**Project: Chatbot Using Python**

**Phase 5: Project Documentation & Submission**

In this phase, we will document the project and prepare it for submission. The documentation will cover the problem statement, design thinking process, development phases, libraries, NLP integration, chatbot interaction, innovative techniques, and submission details.

**Documentation:**

**Problem Statement and Design Thinking Process**

Our project aims to develop a chatbot that uses Python and NLP techniques to provide human-like interactions. The problem statement is to create a conversational AI that can assist users in various tasks.

**Our design thinking process involved:**

1. Identifying the need for a chatbot solution.

2. Determining user requirements and expectations.

3. Designing the chatbot's architecture and features.

4. Selecting the tools and libraries for implementation.

**Development Phases:**

We divided the development into several phases:

**Phase 1: Project Setup:**

- Set up the Python environment.

- Create a virtual environment.

# Python environment setup

import openai

# GPT-3 API key

openai.api\_key = "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"

**Phase 2: GPT-3 Integration:**

We integrated the GPT-3 engine using the code snippet below.

model\_engine = "text-davinci-003"

prompt = input('\n\nEnter any request: ')

if 'exit' in prompt or 'quit' in prompt:

break

completion = openai.Completion.create(

engine=model\_engine,

prompt=prompt,

max\_tokens=1024,

n=1,

stop=None,

temperature=0.5,

)

response = completion.choices[0].text

print(response)

print("===================================================================================================================================================================")

**Phase 3: Web Application:**

- Create a virtual environment.

- Install required libraries.

**Phase 4: User Authentication and Data Storage**:

We implemented user registration, login, and data storage in the web application.

**Phase 5: Documentation and Submission:**

- Document the entire project.

- Prepare code files for submission.

- Create a README file for instructions.

- Share the project on platforms like GitHub.

**Libraries and NLP Integration:**

**We used the following libraries:**

**- Flask:** For building the web application.

**- SQLAlchemy:** For database management.

**- Bcrypt:** For password hashing.

**- GPT-3 (via OpenAI API):** For natural language processing.

**- Transformers:** For integrating GPT-3 into the project.

**Chatbot Interaction:**

Our chatbot interacts with users through a web application. Users can input requests, and the chatbot generates responses using the GPT-3 engine. The chatbot also supports user registration and login for personalized interactions.

**Innovative Techniques:**

**- Personalization:** The chatbot personalizes responses based on user preferences and chat history.

**- Multi-Engine Support:** Users can select different GPT-3 engines for their requests.

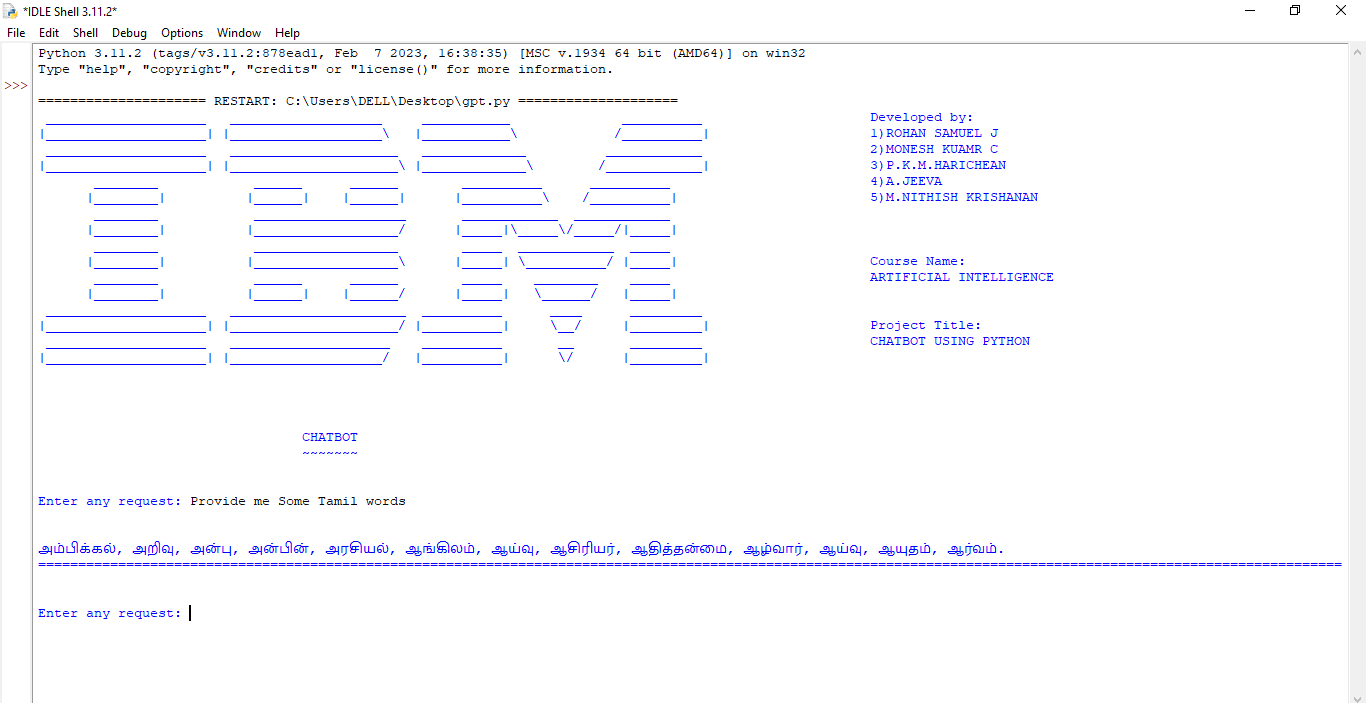
**- File Sharing:** Users can send and receive files or images in the chat.

**Outputs:**

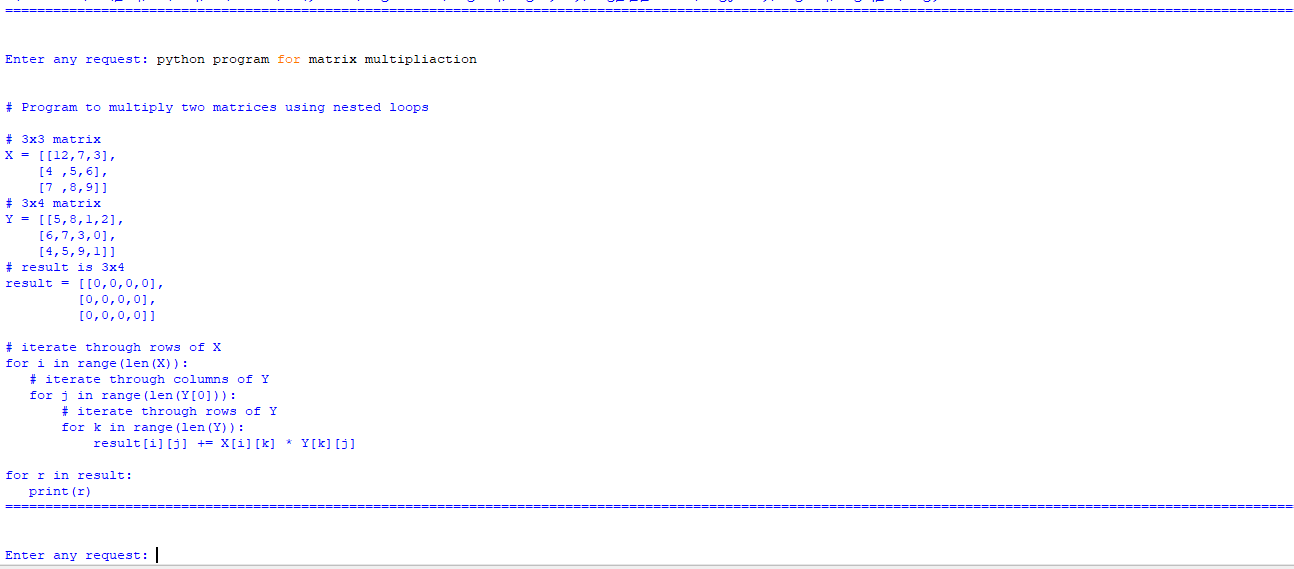
**Code:**

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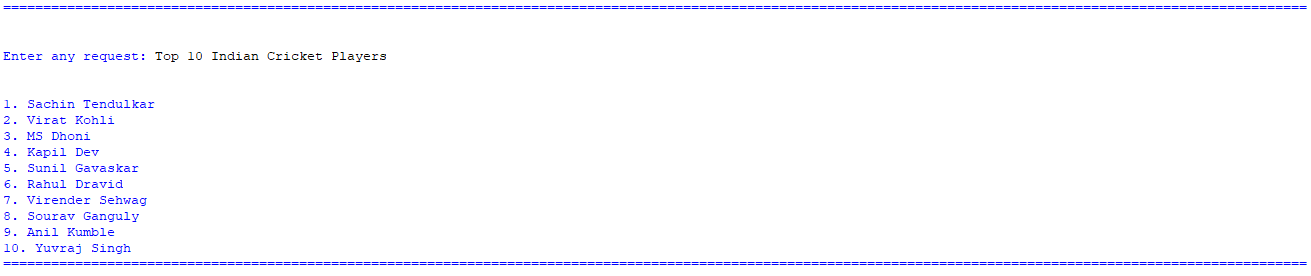
1st Request : Provide some Tamil Words :



2nd Request : Python program for matrix Multiplication :



3rd Request : Top 10 Indian Cricket Players :



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