

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;

```

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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

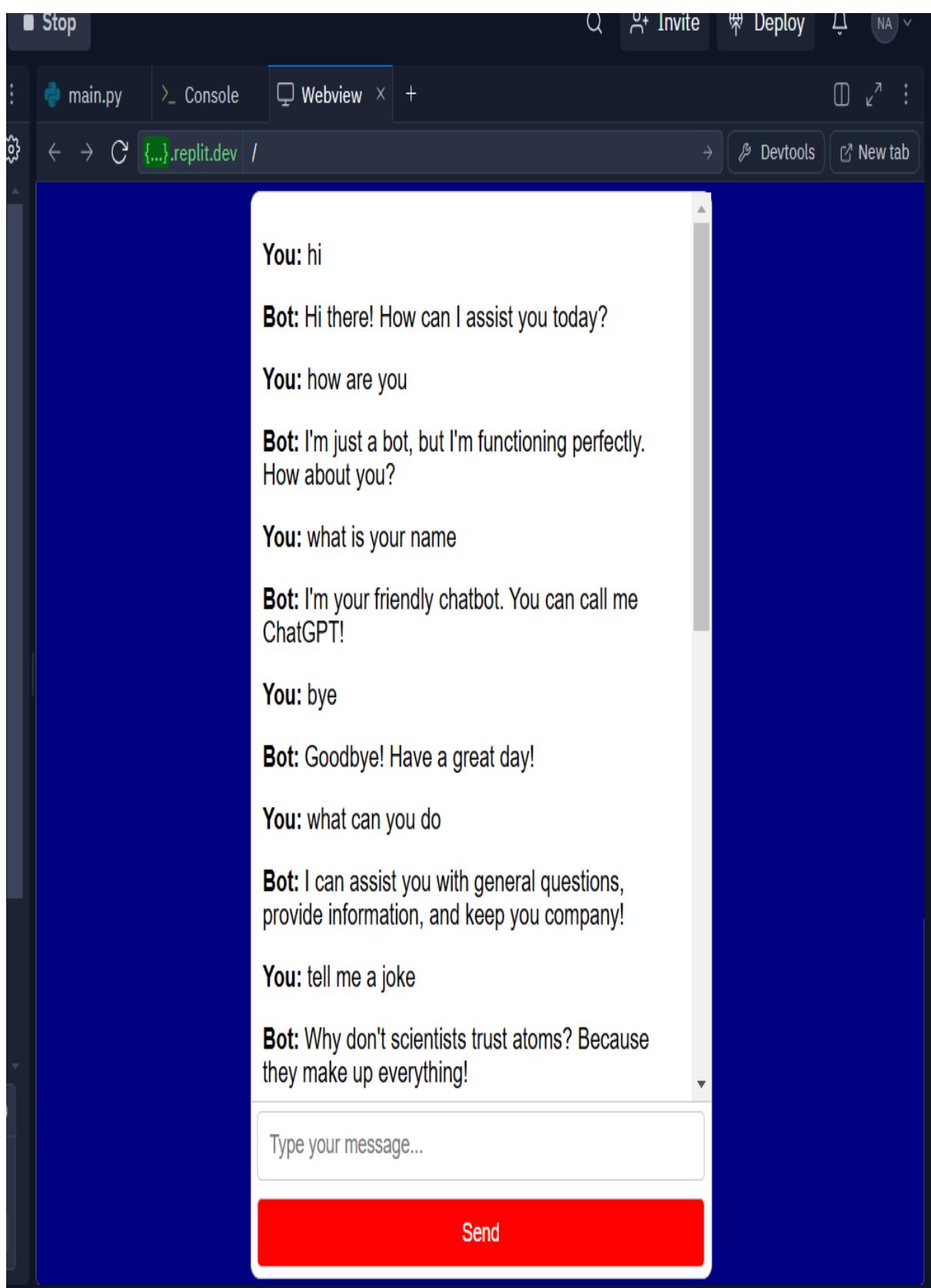
    bot_response = get_bot_response(user_input)

    return jsonify({"response": bot_response})

if __name__ == "__main__":

    app.run(host="0.0.0.0", port=8080)
```

output:



The screenshot shows a web-based chat interface with a dark blue background. At the top, there are tabs for "main.py", "Console", "Webview", and a "+" button. The URL bar displays "....replit.dev". The main area contains a conversation log:

- You:** what is python
- Bot:** Python is a popular programming language known for its simplicity and versatility.
- You:** what is your favorite color
- Bot:** I like all colors equally, but blue feels calming.
- You:** what is the weather
- Bot:** I can't check the weather right now, but you can try a weather app!
- You:** what is artificial intelligence
- Bot:** Artificial Intelligence refers to machines designed to perform tasks that usually require human intelligence.
- You:** i am sad
- Bot:** I'm sorry to hear that. Remember, tough times don't last forever. You're stronger than you think!
- You:** tell me a lame joke
- Bot:** Why don't skeletons fight each other? They

At the bottom, there is a text input field with the placeholder "Type your message..." and a red "Send" button.

