ARTIFICIAL INTELLIGENCE

CASE STUDY: Placement FAQ Chatbot

1. Title of the Case Study

Rule-Based Placement FAQ Chatbot Using Python

2. Student Details

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- **Class:** BE-V SEM
- **Section:** B
- **Department:** Information Technology
- **Faculty In-Charge:** P.Sita Sowjanya

3. Problem Statement / Purpose

The purpose of this project is to develop a simple **rule-based Placement Assistance Chatbot** that answers frequently asked questions related to college placement activities.
The chatbot helps students quickly obtain information about eligibility, recruitment procedures, training programs, internships, placement office contact details, and more.
Since it uses a keyword-based rule system, it does not require machine learning and provides fast, accurate responses to predefined placement-related queries.

4. Objectives / Key Features

Objectives

- To assist students with placement-related information quickly.
- To replace repeated manual queries by providing automated answers.

- To create a simple and efficient Python-based chatbot using rule matching.

Key Features

- Provides placement eligibility criteria
- Explains the placement process
- Shares information about visiting companies
- Gives details about internships
- Provides placement office contact information
- Responds instantly using keyword-based logic
- User-friendly and easy to operate

5. Scope of the System

- Designed for **students preparing for campus placements**.
- Useful for clearing general doubts about:
    - Recruitment process
    - Required documents
    - Training programs
    - Internship opportunities
    - Placement office contact details
- Can be expanded in the future using:
    - Machine Learning
    - Natural Language Processing (NLP)
    - Chat interfaces like Telegram/WhatsApp

6. Algorithm

1. Start the program.
2. Display a welcome message and instructions.
3. Continuously accept questions from the user.
4. Convert the question to lowercase for easy matching.
5. Check for keywords such as:
    - “eligibility”, “criteria”
    - “process”, “interview”, “rounds”
    - “companies”, “visit”, “recruiters”
    - “internship”, “intern”
    - “training”, “skills”, “courses”
    - “resume”, “documents”, “certificate”
    - “contact”, “placement office”
6. If a keyword matches, provide the predefined answer.
7. If user enters “exit”, terminate the loop.
8. If no keyword matches, show a default polite response.
9. Stop the program.

7. PYTHON CODE

```
def placement_chatbot():
    """
    A simple rule-based Placement FAQ Chatbot using Python.
    This chatbot answers basic questions related to placement activities.
    """

    print("Welcome to the Placement FAQ Chatbot!")
    print("Ask your placement-related questions.")
    print("Type 'exit' anytime to quit.\n")

    while True:
        question = input("You: ").lower().strip()
```

```
        if question == "exit":
            print("Bot: Thank you for using the chatbot!")
            break

        # Rule-based responses
        if "eligibility" in question or "criteria" in question:
            print("Bot: Students must have a minimum of 60% with no active
backlogs.")

        elif "process" in question or "procedure" in question or "steps" in question:
            print("Bot: Pre-placement talk → Aptitude Test → Technical Round →
HR Interview.")

        elif "company" in question or "recruiter" in question or "visit" in question:
            print("Bot: TCS, Infosys, Wipro, Cognizant, and Accenture visit every
year.")

        elif "training" in question or "class" in question:
            print("Bot: Training includes aptitude, soft skills, communication,
coding, and mock interviews.")

        elif "internship" in question:
            print("Bot: Internships are provided to pre-final year students with good
academic performance.")

        elif "documents" in question or "certificate" in question:
            print("Bot: Resume, ID card, photos, and semester mark sheets are
required.")

        elif "contact" in question or "help" in question:
            print("Bot: Email placementcell@college.edu or call +91-9876543210.")

        else:
            print("Bot: Sorry, I don't have information on that. Please contact the
Placement Cell.")

        print()
placement_chatbot()
```

4.py - C:/Users/mhasi/OneDrive/Desktop/0877/4.py (3.11.9)

File Edit Format Run Options Window Help

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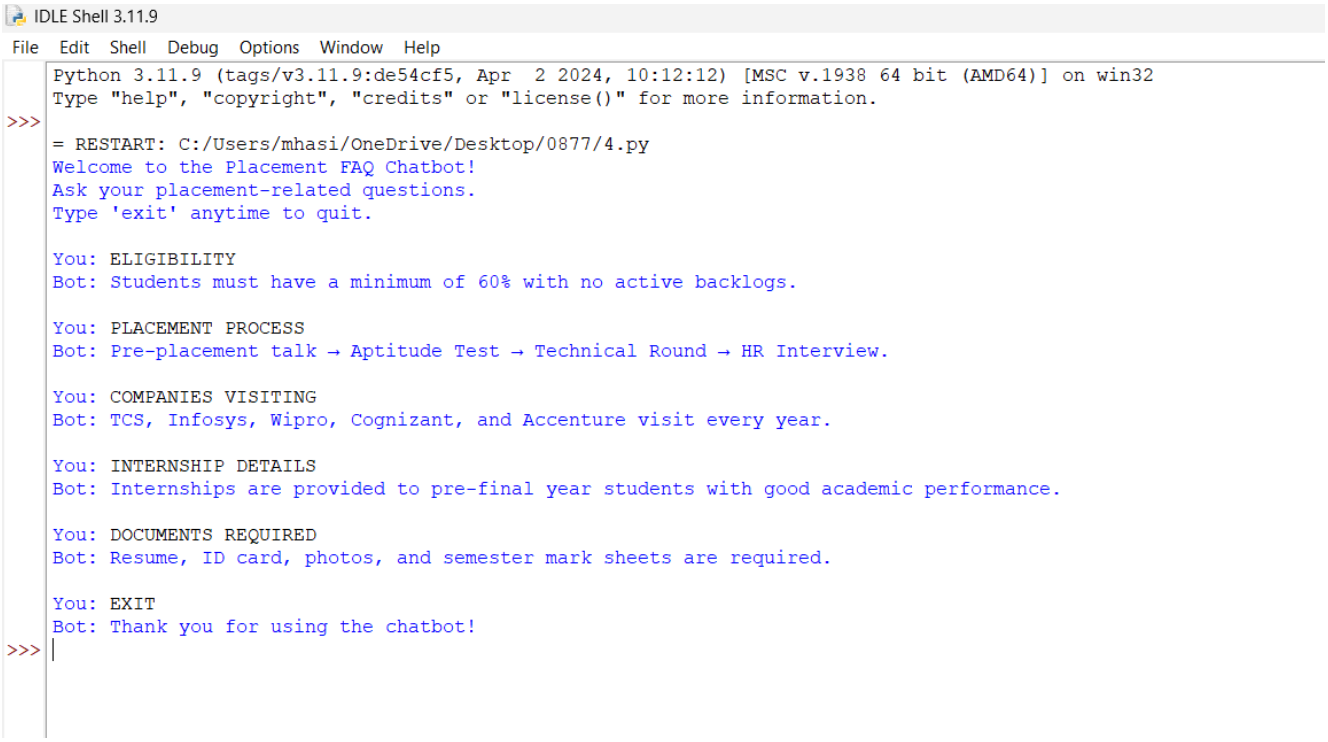
        print()


placement_chatbot()
```

8.INPUT & OUTPUT

Welcome to the Placement FAQ Chatbot!
Ask your placement-related questions. Type 'exit' to quit.
You: eligibility
Chatbot: Students must have a minimum of 60% with no active backlogs.
You: placement process
Chatbot: Pre-placement talk → Aptitude Test → Technical Round → HR Interview.
You: companies visiting
Chatbot: TCS, Infosys, Wipro, Cognizant, and Accenture visit every year.
You: internship details
Chatbot: Internships are provided to pre-final year students with good academic performance.
You: documents required
Chatbot: Resume, ID card, photos, and semester mark sheets are required.
You: exit
Chatbot: Thank you for using the Placement FAQ Chatbot!



9. How It Works

- The user types a question.
- The chatbot converts the text to lowercase.
- It checks for specific keywords using **if–elif** conditions.
- Once a keyword is matched, the related predefined response is displayed.
- If no keywords match, a default message is shown.
- The conversation continues until the user types **"exit"**.

10. Results & Discussion

- The chatbot successfully answers common placement-related questions.
- It reduces workload on the placement office by automating repetitive queries.
- It demonstrates the effectiveness of rule-based systems for simple FAQ tasks.
- Although limited to keyword matching, it works efficiently for predefined queries.

11. Conclusion

The Placement FAQ Chatbot provides a simple and effective way for students to access important placement-related information instantly. It demonstrates how rule-based logic can be used to build a functional chatbot without complex

machine learning models. The system can be expanded further with NLP, GUI interfaces, or integration into college websites.

12. References

- Python Official Documentation
- Basic concepts of rule-based chatbot design
- College placement procedure guidelines