.addActionListener(ae->{

            JOptionPane.showMessageDialog(send,"MESSAGE SENT TO"+" "+"SUMIT");

            String msg2= text2.getText();

            l6.setText("Thank you for ur msg:"+" "+msg2+"");

        });

        p5.add(l6);

        send3.addActionListener(ae->{

            JOptionPane.showMessageDialog(send,"MESSAGE SENT TO"+" "+"PIYUSH");

            String msg3= text3.getText();

            l8.setText("Thank you for ur msg:"+" "+msg3+"");

        });

        p6.add(l8);

        send4.addActionListener(ae->{

            JOptionPane.showMessageDialog(send,"MESSAGE SENT TO"+" "+"NITHIN");

            String msg4= text4.getText();

            l10.setText("Thank you for ur msg:"+" "+msg4+"");

        });

        p7.add(l10);


        back.addActionListener(ae->{

            new Addition();

        });

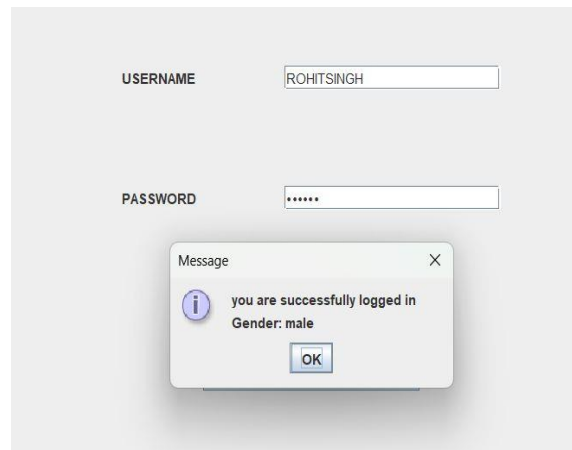
    }
}

```

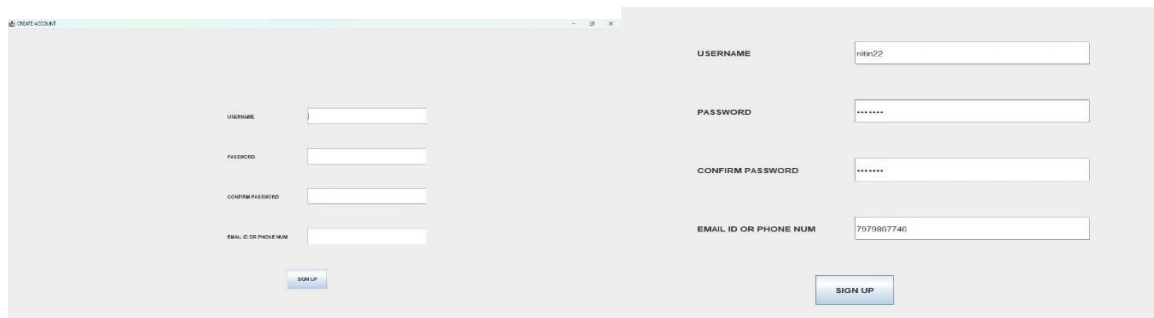
# OUTPUTS




SCREENSHOT OF THE LOGIN PAGE. The page has a light gray background. It contains two input fields for 'USERNAME' and 'PASSWORD'. Below the password field are two radio buttons for 'Male' and 'Female'. At the bottom are two buttons: 'LOGIN' and 'CREATE ACCOUNT'.



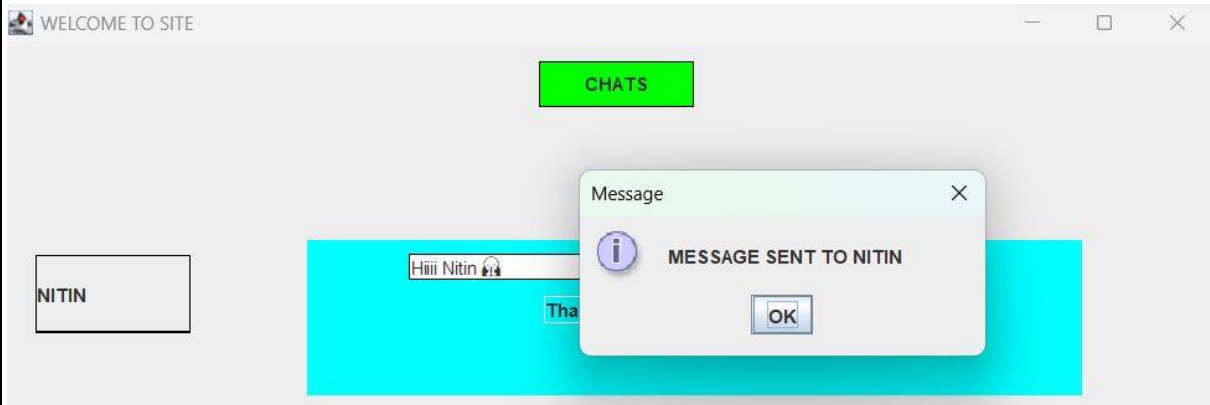
SCREENSHOT OF THE LOGIN PAGE AFTER A SUCCESSFUL LOGIN. The 'USERNAME' field is filled with 'ROHITSINGH' and the 'PASSWORD' field is filled with '\*\*\*\*\*'. A message box is displayed in the center with the text: 'Message', 'you are successfully logged in', 'Gender: male', and an 'OK' button.



SCREENSHOT OF THE 'CREATE ACCOUNT' PAGE. The page has a light gray background. It contains five input fields: 'USERNAME', 'PASSWORD', 'CONFIRM PASSWORD', 'EMAIL ID OR PHONE NUM', and a 'SIGN UP' button.



SCREENSHOT OF THE CHAT INTERFACE. The window title is 'WELCOME TO SITE'. At the top is a green button labeled 'CHATS'. Below it is a list of chat items, each with a name in a box on the left and a chat area on the right. The chat areas have a cyan background and contain a text input field, a 'SEND' button, and a 'SENT' button. The names are: NITIN, DEVAYANI, ADITYA BARI, ROHIT SINGH, and SUMIT. At the bottom is a 'BACK' button.



## **CONCLUSION**

### **& Future Work**

The chat app provides a better and more flexible chat system. Developed with the latest technology in the way of providing a reliable system. The main advantage of the system is instant messaging, real-world communication, added security, group chat, etc. This application may find the best demand in the market for most organizations that aim to have independent applications.