PROJECT NAME: Chat Bot Using Python

DETAILS:

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BE(ECE) 3RD YEAR

CREATE A CHATBOT IN PYTHON

Chatbot:

Chatbots are conversational tools that perform routine tasks efficiently. It Communicates with users using interactive text or speech capabilities. People like them because they help them get through those tasks quickly so they can focus their attention on high-level, strategic, and engaging activities.

Phase 4:

Development Part 2

In this part you will continue building your project. Continue building the chatbot by integrating it into a web app using Flask.

Step 1:

Create a Flask Project

1. Create a new directory for your Flask project.

2. Inside this directory, create a virtual environment:

Python code:

```
python -m venv venv

source venv/bin/activate  # On Windows, use 'venv\Scripts\activate'
```

3. Install Flask:

Python code:

```
pip install Flask
```

Step 2:

Create a Basic Flask Web App

1. Create a file named app.py in your project directory.

2. In app.py, import Flask and create a basic Flask app:

Python code:

```
from flask import Flask, render_template, request

app = Flask(__name)

@app.route('/')

def home():

    return render_template('index.html')

if __name__ == '__main__':

    app.run(debug=True)
```

Step 3:

Create HTML Templates

1. Create a folder named templates in your project directory.

2. Inside the templates folder, create an HTML file named index.html:

HTML code:

```
<!DOCTYPE html>

<html>

<head>

    <title>Chatbot</title>
```

```
</head>
<body>
    <h1>Chatbot</h1>
    <div id="chat-box"></div>
    <input type="text" id="user-input" placeholder="Type your message">
    <button id="send-button">Send</button>
    <script src="static/chatbot.js"></script>
</body>
</html>
```

Step 4:

Create JavaScript for Chatbot

1. Create a folder named static in your project directory.

2. Inside the static folder, create a JavaScript file named chatbot.js. This file will handle user input and responses from the chatbot.

JavaScript code

```
// chatbot.js
const chatBox = document.getElementById('chat-box');
const userInput = document.getElementById('user-input');
const sendButton = document.getElementById('send-button');

sendButton.addEventListener('click', () => {
    const userMessage = userInput.value;
    chatBox.innerHTML += `<p>User: ${userMessage}</p>`;
```

```
// Send user message to the server for processing
fetch('/chat', {
    method: 'POST',
    body: JSON.stringify({ userMessage }),
    headers: {
        'Content-Type': 'application/json',
    },
})
.then(response => response.json())
.then(data => {
    const chatbotMessage = data.chatbotMessage;
    chatBox.innerHTML += `<p>Chatbot: ${chatbotMessage}</p>`;
});

    userInput.value = '';
});
```

Step 5:

Implement Chatbot Logic in Flask

1. In app.py, add a new route to handle user messages and return chatbot responses.

Python code:

```
import json

# Import your chatbot implementation here
```

```
@app.route('/chat', methods=['POST'])
def chat():
    data = json.loads(request.data)
    user_message = data['userMessage']
    # Implement your chatbot logic here
    chatbot_response = get_chatbot_response(user_message)
    return json.dumps({'chatbotMessage': chatbot_response})
```

2. Implement the get_chatbot_response function using your existing chatbot logic. This function should take a user message as input and return the chatbot's response.

Step 6:

Run Your Flask App

1.Run your Flask app using the following command:

Python Code:

```
python app.py
```

2. Access your chatbot web app by opening a web browser and navigating to http://localhost:5000.

Our chatbot is now integrated into a Flask web app. Users can interact with it through the web interface. Make sure you adapt the chatbot logic and responses to suit your specific use case and chatbot implementation. You can also enhance the web interface to make it more interactive and visually appealing

Architectural Diagram in Chatbot:

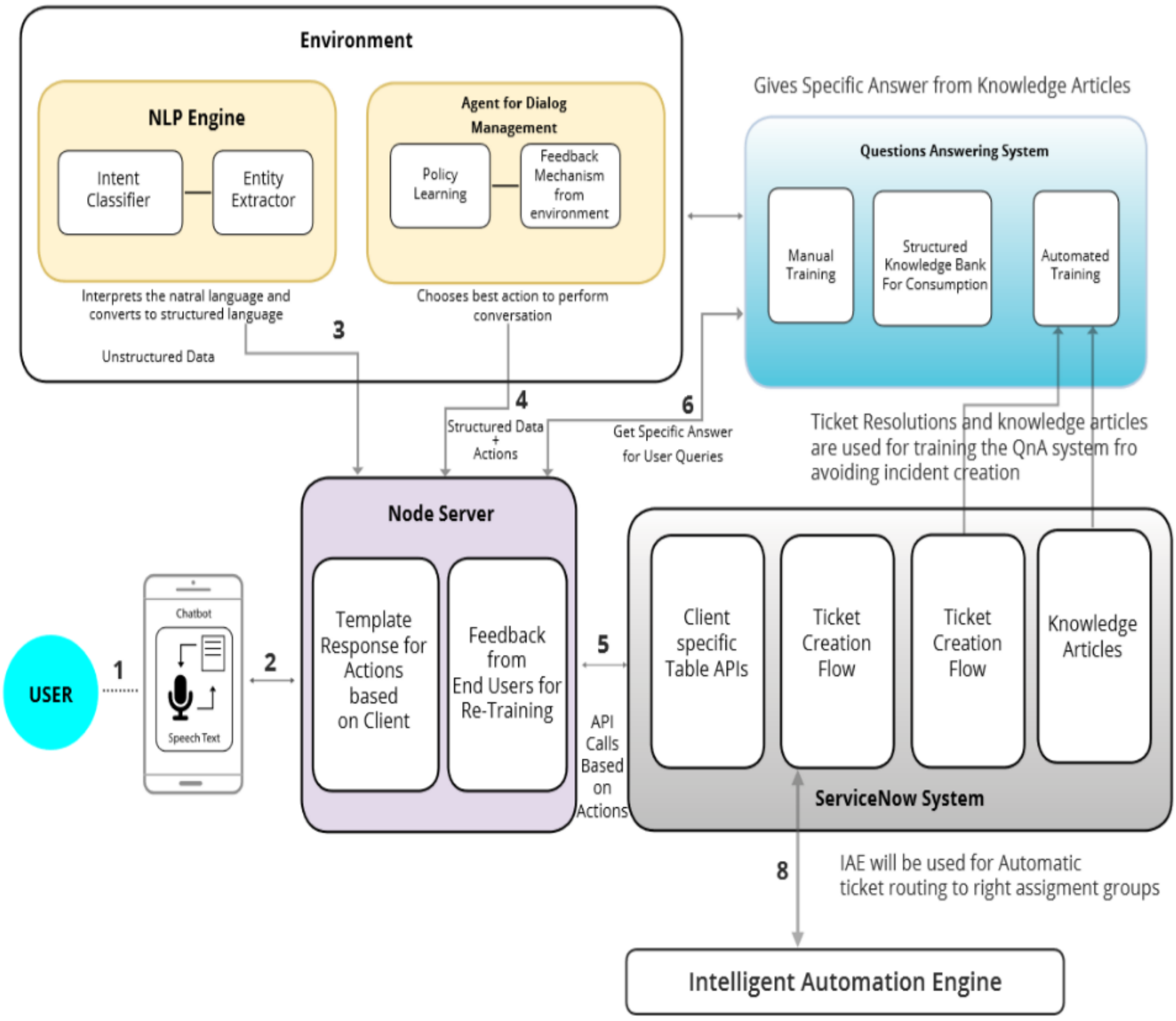

Fig 1.1 Architectural design in chatbot

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