LOVELY PROFESSIONAL UNIVERSITY

Phagwara (Punjab)

Java project

“ChatBot Using JFrame ”

Bachelor Of Technology

(Computer science and engineering)

SCHOOL OF CSE (LPU)

PHAGWARA

GROUP MEMBER

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SECTION: K21BE

Course code:CSE310

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I'm extremely grateful to all the people who have helped me in completing this project.

Primarily, I would thank God for being able to complete this project with success. Then I will thank my subject teacher Chandani Bhasin, under whose guidance I learned a lot about this project. Her suggestions and directions have helped in the completion of this project.

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ABSTRACT

Chatbot was a computer application which may speak to human beings naturally, the way we interact with one another . It can replace a person's for several tasks of answering queries. A chatbot is an agent that interacts with users using simple language. it had been built as an effort to fool humans. Several applications of chatbots like Customer Service, call centers etc. uses AI terminology to talk with user. one among the prime goals of chatbots is to resemble an intelligent human and make it difficult for the receiver of the conversation to know the important working along side various architecture and capabilities for his or her usage has widely broadened. These chatbots can prove sufficient to fool the user into believing they're “talking” to a person's being, but are very limited in improving their knowledge domain at runtime, and usually have a very little to no means of keeping track of all the conversational data. Chatbots makes use of machine learning to succeed in AI helping them to know the user query and supply an appropriate response. The chatbots are developed using the synthetic Intelligence terminology for communicating or interacting with the user. This consist a software which can be made up using codeigniter php framework and can help user to talk with machine.

INTRODUCTION

Chatbot was a computer application which may speak to human beings naturally, the way we interact with one another . It can replace a person's for several tasks of answering queries. A chatbot is an agent that interacts with users using simple language. it had been built as an effort to fool humans. Several applications of chatbots like Customer Service, call centers etc. uses AI terminology to talk with user. one among the prime goals of chatbots is to resemble an intelligent human and make it difficult for the receiver of the conversation to know the important working along side various architecture and capabilities for his or her usage has widely broadened. These chatbots can prove sufficient to fool the user into believing they're “talking” to a person's being, but are very limited in improving their knowledge domain at runtime, and usually have a very little to no means of keeping track of all the conversational data. Chatbots makes use of machine learning to succeed in AI helping them to know the user query and supply an appropriate response. The chatbots are developed using the synthetic Intelligence terminology for communicating or interacting with the user. This consist a software which can be made up using codeigniter php framework and can help user to talk with machine.

What is a ChatBot?

A chatbot is a computer program that uses artificial intelligence (AI) and natural language processing (NLP) to understand customer questions and automate responses to them, simulating human conversation.

Chatbots can make it easy for users to find the information they need by responding to their questions and requests—through text input, audio input, or both—without the need for human intervention. Chatbot technology is almost everywhere these days, from the smart speakers at home to messaging applications in the workplace. The latest AI chatbots are often referred to as "virtual assistants" or "virtual agents." They can use audio input, such as Apple's Siri, Google Assistant and Amazon Alexa, or interact with you via SMS text messaging. Either way, you're able to ask questions about what you need in a conversational way, and the chatbot can help refine your search through responses and follow-up questions.

Working of ChatBots

Historically, chatbots were text-based, and programmed to reply to a limited set of simple queries with answers that had been pre-written by the chatbot's developers. They operated like an interactive FAQ, and while they worked well for those specific questions and answers on which they had been trained, they failed when presented with a complex question or one that hadn't been predicted by the developers.

Over time, chatbots have integrated more rules and natural language processing, so end users can experience them in a conversational way. In fact, the latest types of chatbots are contextually aware and able to learn as they're exposed to more and more human language.

Today's AI chatbots use natural language understanding (NLU) to discern the user's need. Then they use advanced AI tools to determine what the user is trying to accomplish. These technologies rely on machine learning and deep learning—elements of AI, with some nuanced

differences—to develop an increasingly granular knowledge base of questions and responses that are based on user interactions. This improves their ability to predict user needs accurately and respond correctly over time.

For example, if a user asks about tomorrow's weather, a traditional chatbot can respond plainly whether it will rain. An AI chatbot, however, might also inquire if the user wants to set an earlier alarm to adjust for the longer morning commute (due to rain).

Uses of ChatBots

Consumers use AI chatbots for many kinds of tasks, from engaging with mobile apps to using purpose-built devices such as intelligent thermostats and smart kitchen appliances. Business use is equally varied. Marketers use AI chatbots to personalize customer experiences, IT teams use them to enable self-service, and customer contact centers rely on chatbots to streamline incoming communications and direct customers to resources.

Conversational interfaces can vary, too. AI chatbots are commonly used in social media messaging apps, standalone messaging platforms, or applications on websites. Some typical use cases include:

1) Finding local restaurants and providing directions.

2) Defining fields within forms and financial applications

3) Getting answers to healthcare questions and scheduling appointments.

4) Receiving general customer service help from a favorite brand.

5) Setting a reminder to do a task based on time or location.

6) Displaying real-time weather conditions and relevant clothing recommendations.

Benefits of ChatBots

The latest AI chatbots process the data within human language to deliver highly personalized experiences, creating clear benefits for businesses and customers.

Improve customer engagement and brand loyalty

Before the mature e-commerce era, customers with questions, concerns or complaints had to email or call a business for a response from a human. But staffing customer service departments to meet unpredictable demand and retraining staff to provide consistent replies to similar or repetitive queries, day or night, is a constant and costly struggle for many businesses.

Today, chatbots can consistently manage customer interactions 24x7 while continuously improving the quality of the responses and keeping costs down. Chatbots automate workflows and free up employees from repetitive tasks. A chatbot can also eliminate long

wait times for phone-based customer support, or even longer wait times for email, chat and web-based support, because they are available immediately to any number of users at once. That's a great user experience—and satisfied customers are more likely to exhibit brand loyalty.

Reduce costs and boost operational efficiency

Staffing a customer support center day and night is expensive. And for some departments, such as human resources, it might not be possible. Industries have been created to address the outsourcing of this function, but that carries significant cost. It also reduces control over a brand's interaction with its customers.

A chatbot, however, can answer questions 24 hours a day, seven days a week. It can provide a new first line of support, supplement support during peak periods, or offer an

additional support option. At the very least, using a chatbot can help reduce the number of users who need to speak with a human, which can help businesses avoid scaling up staff due to increased demand or implementing a 24-hour support staff.

Generate leads and satisfy customers

Chatbots can help with sales lead generation and improve conversion rates. For example, a customer browsing a website for a product or service may have questions about different features, attributes or plans. A chatbot can provide these answers, helping the customer decide which product or service to buy or take the next logical step toward that final purchase. And for more complex purchases with a multistep sales funnel, the chatbot can qualify the lead before connecting the customer with a trained sales agent.

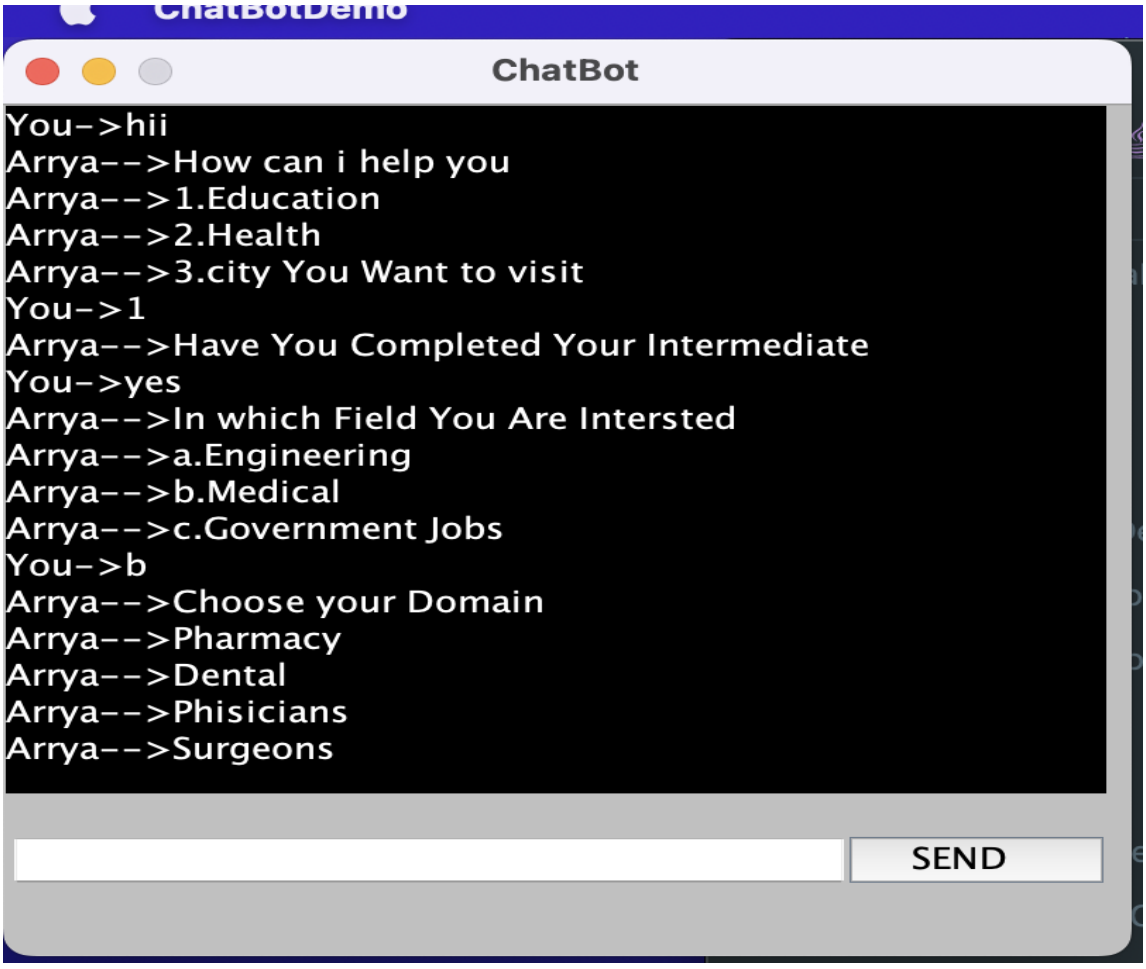
CODE

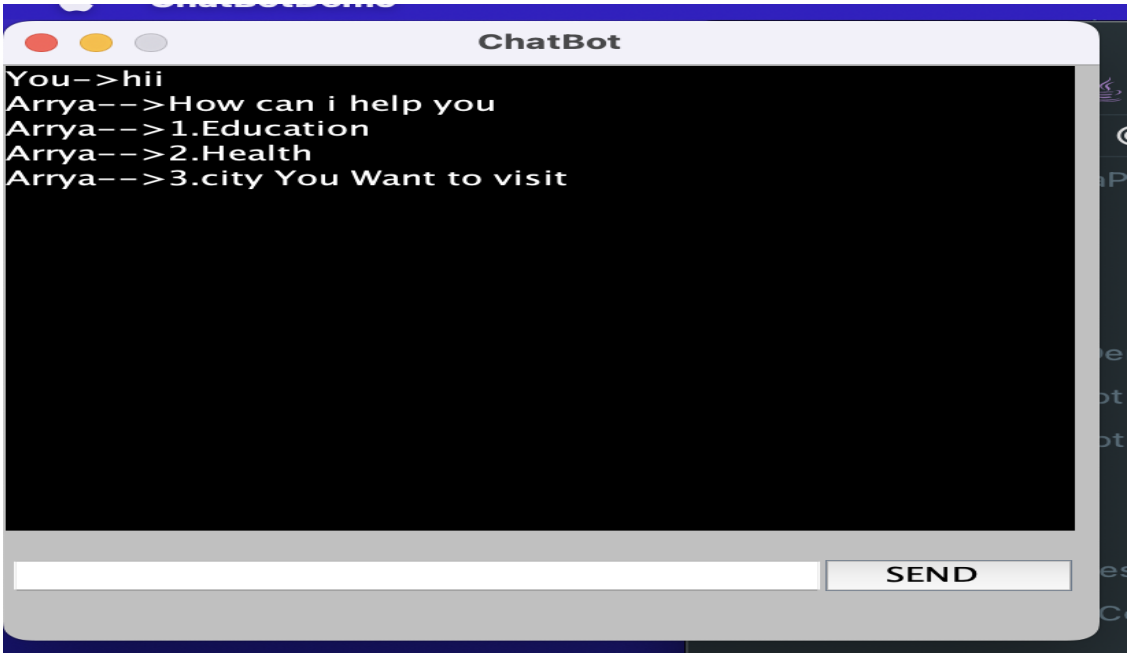
```
import java.awt.Color;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;

import javax.swing.JButton;
import javax.swing.JFrame;
import javax.swing.JLabel;
import javax.swing.JTextArea;
import javax.swing.JTextField;
import java.awt.event.MouseAdapter;
import java.awt.event.MouseEvent;
import java.awt.Desktop;

class Chatbot extends JFrame {

    /**
     *
     */
//    private static final long serialVersionUID = 1L;
    private JTextArea ca= new JTextArea();
    private JTextField cf=new JTextField();
    private JButton b=new JButton();
    private JLabel l=new JLabel();

    Chatbot(){                                                  // Layout and Properties
defined in Constructer

        JFrame f=new JFrame();
        f.setDefaultCloseOperation(EXIT_ON_CLOSE);
        f.setVisible(true);
        f.setResizable(false);
        f.setLayout(null);
        f.setSize(400,400);
        f.getContentPane().setBackground(Color.lightGray);
        f.setTitle("ChatBot");
        f.add(ca);
        f.add(cf);
        ca.setSize(390,300);
        ca.setLocation(1, 1);
        ca.setBackground(Color.BLACK);
        cf.setSize(300,20);
        cf.setLocation(1,320);
        f.add(b);
        l.setText("SEND");
        b.add(l);
        b.setSize(90,20);
        b.setLocation(300,320);

        b.addActionListener( new ActionListener() {
            public void actionPerformed(ActionEvent e) {

                if(e.getSource()==b) {                          // Message sents on
Click button

                    String text=cf.getText().toLowerCase();
                    ca.setForeground(Color.white);
                    ca.append("You->"+text+"\n");
                    cf.setText("");

                    if(text.contains("hi") || text.contains("hello")) {
// input Checking
```

```
                        reply("How can i help you");
                        reply("1.Education");
                        reply("2.Health");
                        reply("3.city You Want to visit");

                    } else if(text.contains("1")) {
                        reply("Have You Completed Your Intermediate");
                    } else if (text.contains("yes")) {
                        reply("In which Field You Are Intersted");
                        reply("a.Engineering");
                        reply("b.Medical");
                        reply("c.Government Jobs");
                    }
                    else if(text.contains("b")) {
                        reply("Choose your Domain");
                        reply("Pharmacy");
                        reply("Dental");
                        reply("Phisicians");
                        reply("Surgeons");
                    }else if (text.contains("no")) {
                        reply("Complete Your intermediate First");

                    } else if(text.contains("2")) {
                        reply("How are you felling");
                    }
                    else if(text.contains("3")){
                        reply("Which city you want to visit");
                        reply("UP");
                        reply("Bihar");
                        reply("Chhatisghar");
                    } else if (text.contains("bihar")) {
                        reply("Welcome TO bihar");
                    }
                    else if(text.contains("up")){
                        reply("Welcome to UP");
                    }
                    else if(text.contains("chhatisghar")){
                        reply("Welcome to Chhatisghar");
                        JLabel linkLabel = new JLabel("<html><a
href=\"https://www.example.com\">Visit Example.com</a></html>");

                        // Add a mouse listener to the label
                        linkLabel.addMouseListener(new MouseAdapter() {
                            public void mouseClicked(MouseEvent e) {
                                try {
                                    // Open the link in a browser
                                    Desktop.getDesktop().browse(new
java.net.URI("https://www.example.com"));
                                } catch (Exception ex) {
                                    ex.printStackTrace();
                                }
                            }
                        });
                        f.add(linkLabel);add(f);

                    }
                    else {
                        int rand = (int) (Math.random() * 3 + 1);
                        if (rand == 1) {
                            reply("I don't understand");
                        } else if (rand==2) {
                            reply("I Can't Understand");
                        } else if (rand==3) {
                            reply("Please come Later");
                        }
```

```
                    }
                }

            }

        });

    }
    public void reply(String s) {                           // Reply Method
        ca.append("Arrya-->"+s+"\n");
    }


}
public class ChatBotDemo {                                      //Driver Class

    public static void main(String[] args) {              //main class

        Chatbot x=new Chatbot();
        x.setVisible(true);// instantiation
    }

}
```

OUTPUT


ChatBot
You->hii
Arrya-->How can i help you
Arrya-->1.Education
Arrya-->2.Health
Arrya-->3.city You Want to visit
You->1
Arrya-->Have You Completed Your Intermediate
You->yes
Arrya-->In which Field You Are Intersted
Arrya-->a.Engineering
Arrya-->b.Medical
Arrya-->c.Government Jobs
You->b
Arrya-->Choose your Domain
Arrya-->Pharmacy
Arrya-->Dental
Arrya-->Phisicians
Arrya-->Surgeons
SEND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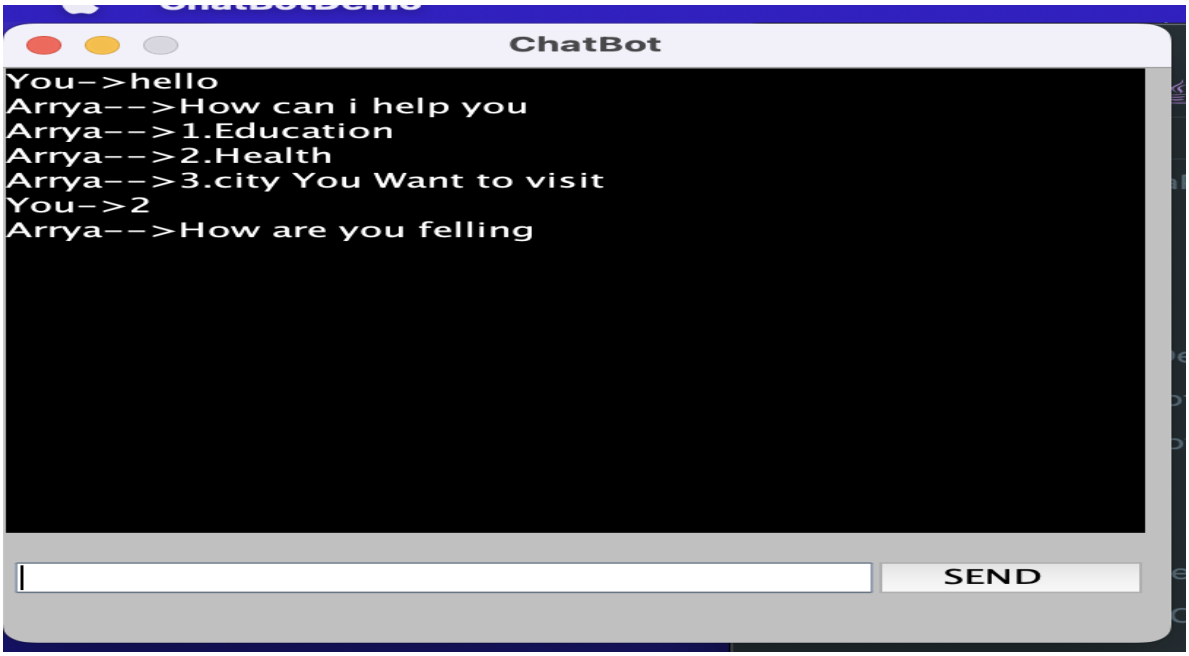
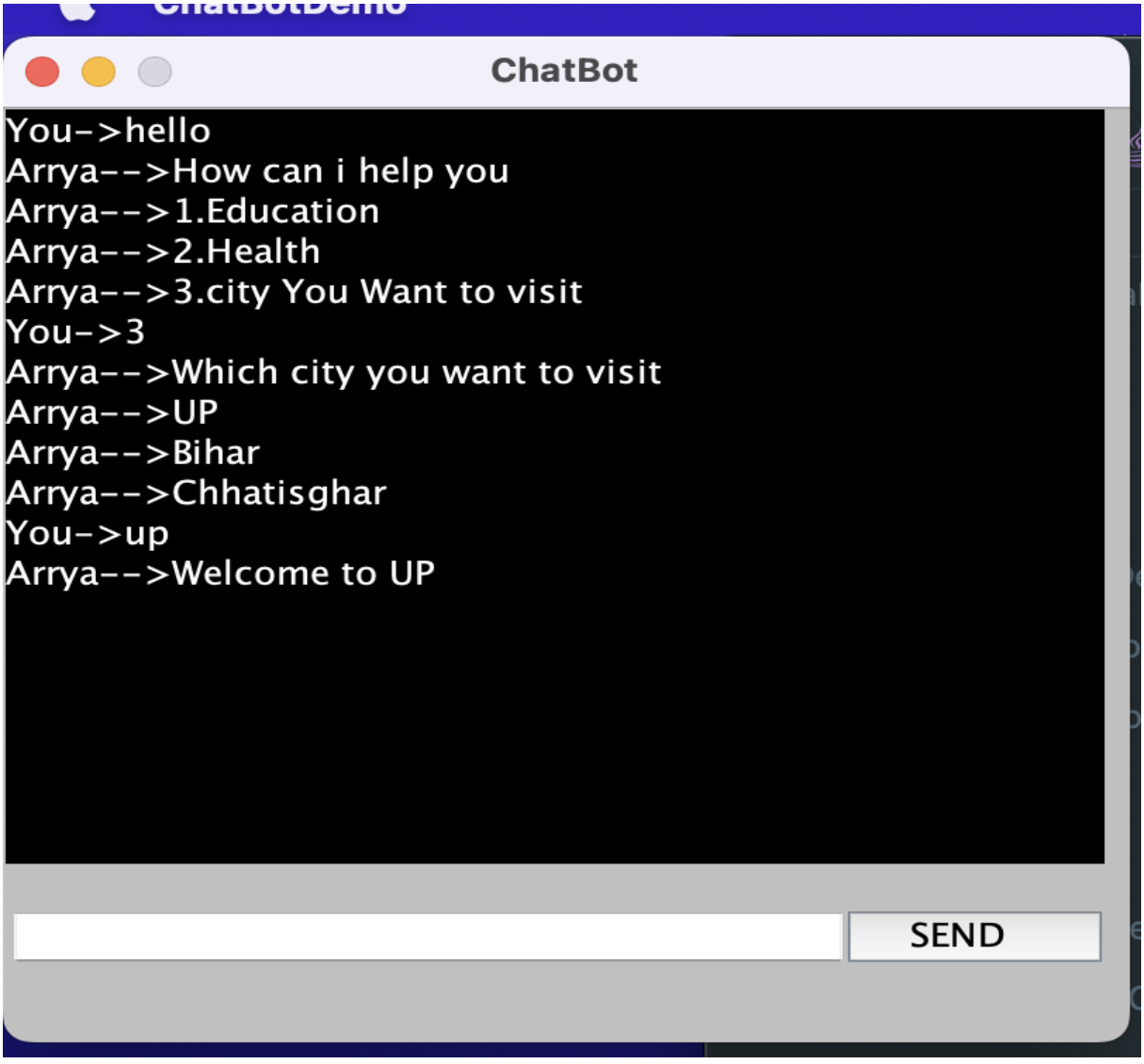

ChatBot
You->hello
Arrya-->How can i help you
Arrya-->1.Education
Arrya-->2.Health
Arrya-->3.city You Want to visit
You->2
Arrya-->How are you felling
SEND


ChatBot
You->hello
Arrya-->How can i help you
Arrya-->1.Education
Arrya-->2.Health
Arrya-->3.city You Want to visit
You->3
Arrya-->Which city you want to visit
Arrya-->UP
Arrya-->Bihar
Arrya-->Chhatisghar
You->up
Arrya-->Welcome to UP
SEND