Management Institute of Durgapur

Project Report

Project Title: Smart Rule-Based ChatBot with Enhanced Features and GUI

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1. Introduction

This project is a smart chatbot application built using Python. It uses rule-based logic to respond to user inputs and is enhanced with name recognition, math solving, and jokes.

2. Features

- Time-based greetings (morning/afternoon/evening)

- Remembers user's name when told 'my name is ...'

- Can calculate simple math expressions (e.g., 5+3*2)

- Provides date and time info

- Tells random jokes on request

- GUI with scrollable chat area

- Clean and colorful interface with user-friendly layout

3. Technologies Used

- Python 3

- Tkinter

- datetime, random modules

- FPDF (for report generation)

4. Output Sample

Below is a sample conversation:

User: hi

ChatBot: Good afternoon! How can I assist you?

User: my name is Pratyusha

ChatBot: Nice to meet you, Pratyusha!

User: calculate 5+3*2

ChatBot: The result is 11

User: tell me a joke

ChatBot: Why was the math book sad? Because it had too many problems.

5. Conclusion

This project demonstrates a functional and user-friendly chatbot using basic AI principles. It helps students understand logic implementation and GUI design in Python.