Chat_Box – A Simple Python Chatbot

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1. Introduction

The project **Chat_Box** is a simple interactive chatbot built using Python. It simulates small conversations with the user through predefined text responses. The chatbot identifies keywords in user input and responds accordingly.
This project is useful for beginners to understand **string handling, conditional logic, dictionaries, loops, and functions** in Python.

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2. Objectives

The key objectives of this project are:

- To understand how a basic rule-based chatbot works.
- To implement a dictionary-driven response system.
- To learn handling of user input and automated output.
- To demonstrate the use of functions and loops in Python.
- To create an interactive, real-time conversational program.

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3. System Requirements

Hardware Requirements

- PC/Laptop
- Minimum 2 GB RAM
- At least 100 MB storage

Software Requirements

- Python 3.x
- Code editor (VS Code / Sublime / PyCharm / IDLE)

- Command Prompt / Terminal

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4. Technologies Used

- **Python 3**
- **time module** — for delay effect
- **Dictionary** — to store predefined responses
- **Function (get_response)** — to match input with responses
- **Loop** — to keep conversation running until user exits

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5. Project Overview

The Chat_Box works on a simple rule-based logic:

1. User enters a message.
2. The program converts it into lowercase.
3. It checks if the message contains any keyword present in the response dictionary.
4. If matched → chatbot replies from the dictionary.
5. If no match → chatbot replies:
   “Sorry, I don't understand that.”
6. When the user types **"bye"**, the chatbot exits.

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6. Working of the Program (Logic)

(a) Response Dictionary

Stores predefined keywords and their replies.

(b) get_response() Function

Matches user input with keywords in the dictionary.

(c) main() Function

Controls the chat loop, receives user input, and prints chatbot responses.

(d) Exit Condition

When input == "bye", program stops and prints a goodbye message.