

Major project code:

```
from flask import Flask, request, jsonify, render_template_string

app = Flask(__name__)

HTML_TEMPLATE = """
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Chatbot</title>

    <style>

        body {

            font-family: Arial, sans-serif;

            display: flex;

            justify-content: center;

            align-items: center;

            height: 100vh;

            margin: 0;

            background: #000080; /* Navy Blue Background */

        }

        #chat-container {

            width: 400px;

            height: 600px;

            border: 1px solid #ccc;

            background: white;

            border-radius: 8px;

            display: flex;

            flex-direction: column;

        }

        #chat-window {

            flex: 1;


```

```
padding: 10px;
overflow-y: auto;
border-bottom: 1px solid #ccc;
}
input, button {
padding: 10px;
margin: 5px;
border: 1px solid #ccc;
border-radius: 4px;
font-size: 14px;
}
button {
background-color: red;
color: white;
cursor: pointer;
}
button:hover {
background-color: #0056b3;
}
/* Button outline turns red when clicked */
button:focus {
outline: 2px solid red;
}
</style>
</head>
<body>
<div id="chat-container">
<div id="chat-window"></div>
<input type="text" id="user-input" placeholder="Type your message...">
<button id="send-btn">Send</button>
</div>
```

```

<script>

const sendBtn = document.getElementById("send-btn");
const userInput = document.getElementById("user-input");
const chatWindow = document.getElementById("chat-window");

sendBtn.addEventListener("click", async () => {
    const message = userInput.value.trim();
    if (!message) return;

    const response = await fetch("/chat", {
        method: "POST",
        headers: { "Content-Type": "application/json" },
        body: JSON.stringify({ message }),
    });
    const data = await response.json();
    chatWindow.innerHTML += `<p><strong>You:</strong> ${message}</p>`;
    chatWindow.innerHTML += `<p><strong>Bot:</strong> ${data.response}</p>`;
    userInput.value = "";
    chatWindow.scrollTop = chatWindow.scrollHeight; // Auto-scroll
});
</script>

```

```

</body>

```

```

</html>

```

```

"""

```

```

def get_bot_response(user_input):

```

```

    """

```

```

    Generate a response based on the user's input.

```

```

    """

```

```

    normalized_input = user_input.strip().lower()

```

```

    responses = {

```

```

        "hello": "Hi there! How can I assist you today?",

```

"hi": "Hi there! How can I assist you today?",

"how are you":

"I'm just a bot, but I'm functioning perfectly. How about you?",

"what is your name":

"I'm your friendly chatbot. You can call me ChatGPT!",

"bye": "Goodbye! Have a great day!",

"what can you do":

"I can assist you with general questions, provide information, and keep you company!",

"tell me a joke":

"Why don't scientists trust atoms? Because they make up everything!",

"what is python":

"Python is a popular programming language known for its simplicity and versatility.",

"how old are you":

"I'm as old as the code that runs me, which is timeless!",

"what is your favorite color":

"I like all colors equally, but blue feels calming.",

"tell me a fun fact": "Did you know? Octopuses have three hearts!",

"what is the weather":

"I can't check the weather right now, but you can try a weather app!",

"how do computers work":

"Computers process data using instructions given by software. They're essentially super-fast calculators!",

"what is artificial intelligence":

"Artificial Intelligence refers to machines designed to perform tasks that usually require human intelligence.",

"can you help me":

"Of course! Let me know what you need help with, and I'll do my best.",

"i am sad":

"I'm sorry to hear that. Remember, tough times don't last forever. You're stronger than you think!",

"tell me a lame joke":

"Why don't skeletons fight each other? They don't have the guts!",

```
}  
  
return responses.get(  
    normalized_input,  
    "I'm sorry, I didn't understand that. Can you rephrase?")  
  
@app.route("/")  
def index():  
    return render_template_string(HTML_TEMPLATE)  
  
@app.route("/chat", methods=["POST"])  
def chat():  
    user_input = request.json.get("message")  
  
    if not user_input:  
        return jsonify({"response": "Please provide a valid input."}), 400  
  
    bot_response = get_bot_response(user_input)  
  
    return jsonify({"response": bot_response})  
  
if __name__ == "__main__":  
    app.run(host="0.0.0.0", port=8080)
```

output:





