

# UNIVERSITY CHATBOT FOR LIBRARY SUPPORT

Section:- (K18SP) Group No:- (14)  
Final Report

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By

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**L** OVELY  
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**U** NIVERSITY

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*Transforming Education Transforming India*

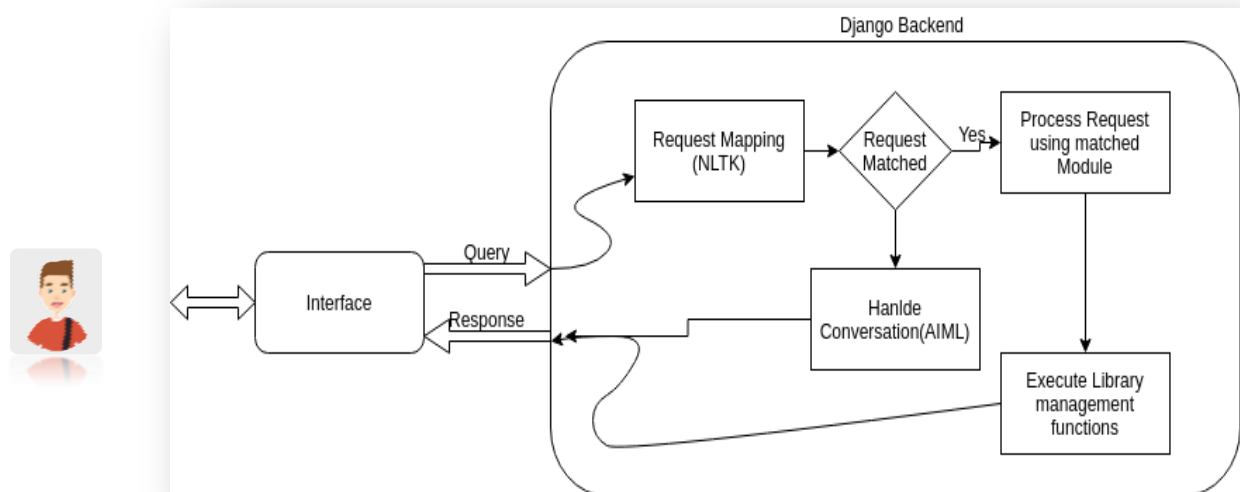
# INTRODUCTION

As many libraries continue to see reductions in funding, we are increasingly seeing technology as a way to make up for budget shortfalls. In the circulation context, online patron account management, self-registration, and self-serve checkout stations are examples of this trend. Since requests for basic library information (including locations, hours, and policies) and for specific materials or resources predominate among chat and IM inquiries of libraries, “chatbots” or “virtual agents” offer a self-service option for our online customers in the context of information services. The main objectives of this project are, explore the Library resources to the users by adapting an Artificial Intelligence Technology easy communication between the user and the chatbot- Anytime and Anywhere.

In recent times, chatbots have reduced the need for human intervention. Artificial intelligence and machine learning have accelerated the evolution of chatbots to blur the line between human and bot style of interaction. A chatbot is a computer program or artificial intelligence which conducts a conversation via auditory or textual methods. Chatbots are generally used in systems which involves chatting with users to either acquire information or provide the service as information to them. In certain Chatbots natural language processing is used, but many of the Chatbots have their reply stored in database which they retrieve when they receive an input from user. According to Finance Digest, AI will handle 95% of the customer interactions by 2025, which will free up the need for human interaction. Such advanced AI technology would create a self-learning system for chatbots, where chatbots can learn to respond without any scripts for every instance of a conversation. Chatbot's helps people by reducing the time they navigate in Web by easily providing the information they search.

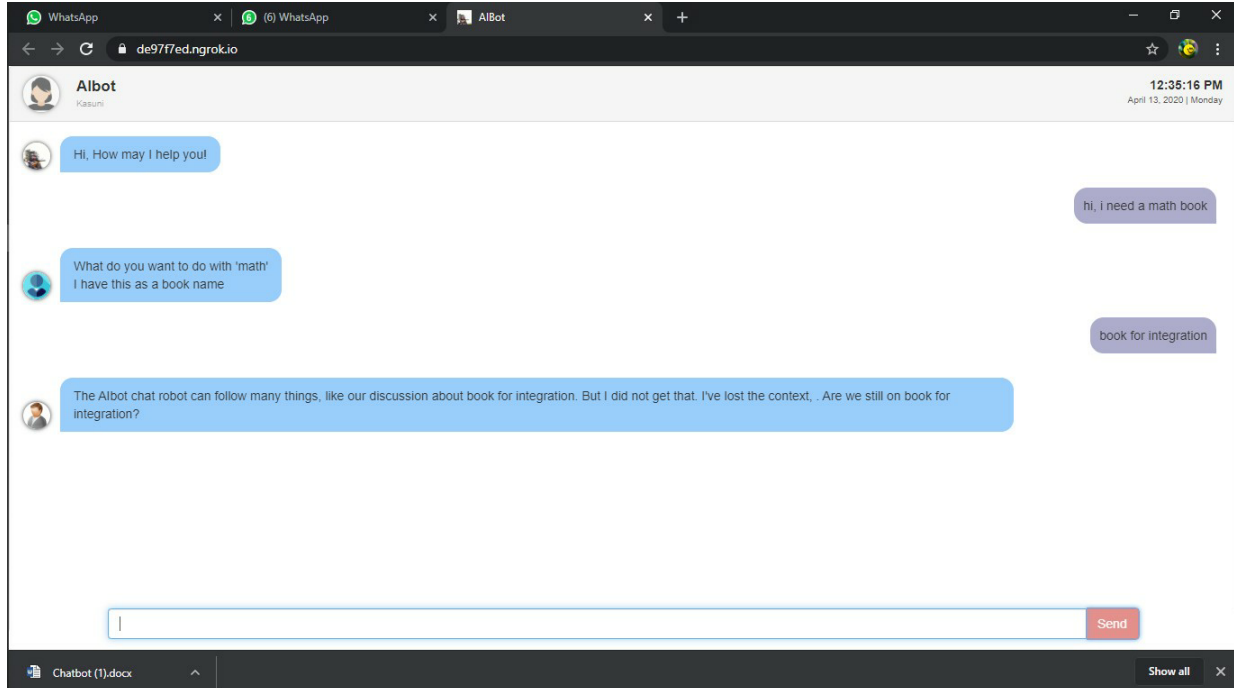
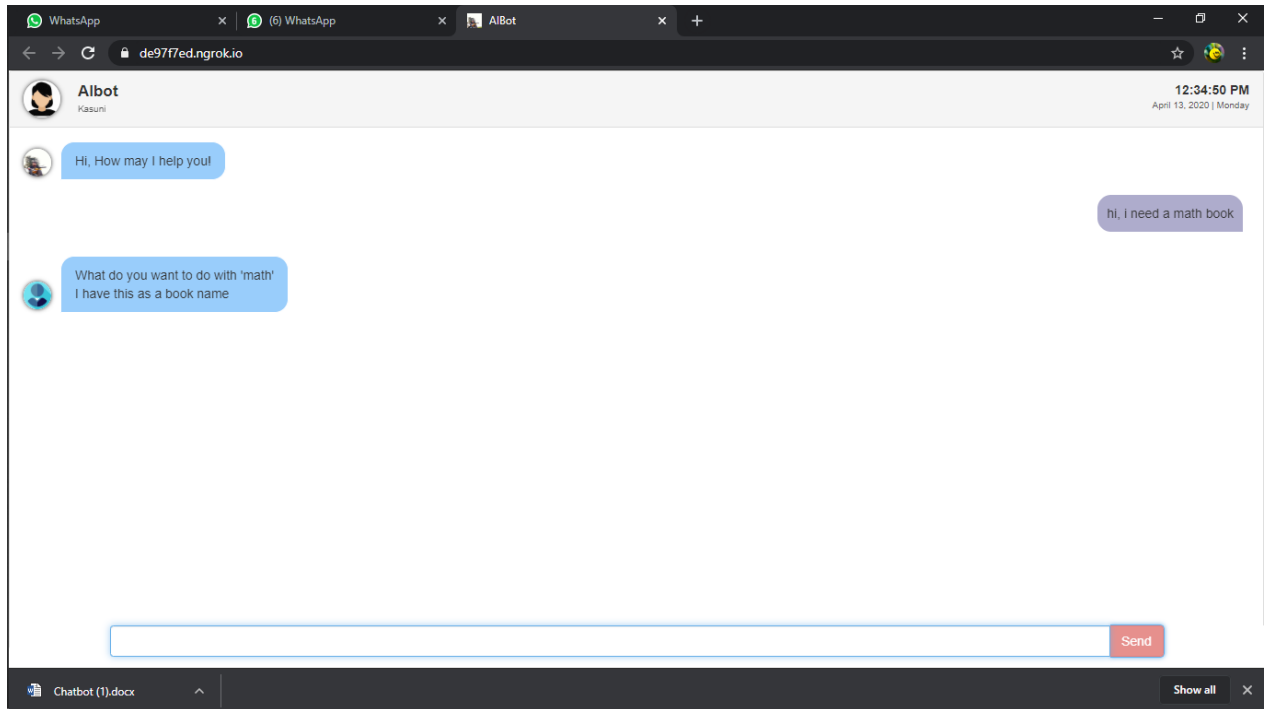
## Methods & Materials

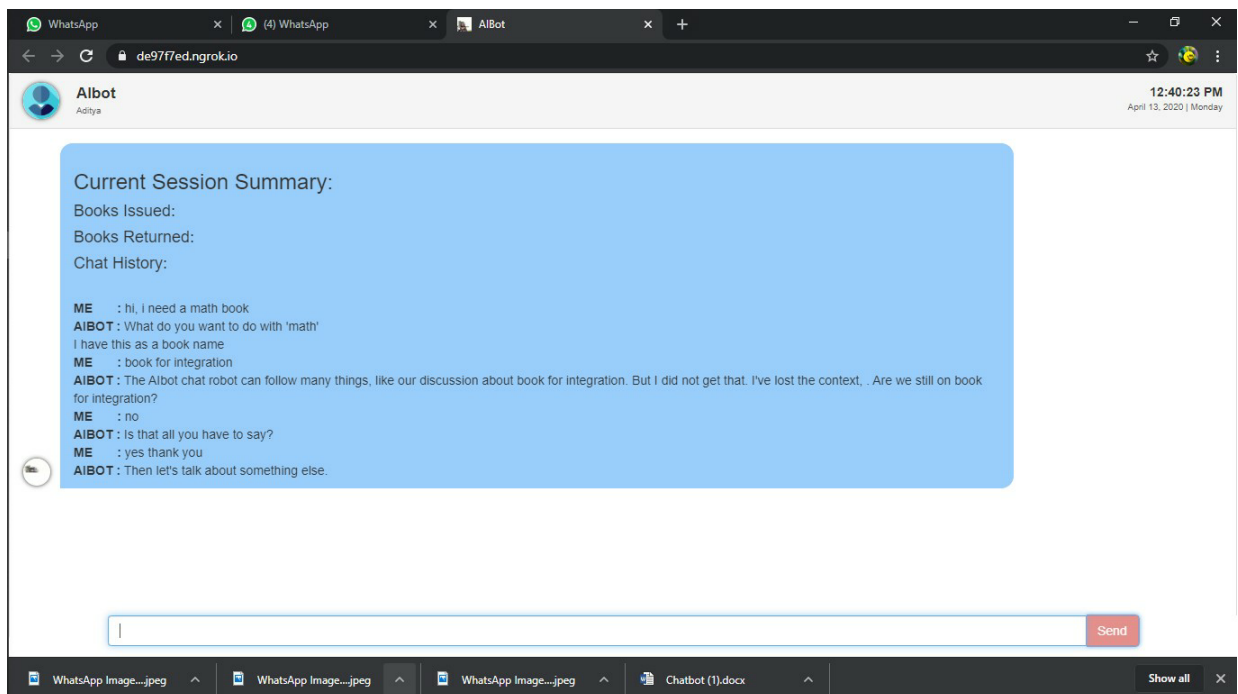
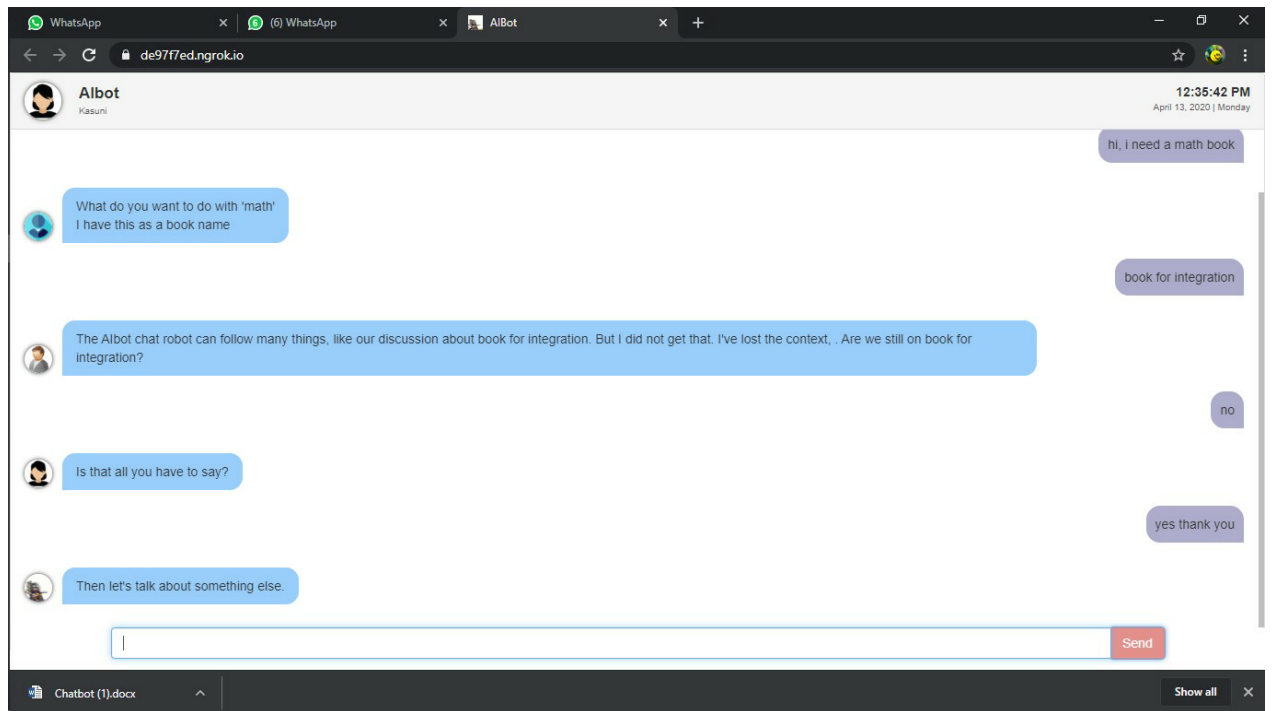
The Library Chatbot is using intelligence that analyses user requests using natural language processing library NLTK and respond accordingly. This system is used to ensure the availability of books to the students and faculties of various academic years and departments without visiting the library. System follows a simple rule that is each book is issued once per student. NLTK is used as a library to get user requirement from user queries. The NLTK is where the analysis of the user query takes place and then modules are executed and replied to the user by the chatbot. The system replies using an effective chat interface which implies that as if a real person is talking to the user. The user can request for information about the library related activities through online with the help of this bot. This chatbot system supports user by saving their time and provides data related to library resources and answers to simple queries and users do not want to go personally to library to ensure the availability of books.

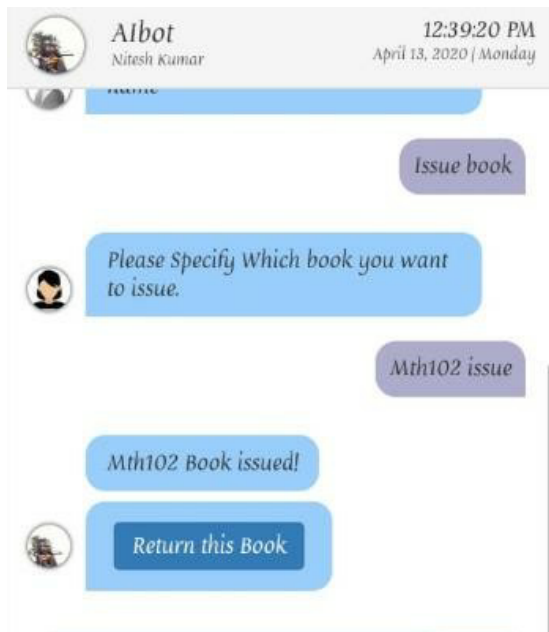
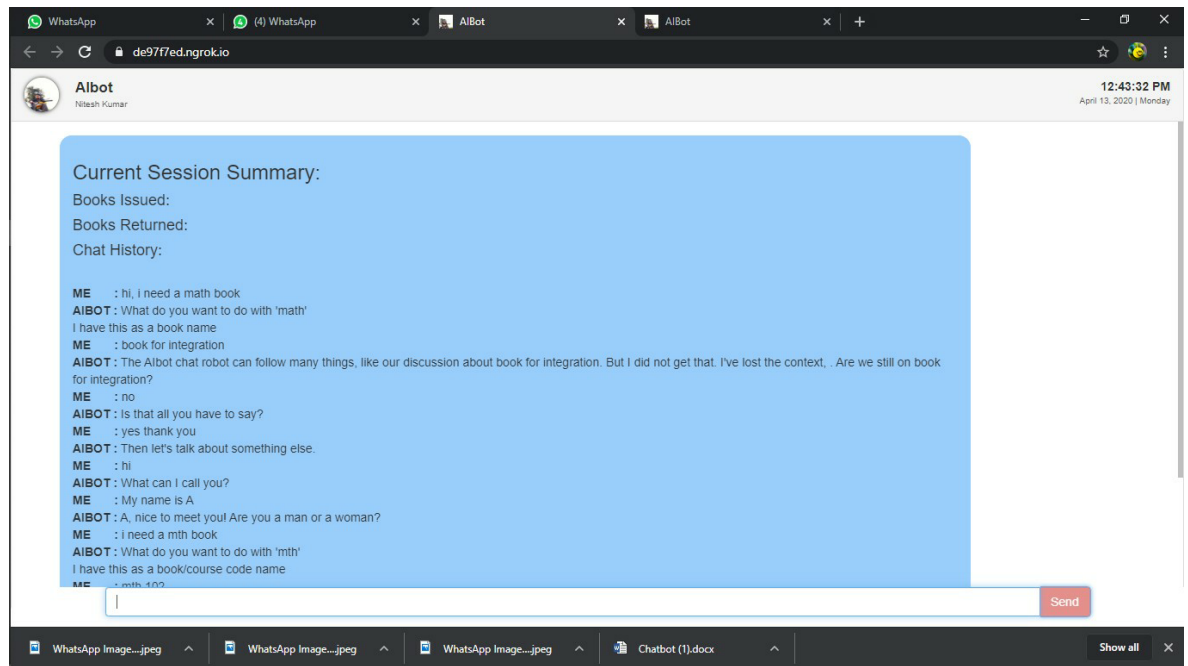


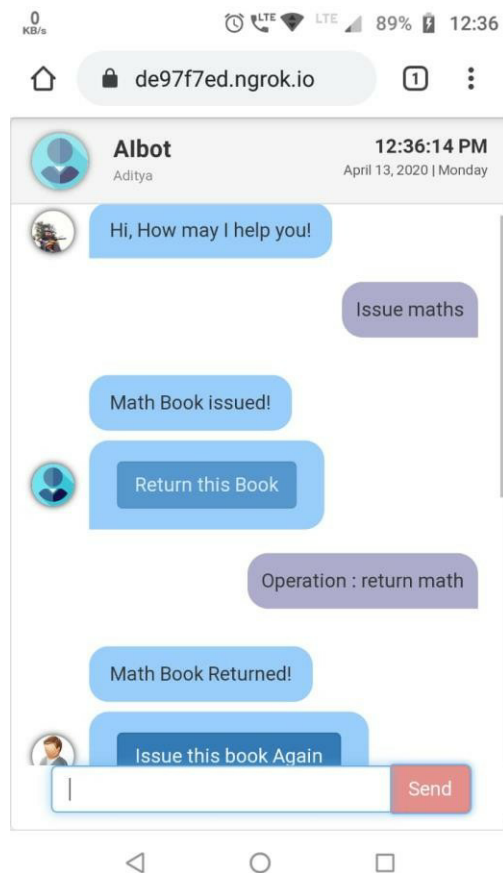
Architecture of the system

# The System Output









## Assessment Results

- *Scalability:*

More than one user can access the bot at the same time. So that many users can make a conversation with the chatbot and it is scalable. The bot has its own interface but can be embedded with other websites via simple api requests to our Albot System

- *Accessibility:*

In order to be more scalable for the usage of bot in colleges, it will be very much easy when it is integrated with the college web portal. Each student can access with the help of their own username and password.

- *Usability:*

We have created a bot to get details of any number of departments (Details must be available to Chatbot). More than one department book can be retrieved easily without making any changes in the flow. In the near future, there will be more advancement so that the library can exist without any man power and the simpler chatbots are going to dominate with more rule based development. The combination of chatbots and robots will automate the process in various fields with very less man power and in specific fields without even single manpower. This will also minimize the cost of operation.

## FEATURES OF THE CHATBOT

- Anyone can issue the books
- Can return the book which are issued by user
- We can search books via book name, department name, course code
- We can count the books in specified department like how much books are available in CSE department
- Miscellaneous Chat

## Functions of Chatbots

- ✓ Chatbot can handle user queries in any form No specific input required by user
- ✓ Chatbot can handle responses other than library using AIML
- ✓ Chatbot uses Django Backend which is highly secured system



# SWOT Analysis

## **Strength:**

Our project is helping in knowing about the books present in library, the book is available in the library or whether the books can be issuable or not, or is the book available with brief information about them Also, our project has GUI interface for communication with the user which is very helpful. Our Chatbot can remember currently issued and returned books till the session is open.

Our Chatbot System is highly Secured System It can handle 99.9% malicious attacks.

## **Weakness:**

Chatbot is not developed to save user sessions. It can store Details till the browser cache is not deleted.

## **Opportunities:**

Our project will create an opportunity for those people who doesn't have good knowledge about libraries and find difficulties to find the book and don't know the book is in which floor. Many of them comes to issue the book and then they find that the book is not available at that moment. So to overcome these problem, this chatbot will help them to know better.

## **Threats:**

No known threats are found in our Chatbot System

- **WorkDistribution**

1. Nitesh Dangi:- Query handling & Response handling using NLTK & AIML,  
Django for runs the user interface handle URLsdata
2. Abhishek Guatam- JavaScript is using for sending user query to back end and  
receive data fromtheir, update and show the data .Also contribute in a little bit in  
Django part in making theproject
3. Aditya Raj:- Frontend for design the interface, Django; it runs the user  
interface handle URLs data , Python forlogics
4. Kasuni Geethadhari:- Django for processing of everything and Python for  
coding &logics