MINDCARE CHATBOT

PRESENTED BY

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ABSTRACT

The Mental Health Chatbot website is designed to provide easy access to mental health support. Users can chat with an AI-powered bot that offers emotional check-ins, coping tips, and feedback based on their mood. The bot analyzes the user's responses and displays mood emojis to help track emotional well-being.

The website features a simple, calming design that makes it easy to navigate, with responsive features that work well on all devices. It also allows users to connect with mental health counselors if they need further help. The platform aims to offer quick, accessible mental health support anytime, anywhere.

INTRODUCTION

Our Mental Health Chatbot website is a platform designed to support users' emotional well-being by providing an accessible, easy-to-use tool for mental health check-ins. It allows users to engage with an AI-driven chatbot that offers coping strategies, tracks mood, and gives personalized responses based on user input. With its calming design and user-friendly interface, the website creates a safe space for users to express their feelings and get quick, reliable mental health support.

PROBLEM STATEMENT

Many people struggle to access timely mental health support due to stigma, high costs, or limited availability of professional help. This creates a gap in emotional well-being care, leaving individuals without proper guidance or support during times of stress or mental health challenges. Our solution aims to bridge this gap by providing an easily accessible, low-cost platform where users can engage with a mental health chatbot for immediate support and coping strategies, ensuring that help is available when it’s needed most.

CHALLENGES

- **Building Trust:** Users may be unsure about sharing personal feelings with a chatbot, making it hard to establish trust.
- **Handling Emotions**: The chatbot needs to manage many different emotional topics and provide helpful responses, which can be complex.
- **Personalized Responses**: Giving users tailored feedback based on their feelings and mood can be challenging and requires smart technology.
- **Technical Performance**: Ensuring the website works well on all devices and browsers is essential, but can be technically difficult.
- **Crisis Support**: The chatbot must be able to recognize when someone is in crisis and direct them to appropriate help, which is complicated to implement.
- **Encouraging Return Visits**: Getting users to come back for ongoing support instead of just using the chatbot once can be a challenge.

TOOLS & TECHNOLOGIES

Frontend Development:

- HTML: For structuring the web pages and defining the content.
- CSS: For styling the website, ensuring it is visually appealing and user-friendly.
- JavaScript: For adding interactivity, such as handling user messages and responses from the chatbot.

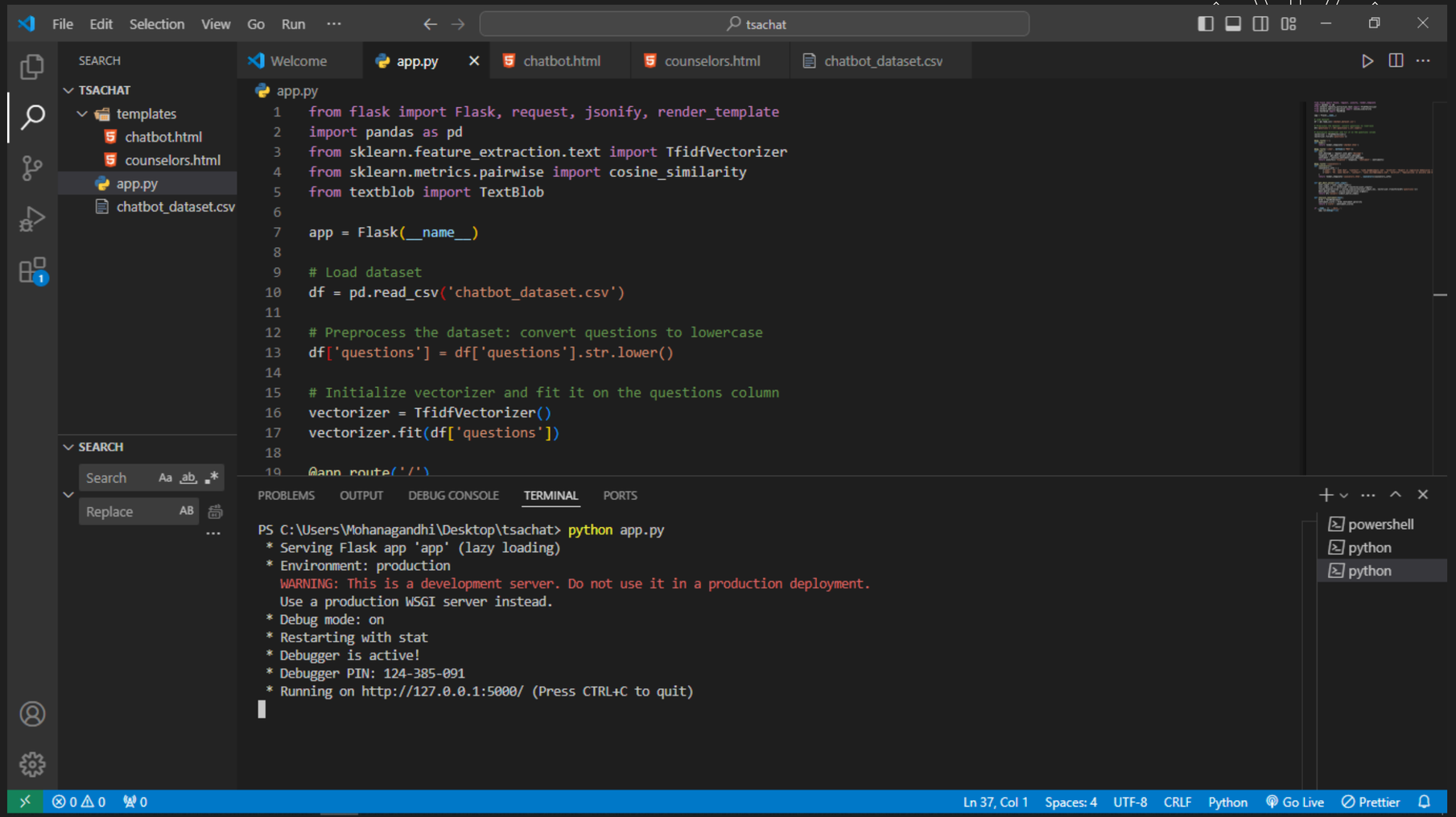
Backend Development:

- Python Flask: A lightweight framework used to create the server that handles incoming requests, processes chatbot responses, and manages user sessions.

PROPOSED MODEL

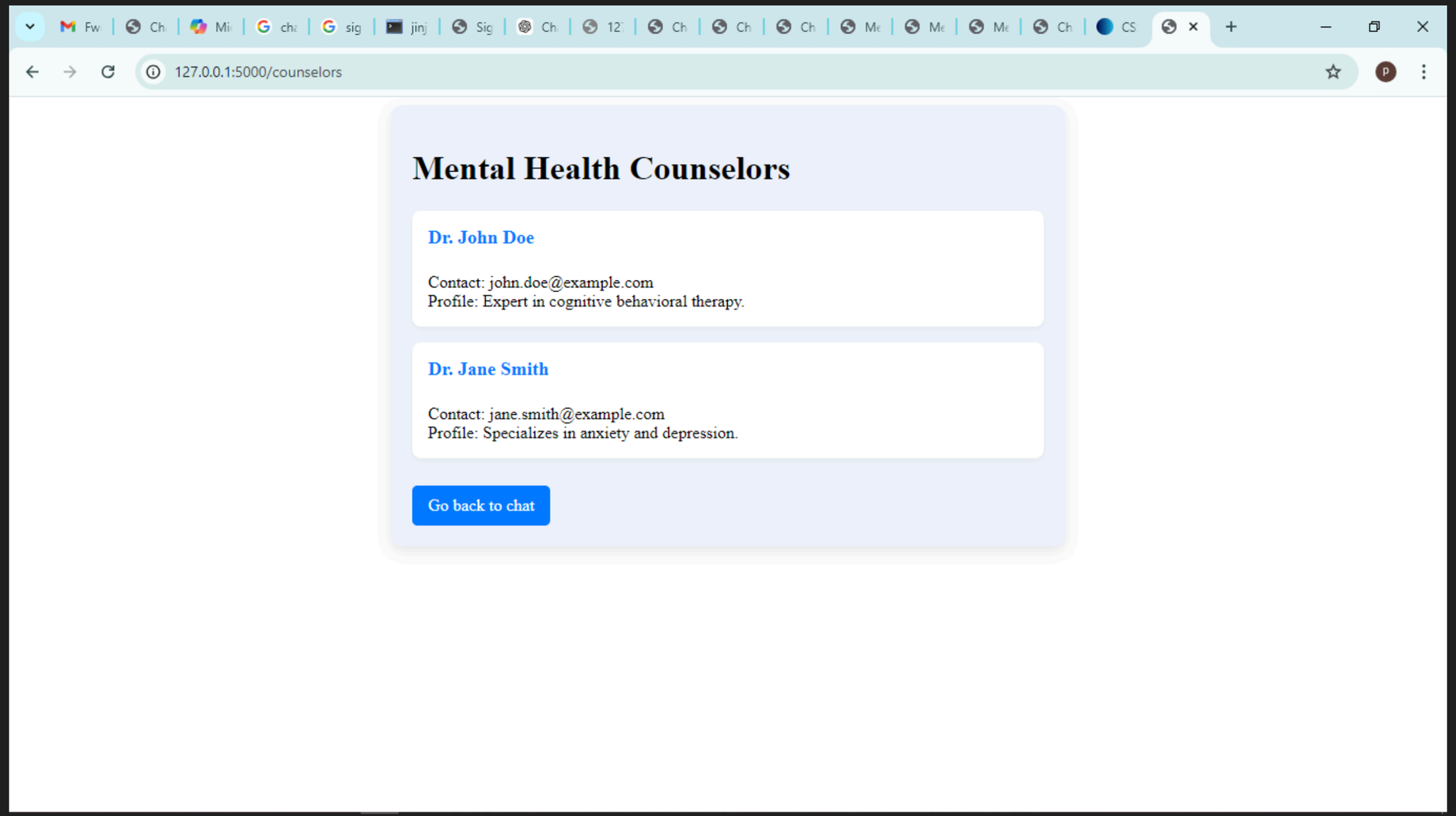
- **User-Friendly Interface:** A simple and calming design for easy navigation.
- **Interactive Chatbot:** Engages users by asking about their feelings and providing support.
- **Mood Tracking:** Analyzes user responses to track mood changes and offer feedback.
- **Crisis Support:** Identifies users in distress and connects them to professional help.

IMPLEMENTATION



DEMO SCREENSHOT

DEMO SCREENSHOT



CONCLUSION

- The Mental Health Chatbot website offers easy access to mental health support.
- Users can talk to the chatbot about their feelings in a safe space.
- It tracks moods and provides help during tough times.
- The website is designed to be user-friendly and secure.
- Overall, it’s a valuable tool for promoting mental well-being.

MINDCARE CHATBOT
A PROJECT REPORT

Submitted by

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MINI-PROJECT: MINDCARE CHATBOT

BACHELOR OF TECHNOLOGY

in

INFORMATION TECHNOLOGY

PSNA COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution, Affiliated to Anna University, Chennai)

DINDIGUL - 624622

OCTOBER 2024

PSNA COLLEGE OF ENGINEERING AND TECHNOLOGY,

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BONAFIDE CERTIFICATE

Certified that this idea report "**MINDCARE CHATBOT**" is the bonafide work of "**POORNIMA M (92132223114), PRAVEENA T(92132223119), NIRANCHANA S (92132223107)**" who carried out the idea work under my supervision

SIGNATURE	SIGNATURE
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ABSTRACT

The Mental Health Chatbot website is an innovative platform designed to provide individuals with accessible and immediate mental health support through the use of artificial intelligence. This AI-powered chatbot allows users to engage in real-time conversations to check in on their emotional state, offering personalized feedback, coping strategies, and resources tailored to the user's current mood and mental health needs. The chatbot analyzes users' inputs and displays mood emojis that reflect their emotional status, helping users track and manage their mental well-being over time. This visual tool aids in increasing self-awareness and emotional management, promoting healthier mental habits.

The website is designed with simplicity and user experience in mind, featuring a calming and intuitive interface. The minimalist design and soothing color palette foster a peaceful environment, making it easy for users to navigate and interact with the chatbot. The platform is fully responsive, ensuring seamless usability across various devices such as smartphones, tablets, and desktop computers, so that users can access mental health support from anywhere at any time.

In addition to the AI chatbot's emotional check-ins and tips, the platform offers a valuable option for users who require more in-depth assistance. Users are provided with direct connections to licensed mental health counselors, ensuring that those who need further professional help can access it quickly and easily. This feature bridges the gap between immediate emotional support and long-term mental health care.

The Mental Health Chatbot website prioritizes privacy and confidentiality, allowing users to engage with the platform anonymously if they prefer. By maintaining user security, the platform ensures a safe space for individuals to discuss their emotions and mental health concerns without fear of judgment. This aspect enhances user comfort and promotes open, honest communication with the chatbot.

The primary aim of the platform is to offer quick, accessible, and effective mental health support to individuals whenever and wherever they need it. Whether users are seeking emotional relief, guidance, or professional counseling, the Mental Health Chatbot provides a lifeline for managing mental well-being, empowering individuals to take charge of their mental health in a confidential and supportive manner.

INTRODUCTION

The Mental Health Chatbot website is a comprehensive platform designed to promote emotional well-being by offering users an accessible and intuitive tool for mental health support. At its core is an AI-driven chatbot that provides real-time interactions, allowing users to engage in mental health check-ins, receive personalized responses, and access coping strategies tailored to their emotional state. The chatbot analyzes user input to offer thoughtful advice, helping individuals manage stress, anxiety, or other emotional challenges they may be experiencing.

One of the standout features of the platform is its ability to track users' moods through interactive conversations. The bot displays mood emojis based on user responses, which helps them visualize and monitor their emotional health over time. This mood-tracking feature encourages self-awareness and enables users to identify patterns in their emotional well-being, promoting healthier coping mechanisms and mental health habits.

The website is designed with a calming aesthetic and a user-friendly interface to create a welcoming environment where users feel safe and comfortable expressing their thoughts and emotions. Its minimalist design, combined with soft color schemes, fosters a sense of tranquility, while the intuitive layout ensures easy navigation. Whether users are accessing the site from a desktop, tablet, or mobile device, the responsive design ensures smooth functionality across all platforms.

Beyond providing immediate emotional support, the platform also offers users the opportunity to connect with professional mental health counselors if they require more comprehensive help. This ensures that users not only receive timely coping strategies but also have access to ongoing support when needed, bridging the gap between quick mental health check-ins and long-term professional care.

PROBLEM STATEMENT

Many people face challenges in accessing timely mental health support due to factors such as social stigma, high costs, and the limited availability of professional help. These barriers prevent individuals from seeking the guidance and assistance they need during periods of stress, anxiety, or other mental health challenges. As a result, a significant gap in emotional well-being care exists, leaving many without proper support at critical moments. Our solution aims to address this gap by offering an easily accessible, low-cost platform where users can interact with a mental health chatbot. This AI-driven chatbot provides immediate support, personalized coping strategies, and guidance, ensuring that users can receive the help they need when it matters most, regardless of financial or social barriers.

CHALLENGES

Building Trust: Users may be unsure about sharing personal feelings with a chatbot, making it hard to establish trust.
Handling Emotions: The chatbot needs to manage many different emotional topics and provide helpful responses, which can be complex.
Personalized Responses: Giving users tailored feedback based on their feelings and mood can be challenging and requires smart technology.
Technical Performance: Ensuring the website works well on all devices and browsers is essential, but can be technically difficult.
Crisis Support: The chatbot must be able to recognize when someone is in crisis and direct them to appropriate help, which is complicated to implement.
Encouraging Return Visits: Getting users to come back for ongoing support instead of just using the chatbot once can be a challenge.

PROPOSED MODEL

User-Friendly Interface: A simple and calming design for easy navigation.
Interactive Chatbot: Engages users by asking about their feelings and providing support.
Mood Tracking: Analyzes user responses to track mood changes and offer feedback.
Crisis Support: Identifies users in distress and connects them to professional help.

SOURCE CODE

Backend code:(python)

```
from flask import Flask, request, jsonify, render_template
import pandas as pd
from sklearn.feature_extraction.text import TfidfVectorizer
from sklearn.metrics.pairwise import cosine_similarity
from textblob import TextBlob

app = Flask(__name__)

# Load dataset
df = pd.read_csv('chatbot_dataset.csv')

# Preprocess the dataset: convert questions to lowercase
df['questions'] = df['questions'].str.lower()

# Initialize vectorizer and fit it on the questions column
vectorizer = TfidfVectorizer()
vectorizer.fit(df['questions'])

@app.route('/')
def home():
    return render_template('chatbot.html')

@app.route('/chat', methods=['POST'])
def chat():
    user_message = request.json.get('message')
    response = get_best_answer(user_message)
    sentiment = analyze_sentiment(user_message)
    return jsonify({'response': response, 'sentiment': sentiment})

@app.route('/counselors')
def counselors():
    counselors_info = [
        {"name": "Dr. John Doe", "contact": "john.doe@example.com", "profile": "Expert in cognitive behavioral
therapy."},
        {"name": "Dr. Jane Smith", "contact": "jane.smith@example.com", "profile": "Specializes in anxiety and
depression."},
    ]
    return render_template('counselors.html', counselors=counselors_info)


def get_best_answer(user_input):
    user_input = user_input.lower()
    user_input_vec = vectorizer.transform([user_input])
    cosine_similarities = cosine_similarity(user_input_vec, vectorizer.transform(df['questions']))
```

```
    best_match_index = cosine_similarities.argmax()
    return df['answers'][best_match_index]

def analyze_sentiment(text):
    blob = TextBlob(text)
    sentiment_score = blob.sentiment.polarity
    return {'score': sentiment_score}

if __name__ == '__main__':
    app.run(debug=True)
```

Frontend Code:(HTML,Css)

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Chat with the Mental Health Bot</title>
    <style>
     body {
            font-family: Arial, sans-serif;
            margin: 20px;
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
            flex-direction: column;
            background: rgb(238,174,202);
background: radial-gradient(circle, rgba(238,174,202,1) 0%, rgba(249,165,247,1) 100%);
        }

        h1 {
            text-align: center;
            margin-bottom: 10px;
            font-size: 24px;
            color: #333;
        }

        .chat-box {
            border: 1px solid #ddd;
            padding: 10px;
            width: 400px;
            height: 400px;
            overflow-y: auto;
            background-color: #fff;
```

```
    border-radius: 10px;
    box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);
    display: flex;
    flex-direction: column;
    justify-content: flex-end;
    margin-bottom: 20px;
}

.chat {
    display: inline-block;
    padding: 10px;
    margin: 10px 0;
    border-radius: 20px;
    max-width: 80%;
    word-wrap: break-word;
}

.user {
    background-color: #d1ffd1;
    align-self: flex-end;
    text-align: right;
}

.bot {
    background-color: #e6f0ff;
    align-self: flex-start;
    text-align: left;
}

form {
    display: flex;
    justify-content: flex-end;
    align-items: center;
    width: 400px;
}

input[type="text"] {
    width: 70%;
    padding: 10px;
    border: 1px solid #ddd;
    border-radius: 20px;
    outline: none;
    box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
}

button {
    padding: 10px 20px;
    margin-left: 10px;
```

```
            background-color: #007bff;
            color: #fff;
            border: none;
            border-radius: 20px;
            cursor: pointer;
            box-shadow: 0 2px 4px rgba(0, 0, 0, 0.1);
        }

        button:hover {
            background-color: #0056b3;
        }

        .mood-display {
            display: flex;
            align-items: center;
            margin-left: 10px;
        }

        .emoji {
            font-size: 48px;
            margin-left: 10px;
        }
        .counselor-list { display: none; }

</style>
</head>
<body>
    <h1>MindCare Chatbot</h1>

    <div class="chat-box" id="chat-box"></div>

    <form id="chat-form">
        <label for="message">You:</label>
        <input type="text" id="message" name="message" required>
        <button type="submit">Send</button>
    </form>

    <div class="mood-display">
        <p>Your Mood: </p>
        <span id="emoji" class="emoji"></span>
    </div>

    <div class="counselor-list" id="counselor-list">
        <h2>Mental Health Counselors</h2>
        <ul>
            <li><strong>Dr. John Doe</strong><br>Contact: john.doe@example.com<br>Profile: Expert in cognitive behavioral therapy.</li>
```

```
        <li><strong>Dr. Jane Smith</strong><br>Contact: jane.smith@example.com<br>Profile: Specializes in anxiety and depression.</li>
    </ul>
    <a href="chatbot.html" onclick="goBack()">Go back to chat</a>
  </div>

  <script>
    let totalSentimentScore = 0;
    let messageCount = 0;

    document.getElementById('chat-form').addEventListener('submit', function(event) {
      event.preventDefault();
      let message = document.getElementById('message').value;
      let chatBox = document.getElementById('chat-box');

      let userChat = document.createElement('p');
      userChat.className = 'chat user';
      userChat.textContent = 'You: ' + message;
      chatBox.appendChild(userChat);

      document.getElementById('message').value = '';

      if (message.toLowerCase().includes("thanks") || message.toLowerCase().includes("thank you")) {
        handleEndConversation(chatBox);
        return;
      }

      fetch('/chat', {
        method: 'POST',
        headers: { 'Content-Type': 'application/json' },
        body: JSON.stringify({ message: message }),
      })
      .then(response => response.json())
      .then(data => {
        let botChat = document.createElement('p');
        botChat.className = 'chat bot';
        botChat.textContent = 'Bot: ' + data.response;
        chatBox.appendChild(botChat);
        chatBox.scrollTop = chatBox.scrollHeight;

        totalSentimentScore += data.sentiment.score;
        messageCount++;
        updateEmoji();
      });
    });

    function updateEmoji() {
      let averageSentiment = totalSentimentScore / messageCount;
```

```
            let emojiElement = document.getElementById('emoji');

            if (averageSentiment > 0) emojiElement.textContent = '☺';
            else if (averageSentiment < 0) emojiElement.textContent = '☹';
            else emojiElement.textContent = '😐';
        }


        function handleEndConversation(chatBox) {
    let botChat = document.createElement('p');
    botChat.className = 'chat bot';
    botChat.textContent = 'Bot: Would you like to contact a counselor? (yes/no)';
    chatBox.appendChild(botChat);
    chatBox.scrollTop = chatBox.scrollHeight;

    // Add an event listener for handling the "yes" or "no" response
    document.getElementById('chat-form').addEventListener('submit', function(event) {
        event.preventDefault();
        let message = document.getElementById('message').value.toLowerCase();

        if (message === 'yes') {
            // Redirect to the counselors page
            window.location.href = 'counselors.html';
        } else {
            let userChat = document.createElement('p');
            userChat.className = 'chat user';
            userChat.textContent = 'You: ' + message;
            chatBox.appendChild(userChat);
        }
        document.getElementById('message').value = '';
    }, { once: true });
}




        function goBack() {
            document.getElementById('chat-box').style.display = 'block';
            document.getElementById('chat-form').style.display = 'block';
            document.getElementById('mood-display').style.display = 'flex';
            document.getElementById('counselor-list').style.display = 'none';
        }
    </script>
</body>
</html>
```

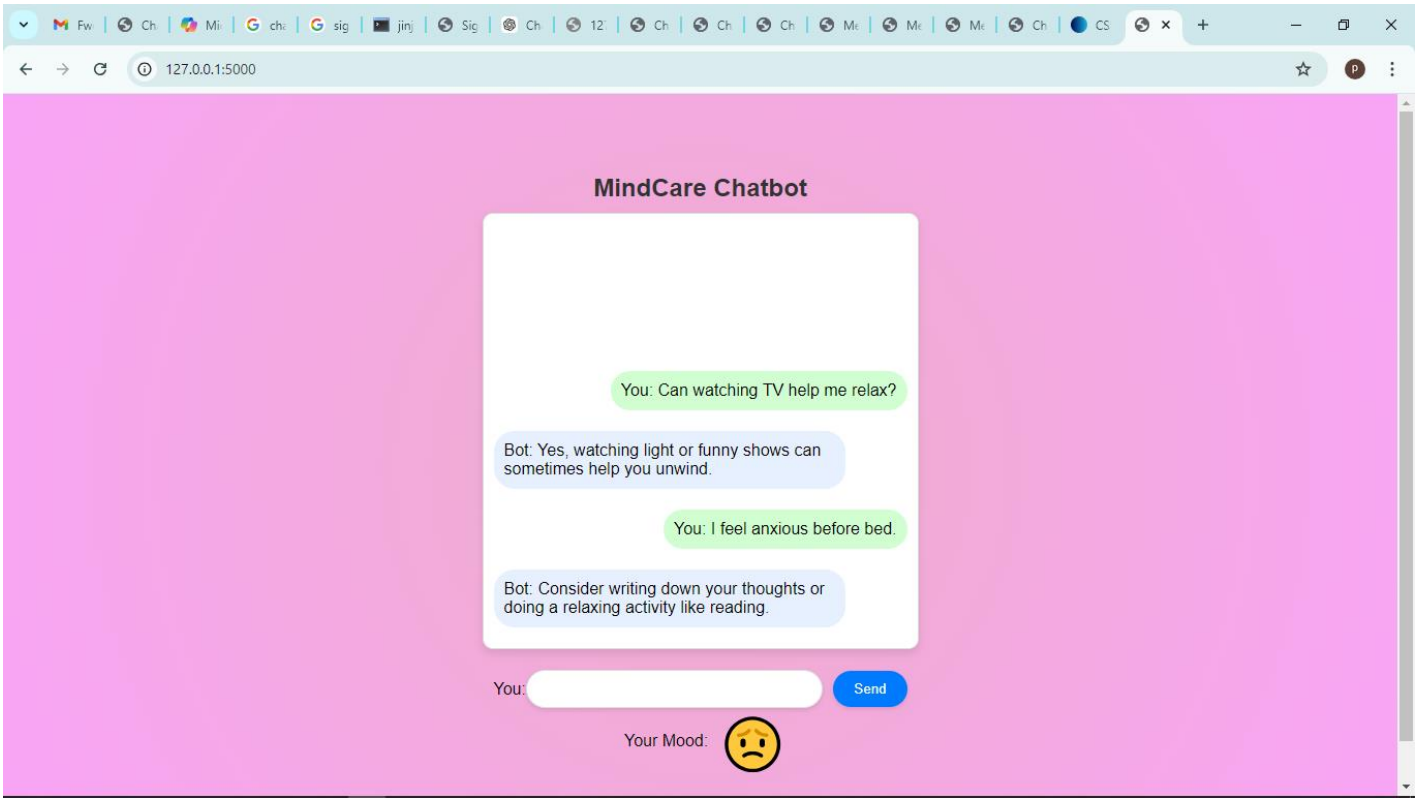
Counselors.html

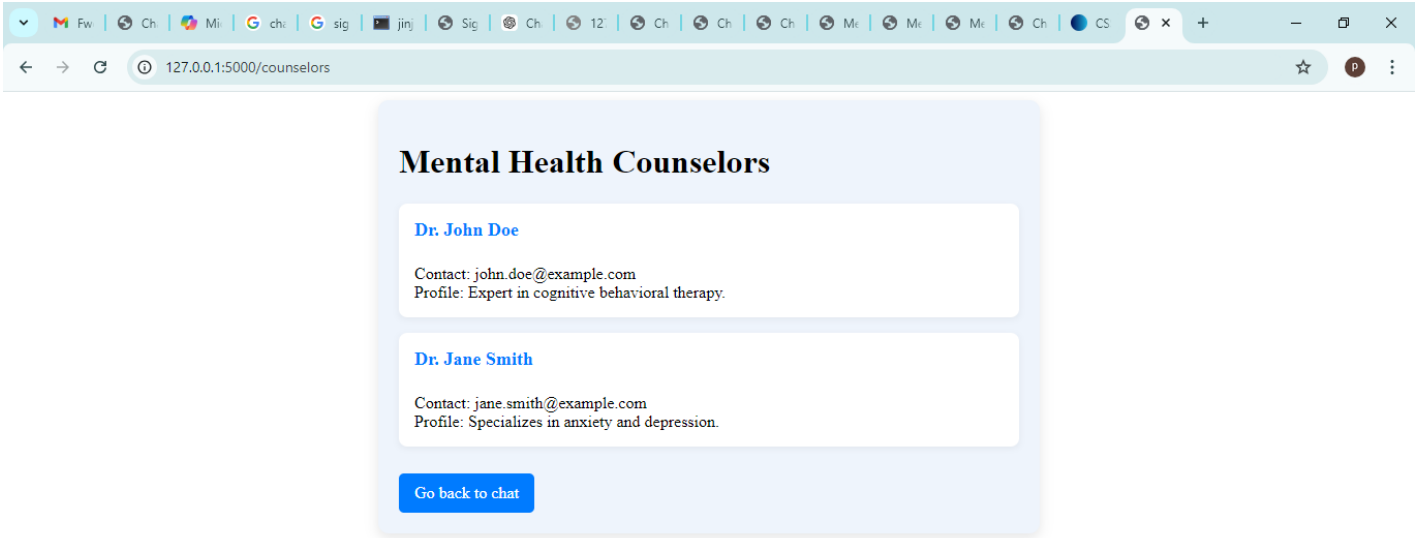
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Mental Health Counselors</title>
    <style>
        .counselor-list {
    display: block;
    width: 100%;
    max-width: 600px;
    margin: 0 auto;
    padding: 20px;
    background-color: #f9f9f9;
    border-radius: 10px;
    box-shadow: 0 4px 12px rgba(0, 0, 0, 0.1);
    transition: background-color 0.3s ease-in-out;
}

.counselor-list:hover {
    background-color: #eef4fc;
}

.counselor-list h2 {
    text-align: center;
    color: #333;
    font-size: 24px;
    margin-bottom: 20px;
}

.counselor-list ul {
    list-style: none;
    padding: 0;
}

.counselor-list li {
    padding: 15px;
    margin-bottom: 15px;
    background-color: #fff;
    border-radius: 8px;
    box-shadow: 0 2px 6px rgba(0, 0, 0, 0.05);
    transition: transform 0.2s, box-shadow 0.2s;
}

.counselor-list li:hover {
    transform: scale(1.02);
    box-shadow: 0 4px 12px rgba(0, 0, 0, 0.1);
```

```
}

.counselor-list strong {
    display: block;
    color: #007bff;
    font-size: 18px;
    margin-bottom: 5px;
}

.counselor-list p {
    margin: 5px 0;
    color: #555;
    font-size: 14px;
}

.counselor-list a {
    display: inline-block;
    margin-top: 10px;
    padding: 10px 15px;
    background-color: #007bff;
    color: #fff;
    text-decoration: none;
    border-radius: 5px;
    transition: background-color 0.3s ease-in-out;
}

.counselor-list a:hover {
    background-color: #0056b3;
}

@media (max-width: 768px) {
    .counselor-list {
        padding: 15px;
    }

    .counselor-list li {
        padding: 10px;
    }

    .counselor-list strong {
        font-size: 16px;
    }

    .counselor-list p {
        font-size: 12px;
    }

    .counselor-list a {
```

```
        padding: 8px 12px;
    }
}

    </style>
</head>
<body>
    <div class="counselor-list" id="counselor-list">
    <h1>Mental Health Counselors</h1>
    <ul>
        {% for counselor in counselors %}
        <li>
            <strong>{{ counselor.name }}</strong><br>
            Contact: {{ counselor.contact }}<br>
            Profile: {{ counselor.profile }}
        </li>
        {% endfor %}
    </ul>
    <a href="chatbot.html" onclick="goBack()">Go back to chat</a>
    </div>
</body>
</html>
```

OUTPUT


127.0.0.1:5000
MindCare Chatbot
You: Can watching TV help me relax?
Bot: Yes, watching light or funny shows can sometimes help you unwind.
You: I feel anxious before bed.
Bot: Consider writing down your thoughts or doing a relaxing activity like reading.
You:
Send
Your Mood:


127.0.0.1:5000/counselors
Mental Health Counselors
Dr. John Doe
Contact: john.doe@example.com
Profile: Expert in cognitive behavioral therapy.
Dr. Jane Smith
Contact: jane.smith@example.com
Profile: Specializes in anxiety and depression.
Go back to chat

CONCLUSION

Overall, the Mental Health Chatbot website serves as a valuable resource for promoting mental well-being by offering users a safe, supportive, and accessible platform. Its intuitive design ensures that individuals can easily navigate through features like mood tracking and emotional support, allowing them to reflect on their feelings and receive timely assistance. By providing personalized responses and using Natural Language Processing (NLP) to understand and interact with users, the chatbot fosters a compassionate, non-judgmental space for those in need. This platform is more than just a tool; it's a companion that helps users cope during tough times, reinforcing the importance of mental health care and encouraging a proactive approach to emotional well-being.