

**Modern Education Society's
Wadia College of Engineering, Pune-01
Department of Computer Engineering**

NAME OF STUDENT:	CLASS:
SEMESTER/YEAR:	ROLL NO:
DATE OF PERFORMANCE:	DATE OF SUBMISSION:
EXAMINED BY:	EXPERIMENT NO: 05

TITLE - Chatbot

PROBLEM STATEMENT: Develop elementary chatbot for any suitable customer interaction application.

OBJECTIVES:

1. To understand, what is NLP.
2. To understand the implementation of NLP.

PRE-REQUISITES:

NLP:

Natural language processing (NLP) is an area of computer science and artificial intelligence concerned with the interactions between computers and human (natural) languages, in particular how to program computers to process and analyze large amounts of natural language data.

AIML:

AIML is an XML based markup language meant to create artificial intelligent applications. AIML makes it possible to create human interfaces while keeping the implementation simple to program, easy to understand and highly maintainable.

THEORY:

A chatbot is an artificial intelligence (AI) software that can simulate a conversation (or a chat) with a user in natural language through messaging applications, websites, mobile apps or through the telephone. A chatbot is often described as one of the most advanced and promising expressions of interaction between humans and machines. However, from a technological point of view, a chatbot only represents the natural evolution of a Question Answering system leveraging Natural Language Processing (NLP). Formulating responses to

questions in natural language is one of the most typical Examples of Natural Language Processing applied in various enterprises' end-use applications.

A chatbot is software that simulates human-like conversations with users via text messages on chat. Its key task is to help users by providing answers to their questions. Chatbots are programs built to automatically engage with received messages. Chatbots can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning to adapt their responses to fit the situation. Chatbots leverage chat mediums like SMS text, website chat windows and social messaging services across platforms like Facebook and Twitter to receive and respond to messages.

The chatbots can be defined into two categories; following are the two categories of chatbots:

- Rule-Based Approach – In this approach, a bot is trained according to rules. Based on this a bot can answer simple queries but sometimes fails to answer complex queries.
- Self-Learning Approach – These bots follow the machine learning approach which is
- rather more efficient and is further divided into two more categories.
- Retrieval-Based Models – In this approach, the bot retrieves the best response from a list of responses according to the user input.
- Generative Models – These models often come up with answers than searching from a set of answers which makes them intelligent bots as well.

QUESTIONS:

1. What is Chatbot?
2. What are the key benefits of chatbots to business applications?
3. Explain any 2 applications of NLP.