# PROJECT OVERVIEW

**Project Title:** Create a ChatBot using Python .

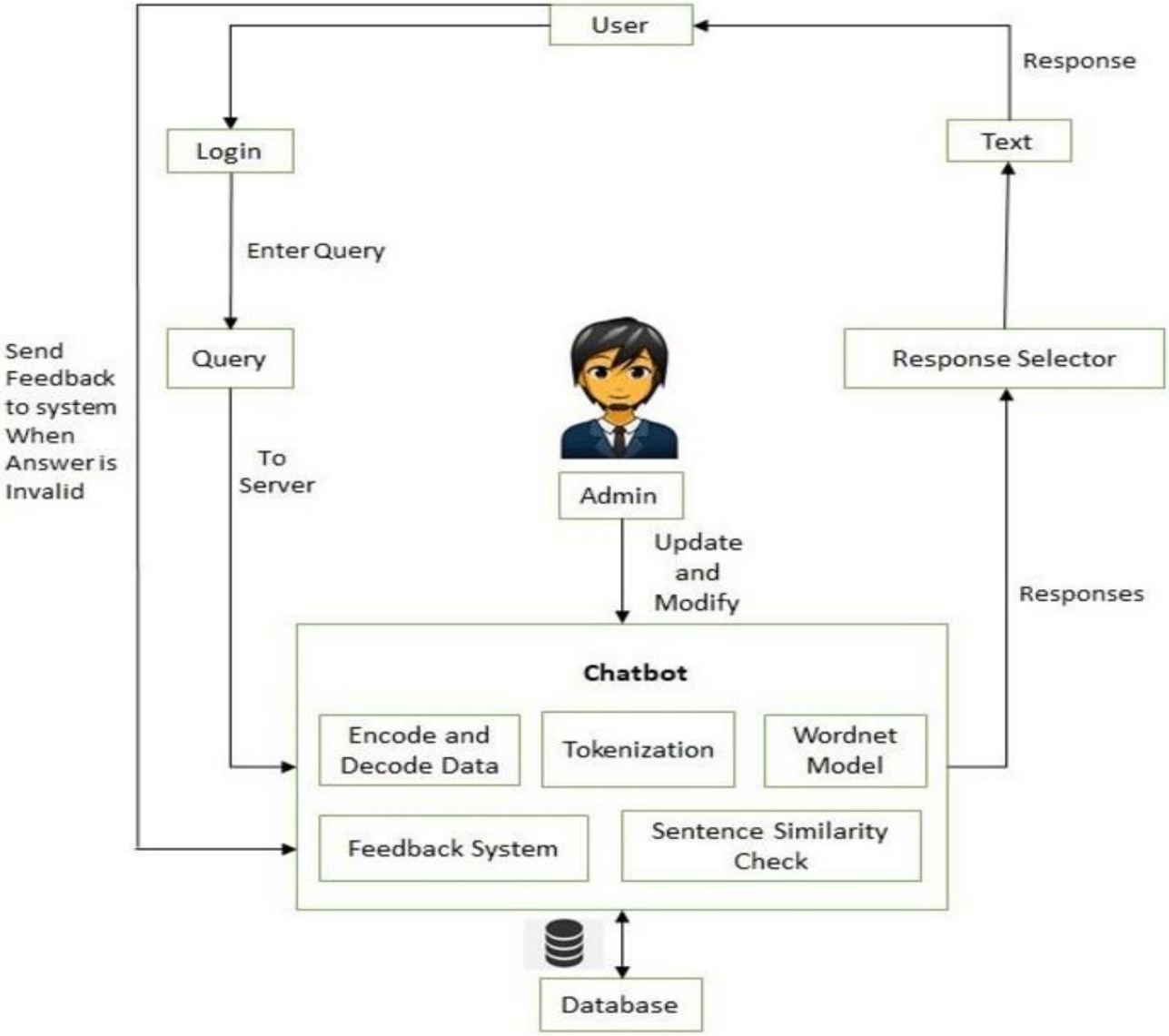
**Problem Definition:** The challenge is to create a chatbot in Python that provides exceptional customer service, answering user queries on a website or application. The objective is to deliver high-quality support to users, ensuring a positive user experience and customer satisfaction.

**Dataset Link:** https://www.kaggle.com/datasets/grafstor/simple-dialogs-for-chatbot

**Design Thinking:**

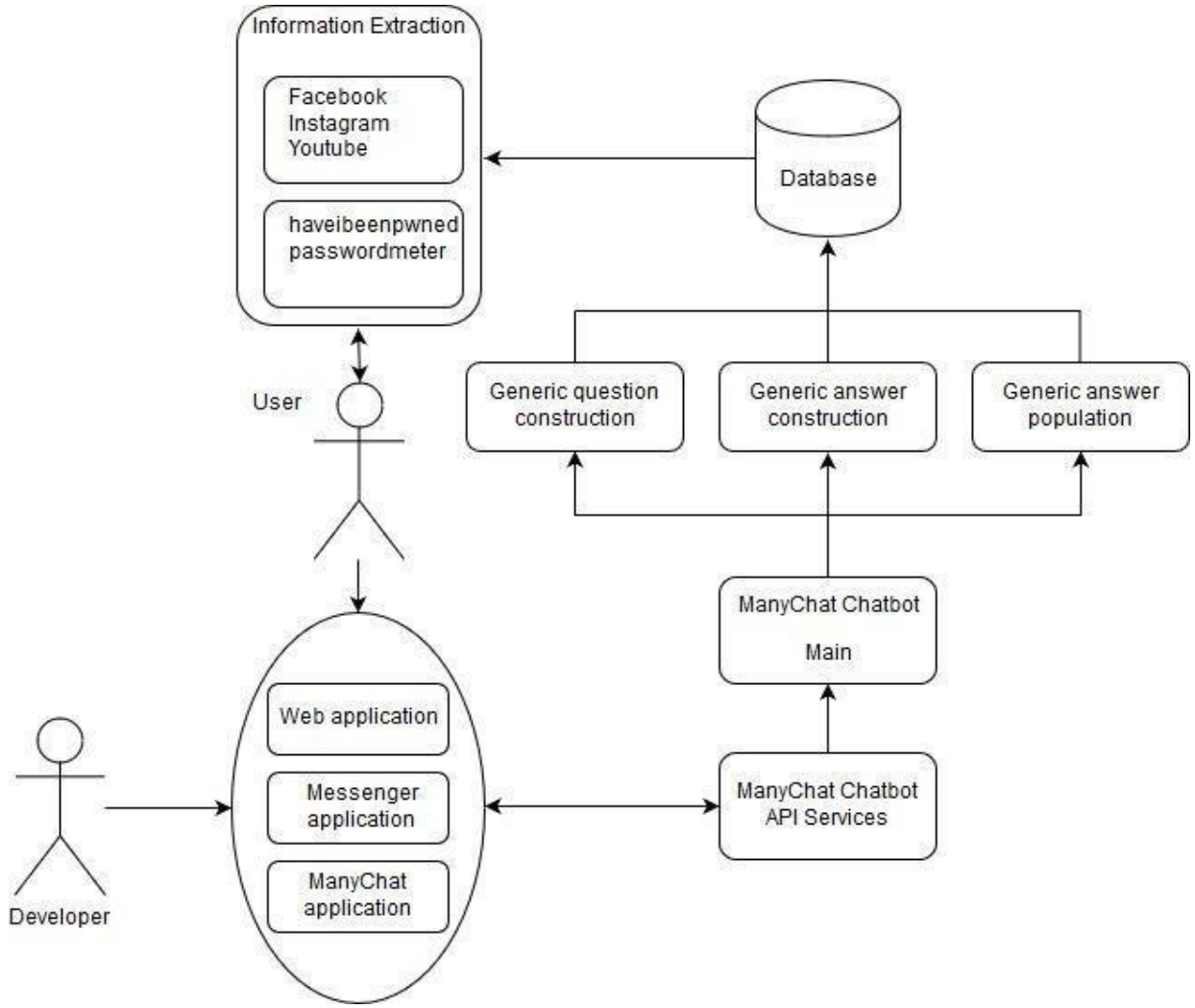
1. **Functionality:** Define the scope of the chatbot's abilities, including answering common questions, providing guidance, and directing users to appropriate resources.
2. **User Interface:** Determine where the chatbot will be integrated (website, app) and design a user-friendly interface For interactions.
3. **Natural Language Processing (NLP):** Implement NLP techniques to understand and process user input in a Conversational manner.
4. **Responses:** Plan responses that the chatbot will offer, such as accurate answers, suggestions, and assistance.
5. **Integration:** Decide how the chatbot will be integrated with the website or app.
6. **Testing and Improvement:** Continuously test and refine the chatbot's performance based on user interactions.

# COLLEGE CHATBOT SYSTEM ARCHITECTURE




In this project we made a college specific chatbot system that can be custom fitted to education domain chatbot, the addition of this chatbot system in the college website will make the webpage more user interactive as it responds to the user queries very accurately as it is a domain specific chatbot system, and furthermore we had investigated our college chatbot system design stages and a few different techniques by which the precision of the chatbot system can be made much better. To make the responses given by the chatbot system more meaningful and accurate the administrator has to train the chatbot system with more information regarding to college and increase the scope of knowledge base.

# CHATBOT USE-CASE DIAGRAM



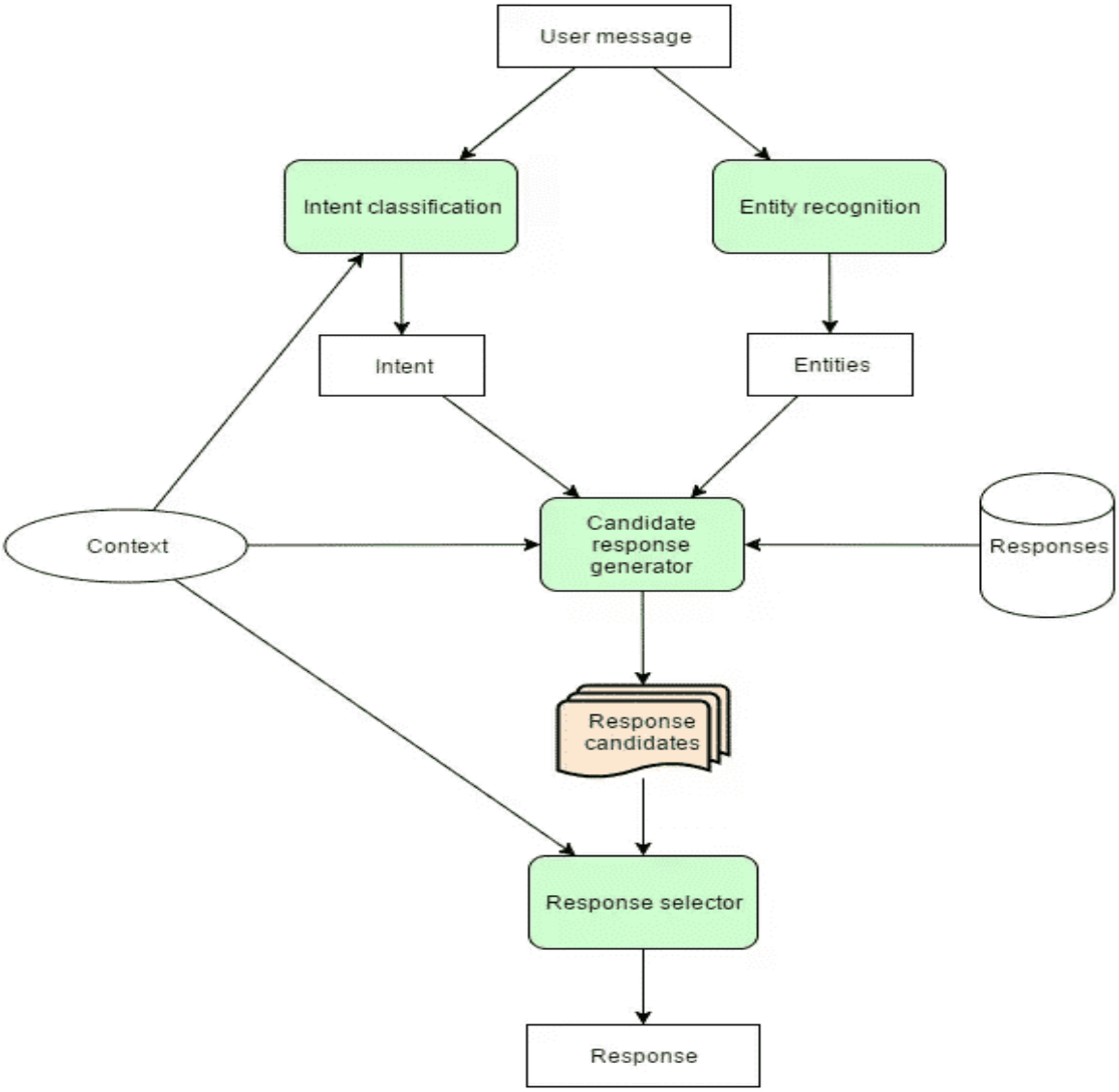

Scientific problem of research and development of software and mathematical tool for improving of social media security level was solved in this work. The solution of this problem allows user to estimate and get recommendations about improving of social media security level. The following results are obtained:

1. Security tools and means of accounts in Facebook,YouTube and Instagram were defined. Comparative analysis of them was conducted. It was demonstrated that social media security tools and means that significantly affect the security level of an account, are not realized in all social media.

2.A mathematical model of formation of social mediasecurity level indicator was built. The direct estimation method was used to estimate the security tools and means of social media accounts and define their mean value. Based on that, the five levels estimating scale for social media security level was proposed.

3.The chatbot that allows user to estimate a security levelin social media account and receive recommendations about its improving in automatic mode was developed.

# CHATBOT ARCHITECTURE DIAGRAM




- Regardless of how simple or complex a chatbot architecture is, the usual workflow and structure of the program remain almost the same. It only gets more complicated after including additional components for a more natural communication.

- Below is the basic chatbot architecture diagram that depicts how the program processes a request.

- Whereas, the following flowchart shows how the NLU Engine behind a chatbot analyzes a query and fetches an appropriate response.