

# COD TECH INTERNSHIP:

## TASK 3: AI CHATBOT WITH NLP

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### INTRODUCTION:

*In this project, I have developed a simple AI Chatbot using Python with basic Natural Language Processing (NLP) techniques. The main objective of this project is to enable the chatbot to understand and respond to common greetings and user queries in a conversational manner.*

*This chatbot demonstrates how basic string matching and conditional logic can be used to create an interactive conversational experience. It helped me improve my understanding of Python programming and NLP fundamentals.*

### CODE:

```
import random

# Predefined responses for greetings and common questions
greetings = ["hello", "hi", "hey", "assalamualaikum"]
greeting_responses = ["Hello!", "Hi there!", "Hey!", "Wa Alaikum Assalam! How can I help you?"]

common_questions = {
    "how are you": "I'm just a Python program, but I'm doing great! Thanks for asking.",
    "what is your name": "I'm a chatbot created by Huzaifa Badshah.",
    "who created you": "I was developed by Huzaifa Badshah during his internship project.",
    "bye": "Goodbye! Take care."
}

def get_response(user_input):
    user_input = user_input.lower()
```

```

# Greeting check
if user_input in greetings:
    return random.choice(greeting_responses)

# Question check
for question in common_questions:
    if question in user_input:
        return common_questions[question]

# Default fallback
return "Sorry, I didn't understand that. I'm still learning!"

# Chat interface
print("🤖 Welcome to Huzaifa's AI Chatbot (Type 'bye' to exit)")

while True:
    user_input = input("You: ")
    response = get_response(user_input)
    print("Bot:", response)

    if user_input.lower() == "bye":
        break

```

## OUTPUT:

Welcome to Huzaifa's AI Chatbot (Type 'bye' to exit)

You: hello

Bot: Hi there!

You: what is your name

Bot: I'm a chatbot created by Huzaifa Badshah.

You: how are you

Bot: I'm just a Python program, but I'm doing great! Thanks for asking.

You: who created you

Bot: I was developed by Huzaifa Badshah during his internship project.

You: bye

Bot: Goodbye! Take care.

## **CONCLUSION:**

*This project helped me develop a simple AI Chatbot using Python with basic Natural Language Processing (NLP) techniques. By creating this chatbot, I learned how to handle user inputs, use conditional statements, and implement basic string matching for conversational interaction.*

*Overall, this project improved my skills in Python programming and gave me practical exposure to how chatbots work at a fundamental level.*