**TEAM 5**

**CREATE A CHATBOT USING PYTHON**

**Project phase 2 : Innovation**

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**INTRODUCTION:**

To create a Python chatbot for exceptional customer service. This chatbot defines the objectives, collect data, manage dialog, integrate, train, test, gathers user’s feedback and ensure security. The focus on personalization and scalability maximizes the customer satisfaction.

**PROBLEM DEFINITION:**

The challenge is to create a chatbot in Python that provides exceptional customer service, answering user queries on a website or application. The objective is to deliver high-quality support to users, ensuring a positive user experience and customer satisfaction.

**HOW THE CHATBOT WORKS/STEPS TO USE CHATBOT:**

1. To use the chatbot, first chrome the website.
2. First page will display with a label and text field – Login/Signup.
3. If the user has an account, then login field has to be filled and jump into the chatbot.
4. If the user does not have an account, then the user has to create an account and login to use the chatbot.
5. In chatbot, the user can ask his/her queries as an input and get an approximate/desired output.

**TECHNOLOGY USED:**

To create a chatbot, we use the following technologies,

Our project is to create a chatbot using python and has to integrate it in the website.

**Website:**

Frontend:

HTML:

HTML (Hypertext Markup Language) is a fundamental language for creating web pages. It uses tags to structure content, like headings (<h1> to <h6>), paragraphs (<p>), links (<a>), and images (<img>). Browsers interpret HTML to display text, images, and multimedia on the internet, making it essential for web development.

CSS:

CSS (Cascading Style Sheets) is a vital web technology that styles HTML content. It defines how elements are displayed, controlling layout, colors, fonts, and more. CSS enables web developers to create visually appealing, responsive, and consistent designs, enhancing the user experience by separating content from presentation on websites.

JavaScript:

JavaScript handles user interactions, data manipulation, and asynchronous operations. It's a core technology for creating modern web applications, enhancing user experiences by adding functionality and interactivity.

Backend:

MYSQL:

MySQL is a popular open-source relational database management system. It stores and retrieves structured data, offering features for efficient data management. MySQL is widely used in web applications, e-commerce sites, and more. It supports complex queries, transactions, and is known for its speed, reliability, and scalability in handling large datasets.

Connectivity:

For connecting the frontend and backend PHP is used.

PHP:

PHP is a server-side scripting language commonly used for web development. It's embedded in HTML code and executed on the web server, generating dynamic web pages. PHP can interact with databases, handle user input, and perform a wide range of tasks. It's known for its simplicity, versatility, and widespread usage in creating web applications.

**Chatbot:**

We going to use python programming language for creating the chatbot. For answering user queries effectiently NLP has to be implemented.

In python there is a libraries like,

NLTK:

NLTK (Natural Language Toolkit) is a Python library designed for working with human language data. It provides tools, resources, and libraries to process and analyze text data, including functions for tokenization, stemming, parsing, and sentiment analysis. NLTK is a valuable resource for natural language processing (NLP) and text analysis tasks.

SpaCy:

SpaCy is an open-source natural language processing (NLP) library for Python. It is designed for efficient and accurate linguistic analysis of text data. SpaCy provides pre-trained models for tasks like part-of-speech tagging, named entity recognition, and parsing. It's a popular choice among developers and researchers for various NLP applications.

For the entire process of creating chatbot, the above technologies are used . The **HTML, CSS & Java Script** are the frontend languages for developing the outlook of the website. **MySQ**L is the database used for the storage of data and information. Since the project is to create a chatbot using python, we use python and **NLP**( Natural Language Processing) – **NLTK**( Natural Language Tool Kit) libraries. Also we use **spaCy** to integrate NLP with chatbot. Now the entire software’s are connect with Chatbot using **PHP.**

**CONCLUSION:**

Thus, the Chatbot using python will created in the above mentioned and explained way.