📌 AI Chatbot with Groq API

📖 Overview

The **AI Chatbot with Groq API** is a Flask-based chatbot that utilizes the **Groq API** to generate real-time responses. This chatbot provides:

- **Instant responses** powered by the Groq API
- **Conversation history** for better user experience
- **Code formatting with copy feature**
- **User-friendly UI with Markdown & syntax highlighting**

🚀 Features

- ◆ **Real-time conversation generation**
- ◆ **Chat history maintenance**
- ◆ **Code block formatting with a copy button**
- ◆ **Full-screen, responsive user interface**
- ◆ **Markdown and syntax highlighting support**

🛠️ Installation

1️⃣ Clone the Repository

```
git clone
https://github.com/yourusername/AI-Chatbot-with-Groq-API.git
cd AI-Chatbot-with-Groq-API
```

2️⃣ Create a Virtual Environment *(Recommended)*

```
python -m venv venv
source venv/bin/activate   # On Windows: venv\Scripts\activate
```

3 Install Dependencies

```
pip install -r requirements.txt
```

4 Set Up Environment Variables

Create a `.env` file and add your **Groq API key**:

```
GROQ_API_KEY=your_api_key_here
```

5 Run the Application

```
python app.py
```

🎯 Usage

- Open a browser and go to `http://localhost:5000`
- Enter your query in the chatbot interface
- Receive **instant AI-generated responses**
- If the response includes **code snippets**, you can **copy them with a single click**

🔗 API Integration (Groq API)

The chatbot **sends user queries** to the **Groq API** and receives responses.

Request:

```
import requests

url = "https://api.groq.com/chat"  # Example API endpoint
headers = {
```

```
    "Authorization": "Bearer YOUR_GROQ_API_KEY",
    "Content-Type": "application/json"
}
data = {
    "message": "Hello, how are you?"
}

response = requests.post(url, json=data, headers=headers)
print(response.json())
```

Response (Example):

```
{
    "response": "I'm doing great! How can I help you today?"
}
```
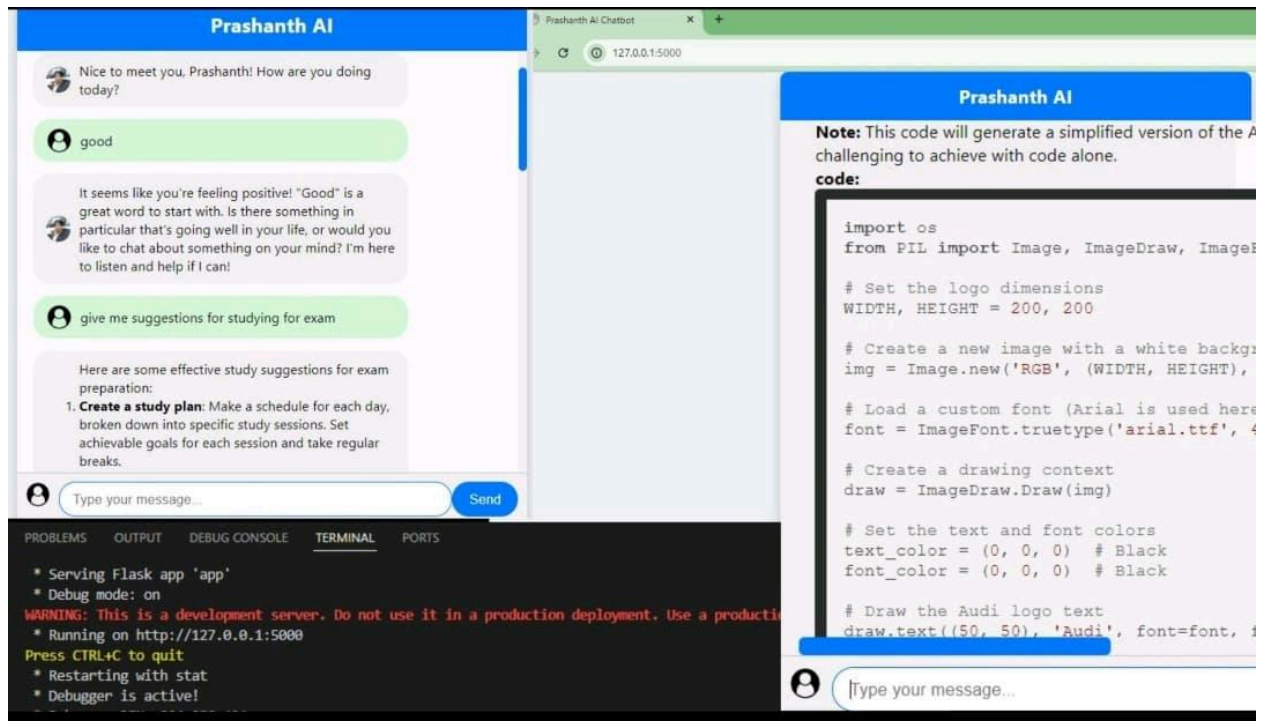

💻 Technologies Used

Technology	Purpose
Flask	Backend framework
Groq API	AI-powered conversation generation
HTML, CSS, JavaScript	Frontend development
Markdown & Syntax Highlighting	Code block formatting

📷 Preview

🔥 Future Improvements

✅ **Enhance UI/UX with animations and themes**
✅ **Implement user authentication**
✅ **Add voice input/output support**
✅ **Store and retrieve chat history from a database**

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