

PHASE 1: PROBLEM DEFINITION AND DESIGN THINKING

Project Title: Create a Chatbot in Python

ABSTRACT:

The project aims to develop a rule-based chatbot in Python, a conversational agent capable of engaging in text-based interactions with users. Chatbots have gained significant popularity in recent years, finding applications in customer support, virtual assistants, and more. This project offers a step-by-step guide on creating a simple yet functional chatbot, providing a foundation for further customization and enhancement.

OBJECTIVES:

- Implement a user-friendly interface that accepts text input from users and displays responses from the chatbot.
- Define a set of rules and responses to allow the chatbot to understand and generate appropriate replies to user inputs.
- Incorporate randomization to make the chatbot's responses less predictable and more engaging.
- Enable a termination condition, allowing users to exit the chatbot conversation when desired.

PROJECT COMPONENTS:

- Create a dictionary or database of predefined responses for different user inputs.
- Develop a function that selects and returns a response based on user input and the response database.
- Build a simple command-line interface (CLI) to facilitate user interactions.
- Implement a loop that continuously accepts user input and generates chatbot responses until the exit condition is met.

EXPECTED OUTCOMES:

- Upon completing this project, the following outcomes are anticipated:
- A rule-based chatbot that can engage in basic text-based conversations with users.
- A foundational understanding of how rule-based chatbots work, including response logic and user input processing.
- A customizable chatbot that can be expanded and enhanced with additional rules and responses.
- Improved Python programming skills, particularly in working with dictionaries, functions, and loops.