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Title: Basic Rule-Based Chatbot using Python
Internship Task: Task 4 – Basic Chatbot

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1. Introduction

A chatbot is a computer program designed to simulate conversation with humans. In this project, a simple **rule-based chatbot** is created using Python. It takes input from the user and provides predefined replies based on matching keywords.

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2. Objective

To build a simple chatbot that:

- Accepts user input
- Responds with predefined messages
- Ends the conversation when the user types **"bye"**

3. Concepts Used

Concept	Usage
input()	To take text from user
print()	Display reply
if-elif statements	To match user input
Loop (while True)	To continue the conversation
Function	To organise the code

4. Python Code

```
# Advanced Rule-Based Chatbot with Common User Questions
def chatbot():
    print("🤖 Chatbot: Hello! I'm your friendly chatbot. Type 'bye' to exit.\n")
    while True:
        user_input = input("You: ").lower().strip()
        # Greetings
        if user_input in ["hello", "hi", "hey"]:
            print("🤖 Chatbot: Hi there!")
        elif user_input in ["how are you", "how r u"]:
            print("🤖 Chatbot: I'm good! Thanks for asking 😊")
        elif user_input in ["what is your name", "who are you"]:
            print("🤖 Chatbot: I'm a Python chatbot created for an internship project 🤖")
        # Common human questions
        elif user_input in ["what are you doing", "wyd"]:
            print("🤖 Chatbot: I'm chatting with you right now 😄")
        elif user_input == "tell me a joke":
            print("🤖 Chatbot: Why did the computer sneeze? Because it had a virus 🤧")
        elif user_input in ["where do you live", "what is your address"]:
            print("🤖 Chatbot: I live inside your computer 😎")
        elif user_input in ["what can you do", "your abilities"]:
            print("🤖 Chatbot: I can chat with you and answer simple questions!")
        elif user_input == "who created you":
            print("🤖 Chatbot: I was created by a Python learner for an internship task 👨‍💻")
        elif user_input in ["are you a robot", "are you human"]:
            print("🤖 Chatbot: I'm a cute digital robot 🤖")
        # Student / motivation
        elif user_input == "i am bored":
            print("🤖 Chatbot: Let's talk! I'll try to entertain you 😄")
        elif user_input in ["i am sad", "feeling sad"]:
```

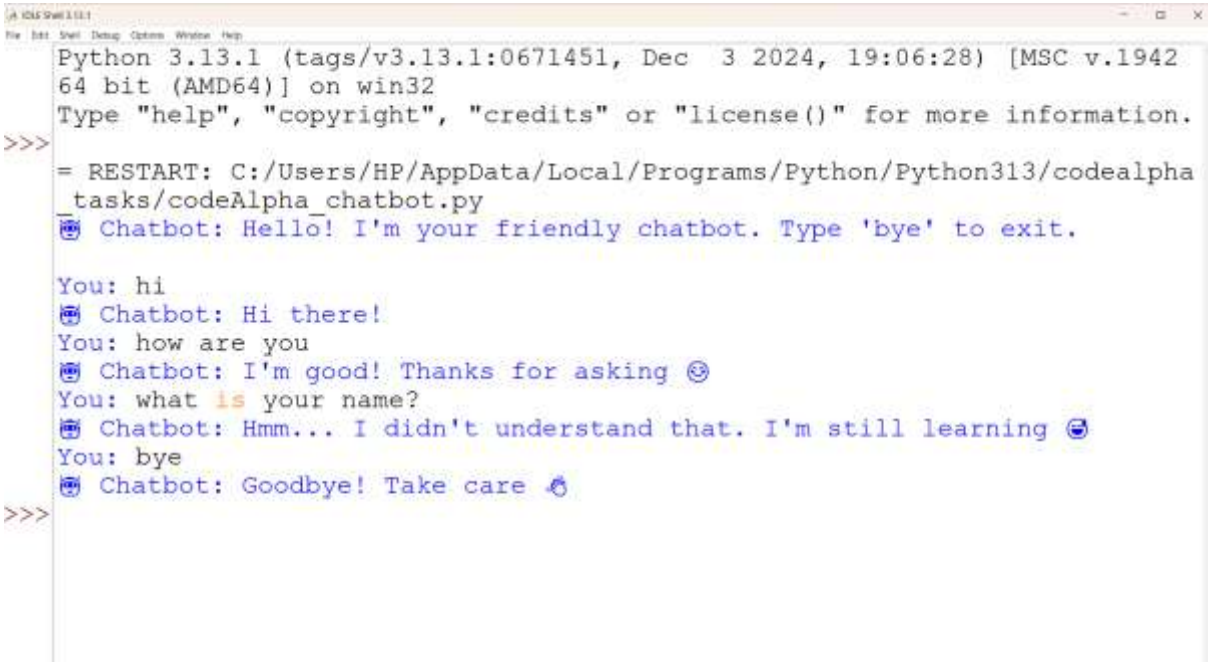
```
        print("🤖 Chatbot: I'm here for you ❤️ Everything will be okay.")

    elif user_input == "give me motivation":
        print("🤖 Chatbot: Believe in yourself! Every expert was once a beginner 💪 ")
    elif user_input == "i can't do it":
        print("🤖 Chatbot: Yes you can! Don't give up! 🔥 ")
    # Funny / casual
    elif user_input == "sing a song":
        print("🤖 Chatbot: La la la 🎶 I don't have a great voice though 😅 ")
    elif user_input in ["do you like me", "do you love me"]:
        print("🤖 Chatbot: Of course! You are my favourite human 😘 ")
    # Thank you
    elif user_input in ["thank you", "thanks", "ty"]:
        print("🤖 Chatbot: You're welcome 😊 ")
    # Conversation ending
    elif user_input in ["bye", "good night", "see you", "talk later"]:
        print("🤖 Chatbot: Goodbye! Take care 👋 ")
        break
    # Unknown question
    else:
        print("🤖 Chatbot: Hmm... I didn't understand that. I'm still learning 😅 ")


# Run chatbot
chatbot()
```

5. Variable Description Table

Variable Name	Data Type	Purpose / Description
user_input	string	Stores the text entered by the user in each turn of the conversation
chatbot()	function	Main function that runs the chatbot and contains all reply rules

Variable Name	Data Type	Purpose / Description
while True	loop	Keeps the conversation running until user types a goodbye phrase
input()	function	Takes user message from keyboard
print()	function	Displays chatbot messages on the screen
.lower()	string method	Converts user input into lowercase so the program can match text easily
.strip()	string method	Removes extra spaces from the beginning and end of user input
if–elif–else	conditional statements	Used to match user input with predefined questions/responses
break	keyword	Ends the loop and closes the chatbot when user says bye

6. Sample Output



7. Conclusion

This project demonstrates a basic chatbot using simple rule-based logic. It helped in understanding **input/output handling, loops, conditional statements, and functions** in Python. Future improvements can include expanding responses, storing chat history, or using AI-based NLP.

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8. References

- Python Documentation
- Internship Training Material