

A Project Report
on
SMARTBOT : CHATBOT

*Submitted in partial fulfillment of the
requirement for the award of the degree
of*

Bachelor of Technology in Computer Science and
Engineering



Under The Supervision of
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DECEMBER - 2021



**SCHOOL OF COMPUTING SCIENCE AND
ENGINEERING
GALGOTIAS UNIVERSITY, GREATER NOIDA**

CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the project, entitled “ **Smartbot Chatbot** ” in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**

submitted in the **School of Computing Science and Engineering** of Galgotias University, Greater Noida, is an original work carried out during the period of **JULY-2021 to DECEMBER-2021**, under the supervision of **T Poongodi ,Assistant Professor, Department of Computer Science and Engineering** of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the project has not been submitted by me/us for the award of any other degree of this or any other places.

18SCSE1010698 – RACHIT SETIA
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This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor

(Dr. T Poongodi, Assistant Professor)

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of **18SCSE1010698 RACHIT SETIA, 18SCSE1010547 – MUDIT JAISWAL** has been held on _____ and his/her work is recommended for the award of **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**.

Signature of Examiner(s)

Signature of Supervisor(s)

Signature of Project Coordinator

Signature of Dean

Date:

Place:

ABSTRACT

A chatbot is a software that is used to develop interaction between a user and system in a natural language like human chats . Online learning is one of the imminent trends in the education sector around the globe. This mode of learning is done through the internet. With advanced and upgraded technologies, this mode of learning has been made simpler. Looking towards the new trends and changes in the Education sector, A need of interactive learning rises. LEARNY is a smart learning chatbot who can solves a user given problem or even answer the question asked by the user. CHATBOT is nothing but a conversational interfaces which is also a new way for individuals to interact with the application. Traditionally, to get a question answered by an individual than the most commonly technique is searching on search engine. But LEARNY solves the question and gives the required answer in minimum time required. A chatbot is a smart application that reduces human work and helps an organization to solve basic queries of the customer. Today most of the companies, business from different sectors make use of chatbots in a different way to reply to their customers as fast as possible. Chatbots also help in increasing traffic of sites which is the top reason for businesses to use chatbots.

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CHAPTER-1

Introduction

A chatbot is a computer software that helps in developing a conversation with the user in a natural way. The user interfaces for software applications can come in a variety of formats, ranging from command-line, graphical, web application, and even voice. While the most popular user interfaces include graphical and web-based applications, occasionally the need arises for an alternative interface. Whether due to multi-threaded complexity, concurrent connectivity, or details surrounding execution of the service, a chatbot-based interface may suit the need.

A chatbot is a smart application that reduces human work and helps an organization to solve basic queries of the customer. Today most of the companies, business from different sectors make use of chatbots in a different way to reply to their customers as fast as possible. Chatbots also help in increasing traffic of sites which is the top reason for businesses to use chatbots. Chatbot asks for basic information about customers like name, email address, and the query. If a query is simple like product fault, booking mistake, need some information then without any human connection it can solve it automatically and if some problem is high then it passes the details to the human head and helps customers to connect with organization manager easily.

Chat bots typically provide a text-based user interface, allowing the user to type commands and receive text as well as text to speech response.

Most businesses and organizations are understanding the potential benefits of machine learning and artificial intelligence to have a positive change on how they perform business. Artificial intelligence has progressed to allow the development of more sophisticated chatbots. Organizations are focusing on specific areas of user engagement that take up a lot of time but can be replaced through the use of a chatbot.

Chatbots can understand what the customer needs from a single text instead of the customer having to follow a process of multiple steps. Chatbots are used to automate customer service and reduce manual tedious tasks performed by employees so they can spend their time more productively on higher priority tasks.

Chat bots are usually a stateful services, remembering previous commands (and perhaps even conversation) in order to provide functionality. When chatbot technology is integrated with popular web services it can be utilized securely by an even larger audience.

The Student Information Chatbot is built using artificial algorithms that analyses user's queries and understand user's message. The System uses built in artificial intelligence to answer the query along with some hard-coded data about the students and the college.

A chatbot is a software tool that utilises natural language processing (NLP) for human machine interaction (HMI) and Machine Learning (ML). "The complexity of a chatbot is directionally proportional to the scope of the domain". An open domain requires a larger knowledge base, whereas, a closed domain has a more specific knowledgebase that was developed to achieve a specific goal.

Chatbot technology initially began in the 1960s to determine whether a chatbot could be portrayed as a human. Throughout the 1980s there was an elevated amount research carried out on natural language interfaces which lead to the development of sophisticated chatbot architectures such as A.L.I.C.E. This chatbot architecture is one of the earlier chatbots developed in 1995 by Dr Wallace which is now open-source, the acronym stands for Artificial Linguistic Internet Computer Entity. This is a chatbot you can create through interaction as it will learn from previous interactions to create its knowledge base. Its knowledge is saved in AIML (Artificial Intelligent Mark-up Language) files which evolved from the Extensible Mark-up Language (XML).

Why do we need Chatbots?

- Cost and Time Effective ~ Humans cannot be active on-site 24/7 but chatbots can and the replying power of chatbots is much faster than humans.
- Cheap Development cost ~ with the advancement in technology many tools are developed that help easy development and integration of chatbots with little investment.
- Human Resource ~ Today Chatbots can also talk with text to speech technology so it gives the feel as a human is talking on another side.
- Business Branding ~ Businesses are changing with technology and chatbot is one out of them. Chatbot also helps in advertising, branding of organization products and services and gives daily updates to users

Types of Chatbots:

There are mainly 2 types of chatbots.

1) Rule-based Chatbots – As the Name suggests, there are certain rules on which chatbots operate. Like a Machine learning model, we train the chatbots on user

intents and relevant responses, and based on these intents chatbot identifies the new user's intent and response to him.

2) Self-learning chatbots – Self-learning bots are highly efficient because they are capable of grabbing and identifying the user's intent on their own. They are built using advanced tools and techniques of Machine Learning, Deep Learning, and NLP.

Self-learning bots are further divided into 2 subcategories.

- Retrieval-based chatbots:- Retrieval-based it is somewhat the same as Rule-based where predefined input patterns and responses are embedded.

- Generative-Based chatbots:- It is based on the same phenomenon as Machine Translation built using sequence 2 sequences neural network. Most of the organization uses self-learning chatbot along with embedding some rules like Hybrid version of both methods which makes chatbot powerful to handle each situation during a conversation with a customer.

. A chatbot is an artificial intelligence-powered piece of software in a device (Siri, Alexa, Google Assistant etc), application, website or other networks that try to gauge consumer's needs and then assist them to perform a particular task like a commercial transaction, hotel booking, form submission etc . Today almost every company has a chatbot deployed to engage with the users.

Some of the ways in which companies are using chatbots are:

- To deliver flight information
- to connect customers and their finances
- As customer support History of chatbots dates back to 1966 when a computer program called ELIZA was invented by Weizenbaum. It imitated the language of a psychotherapist from only 200 lines of code.

CHAPTER-2 Introduction Literature Survey

Intelligent Personal Assistant has the ability to organize and maintain information and includes the management of Emails, calendar events, files and to do lists. Some of automated personal assistant can perform concierge type tasks or provide information based on voice input or commands and some smart personal agents, which can automatically perform management or handling tasks based on online information without user initiation or interaction.

Some of the examples of Intelligent Personal Assistant are Alexa, Jarvis, Siri, Cortana, Google assistant etc.

Building the Bot

Pre-requisites

A hands-on knowledge of **scikit** library and **NLTK** is assumed. However, if you are new to NLP, you can still read the article and then refer back to

resources.

NLP

The field of study that focuses on the interactions between human language and computers is called Natural Language Processing, or NLP for short. It sits at the intersection of computer science, artificial intelligence, and computational linguistics. NLP is a way for computers to analyze, understand, and derive meaning from human language in a smart and useful way. By utilizing NLP, developers can organize and structure knowledge to perform tasks such as automatic summarization, translation, named entity recognition, relationship extraction, sentiment analysis, speech recognition, and topic segmentation.

NLTK: A Brief Intro

NLTK (Natural Language Toolkit) is a leading platform for building Python programs to work with human language data. NLTK has been called “a wonderful tool for teaching and working in computational linguistics using Python,” and “an amazing library to play with natural language.”

Natural Language Processing with Python provides a practical introduction to programming for language processing.

Downloading and installing NLTK

1. Install NLTK: run `pip install nltk`
2. Test installation: run `python` then type `import nltk`

Installing NLTK Packages

Import NLTK and run `nltk.download()`. This will open the NLTK downloader from where you can choose the corpora and models to download. You can also download all packages at once. Text Pre- Processing with NLTK

The main issue with text data is that it is all in text format (strings).

However, the Machine learning algorithms need some sort of numerical feature vector in order to perform the task. So before we start with any NLP project we need to pre-process it to make it ideal for working.

Basic text

pre-processing includes:

- Converting the entire text into **uppercase or lowercase**, so that the algorithm does not treat the same words in different cases as different

- **Tokenization:** Tokenization is just the term used to describe the process of converting the normal text strings into a list of tokens i.e words that we actually want. Sentence tokenizer can be used to find the list of sentences and Word tokenizer can be used to find the list of words in strings.

CHAPTER 3

SYSTEM REQUIREMENTS

Minimum Software Requirements:

- Any operating system capable of running a web browser.
- Google Chrome/Firefox / Internet Explorer/Any other web browser.

Advantages:

- User does not have to go personally to college office for the enquiry.**
- The chat-bot will be very helpful to new students**
- This application enables the students to be updated with college cultural activities.**
- This application saves time for the student as well as teaching and non-teaching staff.**

CHAPTER 4

Technology Used

In this Project we have used Python Programming Language(Version 3.7)along with HTML, CSS, Machine Learning and Artificial Intelligence. We have also utilized a number of python modules to implement various features and functionalities. These modules and libraries include the following:

NLTK (Natural Language Toolkit): NLTK is a leading platform for building Python programs to work with human language data. It provides easy-to-use interfaces to over 50 corpora and lexical resources such as WordNet, along with a suite of text processing libraries for classification, tokenization, stemming, tagging, parsing, and semantic reasoning, wrappers for industrial-strength NLP libraries, and an active discussion forum.

TensorFlow: TensorFlow is a free and open-source software library for data flow and differentiable programming across a range of tasks. It is a symbolic math library, and is also used for machine learning applications such as neural networks. It is used for both research and production at Google.

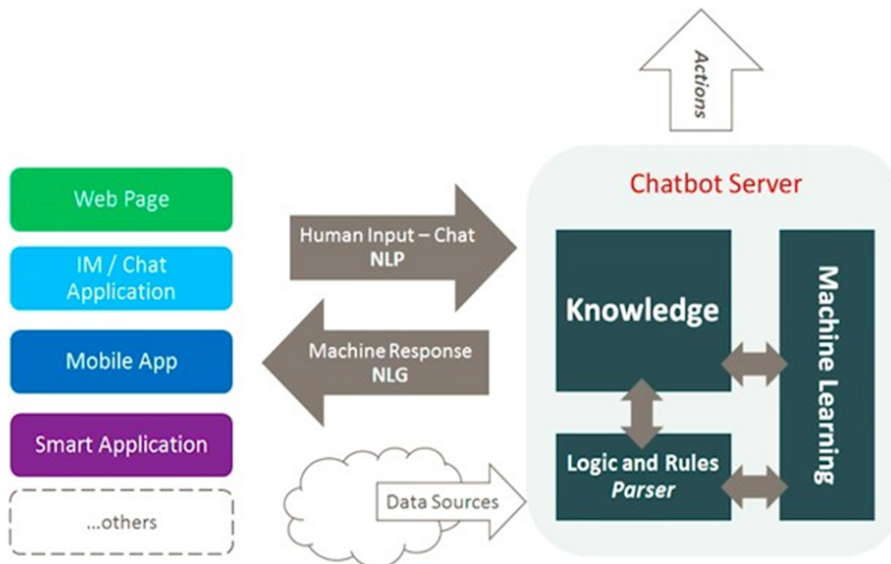
NumPy: NumPy is a library for the Python programming language, adding support for large, multi-dimensional arrays and matrices, along with a large collection of high-level mathematical functions to operate on these arrays.

ChatterBot1.0.5 : ChatterBot is a machine-learning based conversational dialog engine build in Python which makes it possible to generate responses based on collections of known conversations. The language independent design of

ChatterBot allows it to be trained to speak any language.

Flask: Flask is a light weight WSGI web application framework. It is designed to make getting started quick and easy, with the ability to scale up to complex applications. It began as a simple wrapper around Werkzeug and Jinja and has become one of the most popular Python web application frameworks.

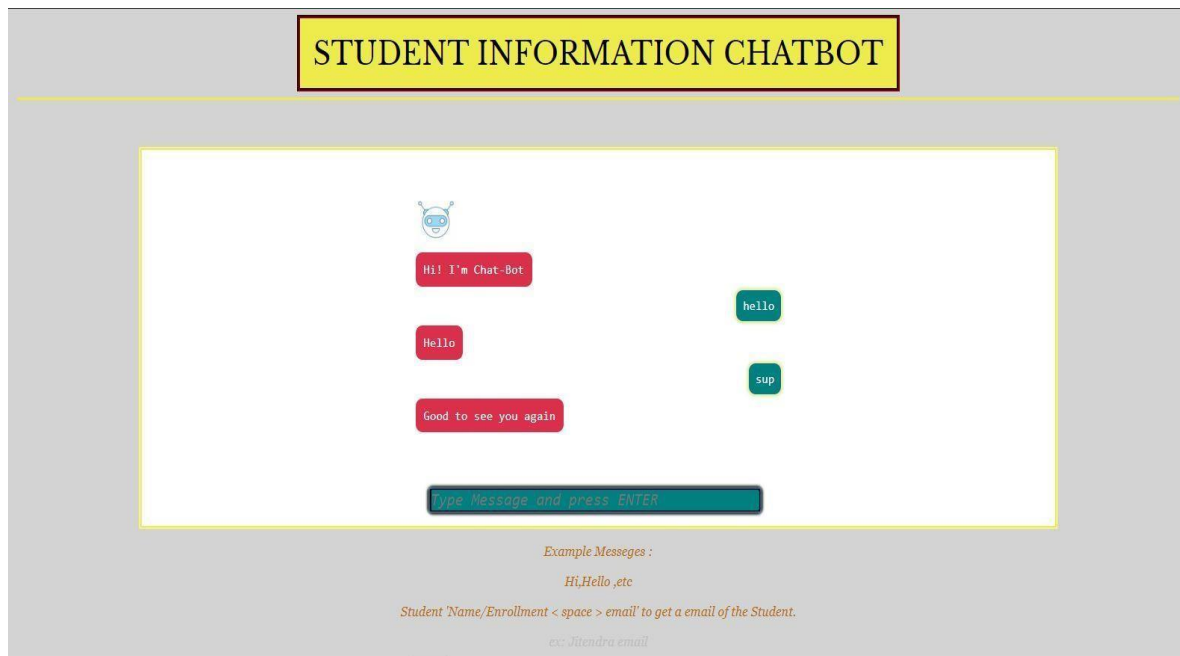
Anatomy of a Chatbot



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CHAPTER 5 DESIGN & INTERFACE

User Interface: The User Interface of the Chat-Bot is designed by using HTML and Cascading Style Sheets, and is capable of running on any window/display size computer or mobile devices. The users can interact with the Chat-Bot by typing their queries in the textbox. And the Chat-Bot will provide a response to the user.



The users can interact with the Chat-Bot by typing their queries in the textbox. And the Chat-Bot will provide a response to the user.



Below the textbox, some hint questions are provided to the user so that the user will have a better understanding about what kind of questions can the Chat-Bot answer.

Example Messegas :

Hi,Hello ,etc

Student 'Name/Enrollment < space > email' to get a email of the Student.

ex: Jitendra email

Student 'Name/Enrollment < space > address' to get the address of the Student.

what is the fees of the college?

'canteen name menu'

ex: nescafe menu

APPLICATIONS:

- Enhance AI Based Chat Bot Information System can be used in colleges and it can be used in various firms to provide ease to users in conducting enquires.
- The chat-bot can be used by fresher students to know more about their college.
- The chat-bot can be used by the students to know about the Exam Time Table, Syllabus etc.
- This application enables the students to be updated with college activities
- The chat-bot can be used by the Faculties to get information about the students.
- Specific queries like the student's email, phone no, address can be asked from the chatbot.

CHAPTER 6

CONCLUSION

Design and development of an AI-based Chatbot for handling placement activities in professional colleges. This agent provides information related to placement activities to students. NLP module of DialogFlow translates students' queries into structured data to understand the institute's service.

The advantages of this Chatbot are listed here:

- This system helps new students to get information related to the institute's placements easily and quickly.
- This Chatbot provides a very rich and wealthy interface to users as they feel chatting with a real person.
- Students needn't physically visit the institute for inquiry as a result of this Chatbot will answer most of their queries.
- Rather than exploitation ancient and recent ways that students/users area unit additional curious to use new technologies like Chatbots and electronic communication apps. Chatbots is newest Technology therefore this can be the proper answer in our case.

CHAPTER 7

IMPLEMENTATION

App.py:

```
from chatbot import chatbot
from flask import Flask, render_template, request, session, logging, url_for, redirect, flash
from flask_recaptcha import ReCaptcha
import mysql.connector
import os

app = Flask(__name__)
recaptcha = ReCaptcha(app=app)
app.secret_key=os.urandom(24)
app.static_folder = 'static'

app.config.update(dict(
    RECAPTCHA_ENABLED = True,
    RECAPTCHA_SITE_KEY = "6LdbAx0aAAAAAANI04WHtDbraFMufACHccHbn09L",
    RECAPTCHA_SECRET_KEY = "6LdbAx0aAAAAAMmkgBKJ2Z9xsQjMD5YutoXC6Wee"
))

recaptcha=ReCaptcha()
recaptcha.init_app(app)

app.config['SECRET_KEY'] = 'cairocoders-ednalan'

#database connectivity
conn=mysql.connector.connect(host='localhost',port='3306',user='root',password='candida1',database='register')
cur=conn.cursor()

# Google recaptcha - site key : 6LdbAx0aAAAAAANI04WHtDbraFMufACHccHbn09L
# Google recaptcha - secret key : 6LdbAx0aAAAAAMmkgBKJ2Z9xsQjMD5YutoXC6Wee

@app.route("/index")
def home():
    if 'id' in session:
        return render_template('index.html')
    else:
        return redirect('/')

@app.route("/")
def login():
    return render_template("login.html")
```

```

@app.route('/register')
def about():
    return render_template('register.html')

@app.route('/forgot')
def forgot():
    return render_template('forgot.html')

@app.route('/login_validation',methods=['POST'])
def login_validation():
    email=request.form.get('email')
    password=request.form.get('password')

    cur.execute("""SELECT * FROM `users` WHERE `email` LIKE '{}' AND `password` LIKE
'{}'""".format(email,password))
    users = cur.fetchall()
    if len(users)>0:
        session['id']=users[0][0]
        flash('You were successfully logged in')
        return redirect('/index')
    else:
        flash('Invalid credentials !!!')
        return redirect('/')
    # return "The Email is {} and the Password is {}".format(email,password)
    # return render_template('register.html')

@app.route('/add_user',methods=['POST'])
def add_user():
    name=request.form.get('name')
    email=request.form.get('uemail')
    password=request.form.get('upassword')

    #cur.execute("UPDATE users SET password='{}'WHERE name = '{}'".format(password, name))
    cur.execute("""INSERT INTO users(name,email,password)
VALUES('{}','{}','{}')""".format(name,email,password))
    conn.commit()
    cur.execute("""SELECT * FROM `users` WHERE `email` LIKE '{}'""".format(email))
    myuser=cur.fetchall()
    flash('You have successfully registered!')
    session['id']=myuser[0][0]
    return redirect('/index')

@app.route('/suggestion',methods=['POST'])
def suggestion():
    email=request.form.get('uemail')
    suggesMess=request.form.get('message')

    cur.execute("""INSERT INTO suggestion(email,message)
VALUES('{}','{}')""".format(email,suggesMess))
    conn.commit()

```

```

    flash('You suggestion is succesfully sent!')
    return redirect('/index')

@app.route('/add_user',methods=['POST'])
def register():
    if recaptcha.verify():
        flash('New User Added Successfully')
        return redirect('/register')
    else:
        flash('Error Recaptcha')
        return redirect('/register')

@app.route('/logout')
def logout():
    session.pop('id')
    return redirect('/')

@app.route("/get")
def get_bot_response():
    userText = request.args.get('msg')
    return str(chatbot.get_response(userText))

if __name__ == "__main__":
    # app.secret_key=""
    app.run()

```

chatbot.py:

```

from chatterbot import ChatBot
from chatterbot.trainers import ListTrainer
import spacy
spacy.load('en_core_web_sm')
# from spacy.lang.en import English
from chatterbot.trainers import ChatterBotCorpusTrainer

# Creating ChatBot Instance
chatbot = ChatBot('<b>GU BOT</b>')

# nlp = spacy.load("en_core_web_sm")

chatbot = ChatBot(
    'ChatBot for College Enquiry',
    storage_adapter='chatterbot.storage.SQLStorageAdapter',
    logic_adapters=[
        {

```

```

        'import_path': 'chatterbot.logic.BestMatch',
        'default_response': "Hi there, Welcome to Fr. GU! 🙌 If you need any assistance, I'm always
here.Go ahead and write the number of any query. 😊🌟<br><br> Which of the following user
groups do you belong to? <br><br>1.&nbsp;Student's Section Enquiry.</br>2.&nbsp;Faculty Section
Enquiry. </br>3.&nbsp;Parent's Section Enquiry.</br>4.&nbsp;Visitor's Section Enquiry.</br><br>",
        'maximum_similarity_threshold': 0.90
    }
],
database_uri='sqlite:///database.sqlite3'
)
trainer = ListTrainer(chatbot)

# python app.py
# Training with Personal Ques & Ans
conversation = [
    "Hi",
    "Hello!",
    "Hey",

    "How are you?",
    "I'm good.<br> <br>Go ahead and write the number of any query. 😊🌟 <br> 1.&nbsp;Student's
Section Enquiry.</br>2.&nbsp;Faculty Section Enquiry. </br>3.&nbsp;Parent's Section
Enquiry.</br>4.&nbsp;Visitor's Section Enquiry.</br>",

    "Great",
    "Go ahead and write the number of any query. 😊🌟 <br> 1.&nbsp;Student's Section
Enquiry.</br>2.&nbsp;Faculty Section Enquiry. </br>3.&nbsp;Parent's Section
Enquiry.</br>4.&nbsp;Visitor's Section Enquiry.</br>",

    "good",
    "Go ahead and write the number of any query. 😊🌟 <br> 2.&nbsp;Faculty Section Enquiry.
</br>3.&nbsp;Parent's Section Enquiry.</br>4.&nbsp;Visitor's Section Enquiry.</br>",

    "fine",
    "Go ahead and write the number of any query. 😊🌟 <br> 2.&nbsp;Faculty Section Enquiry.
</br>3.&nbsp;Parent's Section Enquiry.</br>4.&nbsp;Visitor's Section Enquiry.</br>",

    "Thank You",
    "Your Welcome 😊",

    "Thanks",
    "Your Welcome 😊",

    "Bye",
    "Thank You for visiting!..",

    "What do you do?",
    "I am made to give Information about Fr. GU college.",

    "What else can you do?",

```


"I can help you know more about Fr. GU",

"1",

"STUDENT
The following are frequently searched terms related to student . Please select one from the options below :

 1.1 Curriculars
1.2 Extra-Curriculars
1.3 Administrative
1.4 Examination
1.5 Placements ",

"1.1",

" CURRICULAR
 These are the top results:

 1.1.1 Moodle
 1.1.2 Academic Calendar
 1.1.3 Syllabus ",

"1.1.1",

" 1.1.1 Moodle
The link to Moodle 🖱️ Click Here ",

"1.1.2",

" 1.1.2 Academic Calender
The link to Academic Calender🖱️Click Here ",

"1.1.3",

" 1.1.3 Syllabus
The link to Syllabus 🖱️ Click Here ",

"1.2",

"EXTRA-CURRICULAR
These are the top results:

 1.2.1 Events
 1.2.2 Student Chapters
 1.2.3 Student's Council",

"1.2.1",

" 1.2.1 Events
The link to Events🖱️ Click Here",

"1.2.2",

" 1.2.2 Student Chapters
The link to Student Chapters🖱️Click Here ",

"1.2.3",

" 1.2.3 Student's Council
The link to Student's Council🖱️ Click Here ",

"1.3",

"1.3 ADMINISTRATIVE
These are the top results:

 1.3.1 Students Portal
 1.3.2 Notices ",

"1.3.1",

" 1.3.1 Students Portal
The link to Students Portal🖱️ Click Here ",

"1.3.2",

" 1.3.2 Notices
The link to Notices🖱️ Click Here ",

"1.4",

" EXAMINATION
These are the top results:
 1.4.1 Notices
 1.4.2 Examination Process
 1.4.3 Question Paper Archive ",

"1.4.1",

" 1.4.1 Notices
The link to Notices🖱️ <a href="

'http://www.Galgotiasuniversity.ac.in/index.php/students/GU-notices/110-examsection' ">Click Here ",

"1.4.2",

" 1.4.2 Examination Process
The link to Examination Process👉Click Here ",

"1.4.3",

" 1.4.3 Question Paper Archive
The link to Archives👉 Click Here ",

"1.5",

" PLACEMENTS These are the top results:
 1.5.1 Placements
 1.5.2 Our Recruiters
 1.5.3 Placement Statistics ",

"1.5.1",

" 1.5.1 Placements
The link to Placements👉 Click Here ",

"1.5.2",

" 1.5.2 Our Recruiters
The link to Recruiters👉Click Here ",

"1.5.3",

" 1.5.3 Placement Statistics
The link to Placement Statistics👉 Click Here ",

"2",

"FACULTY
The following are frequently searched terms related to faculty. Please select one from the options below :

2.1 Portals & Administration
2.2 Change Personal Details
2.3 Examination ",

"2.1",

" PORTALS & ADMINISTRATION These are the top results:
 2.1.1 Biometric Attendance System
2.1.2 Moodle ",

"2.1.1",

" 2.1.1 Biometric Attendance
The link to Biometric Attendance👉Click Here ",

"2.1.2",

" 2.1.2 Moodle
The link to Moodle👉Click Here ",

"2.2",

" CHANGE PERSONAL DETAILS These are the top results:

 2.2.1 Site Login
",

"2.2.1",

" 2.2.1 Site Login
The link to Site Login👉Click Here ",

"2.3",

" EXAMINATION
These are the top results:

 2.3.1 Notices
 2.3.2 Question Paper Archive ",

"2.3.1",

" 2.3.1 Notices
The link to Notices 🖱️ Click Here ",

"2.3.2",

" 2.3.2 Question Paper Archive
The link to Archive 🖱️Click Here ",

"3",

" PARENTS
The following are frequently searched terms related to Parents. Please select one from the options below :

 3.1 About Us
3.2 Notices
3.3 Fee Payment
3.4 Placements ",

"3.1",

" ABOUT US
These are the top results:

 3.1.1 About GU
 3.1.2 Director's Address
 3.1.3 Principal's Address ",

"3.1.1",

" 3.1.1 About GU
The link to About GU 🖱️ Click Here ",

"3.1.2",

" 3.1.2 Director's Address
The link to Director's Address 🖱️Click Here ",

"3.1.3",

" 3.1.3 Principal's Address
The link to Principal's Address 🖱️ Click Here ",

"3.2",

" NOTICES
These are the top results:

 3.2.1 All Notices ",

"3.2.1",

" 3.2.1 All Notices
The link to All Notices 🖱️ Click Here ",

"3.3",

" ABOUT US
These are the top results:

3.3.1 Payment Details
 3.3.2 Online Payment Portal ",

"3.3.1",

" 3.3.1 Payment Details
The link to Payment Details 🖱️ Click Here ",

"3.3.2",

" 3.3.2 Payment Portal
The link to Payment Portal 🖱️Click Here ",

"3.4",

" PLACEMENTS These are the top results:

3.4.1 Placements
 3.4.2 Our Recruiters
 3.4.3 Placement Statistics ",

"3.4.1",

" 3.4.1 Placements
The link to Placements 🖱️ <a href='\"

'<http://www.Galgotiasuniversity.ac.in/index.php/students/placements/campus-placement-overview>'

">Click Here ",

"3.4.2",

" 3.4.2 Our Recruiters
The link to Recruiters👉<a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/students/placements/our-recruiters' ">Click Here
",

"3.4.3",

" > 3.4.3 Placement Statistics
The link to Placement Statistics👉 <a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/students/placements/placement-statistics' ">Click
Here ",

"4",

" VISITORS
The following are frequently searched terms related to visitors. Please select one
from the options below :

 4.1 About Us
4.2 Programs We Offer
4.3 Student Bodies

4.4 Extra-Curricular ",

"4.1",

" > ABOUT US
These are the top results:

4.1.1 About GU
 4.1.2 Director's
Address
 4.1.3 Principal's Address ",

"4.1.1",

" > 4.1.1 About GU
The link to About GU👉 <a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/about-us/about-GU' ">Click Here ",

"4.1.2",

" > 4.1.2 Director's Address
The link to Director's Address👉<a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/about-us/director' ">Click Here ",

"4.1.3",

" > 4.1.3 Principal's Address
The link to Principal's Address👉 <a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/about-us/principal-Galgotiasuniversity'
' ">Click
Here ",

"4.2",

" > PROGRAMS WE OFFER
These are the top results:

4.2.1 Under-Graduate

4.2.2 Post-Graduate
 4.2.3 Ph.D ",

"4.2.1",

" > 4.2.1 Under-Graduate
The link to Under-Graduate👉 <a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/admission/under-graduate' ">Click Here ",

"4.2.2",

" > 4.2.2 Post-Graduate
The link to Post-Graduate👉<a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/admission/post-graduate' ">Click Here ",

"4.2.3",

" > 4.2.3 Ph.D
The link to Ph.D👉 <a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/admission/phd' ">Click Here ",

"4.3",

" > STUDENT BODIES
These are the top results:

4.3.1 Students Council

4.3.2 Students Chapter
 4.3.3 Students Project Groups ",

"4.3.1",

" > 4.3.1 Students Council
The link to Students Council 👉 <a href='\"
'http://www.Galgotiasuniversity.ac.in/index.php/students/students-council' ">Click Here ",

"4.3.2",

```

    "<b > 4.3.2 Students Chapter <br>The link to Students Chapter 🖱️<a href="
'http://www.Galgotiasuniversity.ac.in/index.php/students/forums' ">Click Here</a> </b>",
    "4.3.3",
    "<b > 4.3.3 Students Project Groups <br>The link to Students Project Groups 🖱️ <a href="
'http://www.Galgotiasuniversity.ac.in/' ">Click Here</a> </b>",

    "4.4",
    "<b > EXTRA-CURRICULAR <br>These are the top results:<br> <br>4.4.1 Events <br> 4.4.2
Institute Innovation Cell </b>",
    "4.4.1",
    "<b > 4.4.1 Events <br>The link to Events 🖱️ <a href="
'http://www.Galgotiasuniversity.ac.in/index.php/students/events-new' ">Click Here</a> </b>",
    "4.4.2",
    "<b > 4.4.2 Institute Innovation Cell <br>The link to Institute Innovation Cell 🖱️<a href="
'https://GUiiic.github.io/' ">Click Here</a> </b>",

]

```

```
trainer.train(conversation)
```

forgot.html

```

<!DOCTYPE html>
<html>

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no">
  <title>Login</title>
  <link rel="icon" href="{{ url_for('static', filename='images/icon.png') }}" type="image"
sizes="16x16">
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/bootstrap/css/bootstrap.min.css')
}}">
  <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Catamaran:100,200,300,400,500,600,700,800,900">
  <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Lato:100,100i,300,300i,400,400i,700,700i,900,900i">
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/fonts/ionicons.min.css') }}">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/animate.css/3.5.2/animate.min.css">
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/css/Login-Form-Dark.css') }}">
</head>
<body>
  <nav class="navbar navbar-dark navbar-expand-lg fixed-top bg-dark navbar-custom">
    <div class="container">
      <a class="navbar-brand" href="#" style="font-size: large;">GU Bot</a><button

```

```

data-toggle="collapse"      class="navbar-toggler"      data-target="#navbarResponsive"><span
class="navbar-toggler-icon"></span></button>
  <div class="collapse navbar-collapse" id="navbarResponsive">
    <ul class="navbar-nav ml-auto">
      <li class="nav-item"><a class="nav-link" href="/">Log In</a></li>
      <li class="nav-item"><a class="nav-link" href="/register">Register</a></li>
    </ul>
  </div>
</div>
</nav>
<section class="login-dark">

  <form action="/add_user" method="POST">

    <centre>
      <h4 style="text-align: center;">FORGOT PASSWORD</h4>
    </centre>
    <br>
    <div class="form-signup">

      <div class="form-group">
        <input class="form-control" type="text" name="name" placeholder="Name" required>
      </div>

      <div class="form-group">
        <input class="form-control" type="email" name="uemail" placeholder="Email" required>
      </div>

      <div class="form-group">
        <input class="form-control" type="password" name="upassword" placeholder="Password"
pattern=".{8,}" required title="8 characters minimum">
      </div>

      <br>
      {{recaptcha}}
      <br>
      <div class="form-group">
        <button class="btn btn-block" data-bss-hover-animate="pulse" type="submit"
style="background-color: #2980ef; color: white">Submit</button>
      </div>
    </div>
  </form>
</section>
  <script src="{{ url_for('static', filename='assets/js/jquery.min.js') }}"></script>
  <script src="{{ url_for('static', filename='assets/bootstrap/js/bootstrap.min.js') }}"></script>
  <script src="{{ url_for('static', filename='assets/js/bs-init.js') }}"></script>
</body>
</html>

```



```

    <li class="nav-item">
      <a class="nav-link" data-toggle="modal" data-target="#exampleModalScrollable" href="#"> About
    Us </a>
    </li>

```

```

    <li class="nav-item">
      <a class="nav-link" data-toggle="modal" data-target="#exampleModal" href="#">Suggestion
    box</a>
    </li>

```

```

    <div class="modal fade" id="exampleModal" tabindex="-1" role="dialog"
    aria-labelledby="exampleModalLabel" aria-hidden="true">
      <div class="modal-dialog" role="document">
        <div class="modal-content">
          <div class="modal-header">
            <h5 class="modal-title" id="exampleModalLabel">Suggestion box</h5>
            <button type="button" class="close" data-dismiss="modal" aria-label="Close">
              <span aria-hidden="true">&times;</span>
            </button>
          </div>
          <div class="modal-body">
            <form action="/suggestion" method="POST">
              <div class="form-group">
                <input type="email" name="uemail" class="form-control" placeholder="Email" required>
                <br>
                <textarea class="form-control" id="message-text" placeholder="Enter your suggestion..."
                name="message" required></textarea>
              </div>
              <div class="modal-footer">
                <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
                <button type="Submit" class="btn btn-primary" data-target="#alert">Submit</button>
              </div>
            </form>
          </div>
        </div>
      </div>
    </div>

```

```

    <div class="modal fade" id="exampleModalScrollable" tabindex="-1" role="dialog"
    aria-labelledby="exampleModalScrollableTitle" aria-hidden="true">
      <div class="modal-dialog modal-dialog-scrollable" role="document">
        <div class="modal-content">
          <div class="modal-header">
            <h5 class="modal-title" id="exampleModalScrollableTitle">Fr GU BOT </h5>
            <button type="button" class="close" data-dismiss="modal" aria-label="Close">
              <span aria-hidden="true">&times;</span>
            </button>
          </div>
          <div class="modal-body">
            <h3>About Us</h3>
            <div></div>
            <br> <br>
          </div>
        </div>
      </div>
    </div>

```



```

    <h3>Contact Us</h3>

    <ul>

        <li style = "margin-left: 15px">Email: group3cgl@gmail.com</li>
        <li style = "margin-left: 15px">By Candida, Gini & Lizel 😊 </li>
    </ul>
</div>
<div class="modal-footer">
    <button type="button" class="btn btn-secondary" data-dismiss="modal">Close</button>
</div>
</div>
</div>
<div>
<li class="nav-item"><a class="nav-link" href="/logout">Log Out</a></li>

</ul>
</div>

</nav>
<!--header class="msgger-header">
    <div class="msgger-header-title">
        <h5><i class="fas fa-graduation-cap"></i> <b> &nbsp; GU BOT &nbsp; </b><i class="fas
fa-graduation-cap"></i></h5>
    </div>
</header-->
{% with messages = get_flashed_messages() %}
{% if messages %}
{% for message in messages %}
<div class="alert alert-success alert-dismissible" id="alert" role="alert">
    <button type="button" class="close" data-dismiss="alert" aria-label="Close">
        <span aria-hidden="true">&times;</span>
    </button>
    <strong>{{ message }}</strong>
</div>
{% endfor %}
{% endif %}
{% endwith %}

<main class="msgger-chat" style="color: white;">
<br>
    <div class="msg left-msg">
        <div class="msg-img" style = "background-image:
url(https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSByXho41yToOFz5UcHHwct3X-OWwkft_a
kfA&usqp=CAU)">
    </div>
    <div class="msg-bubble">
        <div class="msg-info">
            <div class="msg-info-name"><b>GU BOT</b> </div>
        </div>

```

```

    <div class="msg-text" style="color: white;">
      <b >Hi there, Welcome to Fr. GU! 🙌 If you need any assistance, I'm always here.
    </div>
  </div>
</div>
<div class="msg left-msg">
  <div class="msg-img" style = "background-image:
url(https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSByXho41yToOFz5UcHHwct3X-OWwkft_a
kfA&usqp=CAU)">
  </div>
  <div class="msg-bubble">
    <div class="msg-info">
      <div class="msg-info-name"> <b>GU BOT</b></div>
    </div>

    <div class="msg-text" style="color: white;">
      Which of the following user groups do you belong to?

      <br><br>1.&nbsp;Student's Section Enquiry.</br>2.&nbsp;Faculty Section Enquiry.
</br>3.&nbsp;Parent's Section Enquiry.</br>4.&nbsp;Visitor's Section Enquiry.</br>

  </div>

  </div>
</div>
</main>

<form class="msger-inputarea">
  <input type="text" class="msger-input" id="textInput" placeholder="Enter your enquiry number...">
  <button type="submit" class="msger-send-btn">Send</button>
</form>
</section>
<!-- partial -->
<script src="https://use.fontawesome.com/releases/v5.0.13/js/all.js"></script>
<script>

$("#alert").delay(3000).slideUp(200, function() {
$(this).alert('close');
});

$('#myModal').on('shown.bs.modal', function () {
$('#myInput').trigger('focus')
})

const msgerForm = $(".msger-inputarea");
const msgerInput = $(".msger-input");
const msgerChat = $(".msger-chat");

// Icons made by Freepik from www.flaticon.com
const BOT_IMG =

```

```

"https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSByXho41yToOFz5UcHHwct3X-OWwkft_akf
A&usqp=CAU";
const PERSON_IMG = "https://image.flaticon.com/icons/svg/145/145867.svg";
const BOT_NAME = "GU Bot";
const PERSON_NAME = "You";

msgerForm.addEventListener("submit", event => {
  event.preventDefault();

  const msgText = msgerInput.value;
  if (!msgText) return;

  appendMessage(PERSON_NAME, PERSON_IMG, "right", msgText);
  msgerInput.value = "";
  botResponse(msgText);
});

function appendMessage(name, img, side, text) {
  // Simple solution for small apps
  const msgHTML = `
<div class="msg ${side}-msg">
  <div class="msg-img" style="background-image: url(${img})"></div>

  <div class="msg-bubble">
    <div class="msg-info">
      <div class="msg-info-name">${name}</div>
      <div class="msg-info-time">${formatDate(new Date())}</div>
    </div>

    <div class="msg-text">${text}</div>
  </div>
</div>
`;

  msgerChat.insertAdjacentHTML("beforeend", msgHTML);
  msgerChat.scrollTop += 500;
}

function botResponse(rawText) {

  // Bot Response
  $.get("/get", { msg: rawText }).done(function (data) {
    console.log(rawText);
    console.log(data);
    const msgText = data;
    appendMessage(BOT_NAME, BOT_IMG, "left", msgText);

  });
}

// Utils

```

```

function get(selector, root = document) {
  return root.querySelector(selector);
}

function formatDate(date) {
  const h = "0" + date.getHours();
  const m = "0" + date.getMinutes();

  return `${h.slice(-2)}:${m.slice(-2)}`;
}

</script>
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-b5kHyXgcpbZJO/tY9U17kGkf1S0CWuKcCD3818YkeH8z8QjE0GmW1gYU5S9FOhJ0"
crossorigin="anonymous"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
integrity="sha384-ApNbg9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"
integrity="sha384-JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAjyUar5+76PVCmYI"
crossorigin="anonymous"></script>
</body>

</html>

```

Login.html

```

<!DOCTYPE html>
<html>

<head>
  <meta charset="utf-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no">
  <title>Login</title>
  <link rel="icon" href="{{ url_for('static', filename='images/icon.png') }}" type="image" sizes="16x16">
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/bootstrap/css/bootstrap.min.css') }}">
  <link rel="stylesheet"
href="https://fonts.googleapis.com/css?family=Catamaran:100,200,300,400,500,600,700,800,900">
  <link rel="stylesheet"
href="https://fonts.googleapis.com/css?family=Lato:100,100i,300,300i,400,400i,700,700i,900,900i">
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/fonts/ionicons.min.css') }}">
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/animate.css/3.5.2/animate.min.css">
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/css/Login-Form-Dark.css') }}">

</head>

<body>
  <nav class="navbar navbar-dark navbar-expand-lg fixed-top bg-dark navbar-custom">

```

```

<div class="container">
  <a class="navbar-brand" href="#" style="font-size: large;">GU Bot</a><button
data-toggle="collapse" class="navbar-toggler" data-target="#navbarResponsive"><span
class="navbar-toggler-icon"></span></button>
  <div class="collapse navbar-collapse" id="navbarResponsive">
    <ul class="navbar-nav ml-auto">
      <li class="nav-item"><a class="nav-link" href="/">Log In</a></li>
      <li class="nav-item"><a class="nav-link" href="/register">Register</a></li>
    </ul>
  </div>
</div>
</nav>

<section class="login-dark">
  <form action="/login_validation" method="POST">
    <div>
      {% with messages = get_flashed_messages() %}
      {% if messages %}
      {% for message in messages %}
      <div class="alert alert-danger alert-dismissible fade show" role="alert">
        <button type="button" class="close" data-dismiss="alert" aria-label="Close">
          <span aria-hidden="true">&times;</span>
        </button>
        <strong>{{ message }}</strong> <br><small> Try again or forgot the password!</small>
      </div>
      {% endfor %}
      {% endif %}
      {% endwith %}
    </div>
    <div class="illustration"><i class="icon ion-ios-locked-outline"></i></div>
    <div class="form-group">
      <input class="form-control" type="email" name="email" placeholder="Email" required/>
    </div>
    <div class="form-group">
      <input class="form-control" type="password" name="password" placeholder="Password"
pattern=".{8,}" required title="8 characters minimum">
    </div>
    <br>
    <div class="form-group">
      <button class="btn btn-block" data-bss-hover-animate="pulse" type="submit"
style="background-color: #2980ef; color:white;">
        Log In
      </button>
    </div>

    <a class="forgot" href="/register"> Create an Account </a>
    <a class="forgot" href="/forgot">Forgot your email or password?</a>
  </form>
</section>
<script src="{{ url_for('static', filename='assets/js/jquery.min.js') }}"></script>
<script src="{{ url_for('static', filename='assets/bootstrap/js/bootstrap.min.js') }}"></script>
<script src="{{ url_for('static', filename='assets/js/bs-init.js') }}"></script>

```

```
</body>
```

```
</html>
```

Register.html:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <meta charset="utf-8">
```

```
  <meta name="viewport" content="width=device-width, initial-scale=1.0, shrink-to-fit=no">
```

```
  <title>Register</title>
```

```
  <link rel="icon" href="{{ url_for('static', filename='images/icon.png') }}" type="image" sizes="16x16">
```

```
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/bootstrap/css/bootstrap.min.css') }}">
```

```
  <link rel="stylesheet"
```

```
href="https://fonts.googleapis.com/css?family=Catamaran:100,200,300,400,500,600,700,800,900">
```

```
  <link rel="stylesheet"
```

```
href="https://fonts.googleapis.com/css?family=Lato:100,100i,300,300i,400,400i,700,700i,900,900i">
```

```
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/fonts/ionicons.min.css') }}">
```

```
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/animate.css/3.5.2/animate.min.css">
```

```
  <link rel="stylesheet" href="{{ url_for('static', filename='assets/css/Login-Form-Dark.css') }}">
```

```
</head>
```

```
<body>
```

```
  <nav class="navbar navbar-dark navbar-expand-lg fixed-top bg-dark navbar-custom">
```

```
    <div class="container">
```

```
      <a class="navbar-brand" href="#" style="font-size: large;">GU Bot</a><button  
data-toggle="collapse" class="navbar-toggler" data-target="#navbarResponsive"><span  
class="navbar-toggler-icon"></span></button>
```

```
    <div class="collapse navbar-collapse" id="navbarResponsive">
```

```
      <ul class="navbar-nav ml-auto">
```

```
        <li class="nav-item"><a class="nav-link" href="/">Log In</a></li>
```

```
        <li class="nav-item"><a class="nav-link" href="/register">Register</a></li>
```

```
      </ul>
```

```
    </div>
```

```
  </div>
```

```
</nav>
```

```
<section class="login-dark">
```

```
<form action="/add_user" method="POST">
```

```
  <div class="form-signup">
```

```
    <centre>
```

```
      <h4 style="text-align: center;">REGISTER</h4>
```

```
    </centre>
```

```
    <br>
```

```
  <div class="form-group">
```

```
    <input class="form-control" type="text" name="name" placeholder="Name" required>
```

```
  </div>
```

```

<div class="form-group">
  <input class="form-control" type="email" name="uemail" placeholder="Email" required>
</div>

<div class="form-group">
  <input class="form-control" type="password" name="upassword" placeholder="Password"
pattern=".{8,}" required title="8 characters minimum">
</div>

<br>
{{recaptcha}}
</br>
<div class="form-group">
  <button class="btn btn-block" data-bss-hover-animate="pulse" type="submit"
style="background-color: #2980ef; color: white">Register</button>
</div>
<br>

<p class="forgot" >Already a member ? <a href="/>Login</a></p>
</div>
</form>

<!-- Optional JavaScript -->
<!-- jQuery first, then Popper.js, then Bootstrap JS -->
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.0.0-beta2/dist/js/bootstrap.bundle.min.js"
integrity="sha384-b5kHyXgcpbZJO/tY9U17kGkf1S0CWuKcCD3818YkeH8z8QjE0GmW1gYU5S9FOhJ0"
crossorigin="anonymous"></script>
<script src="https://code.jquery.com/jquery-3.2.1.slim.min.js"
integrity="sha384-KJ3o2DKtlkvYIK3UENzmM7KcRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5K
kN" crossorigin="anonymous"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
integrity="sha384-ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakfPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"
integrity="sha384-JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYI"
crossorigin="anonymous"></script>

</body>
</html>

```

1. Register Page :

Register

127.0.0.1:5000/register

CRCE BOT

LOG IN REGISTER

REGISTER

Name

Email

Password

I'm not a robot

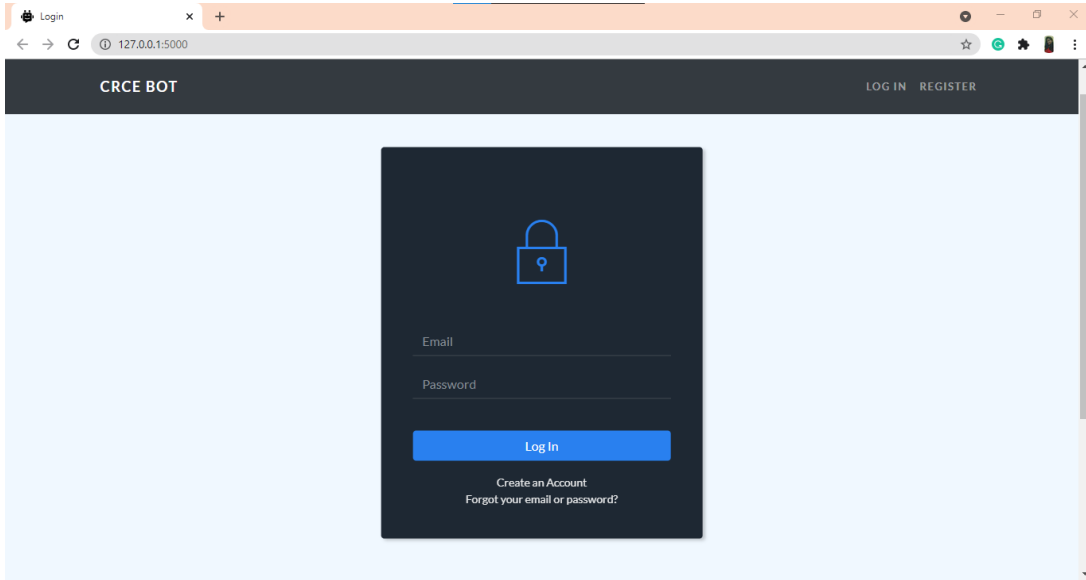
reCAPTCHA

Privacy - Terms

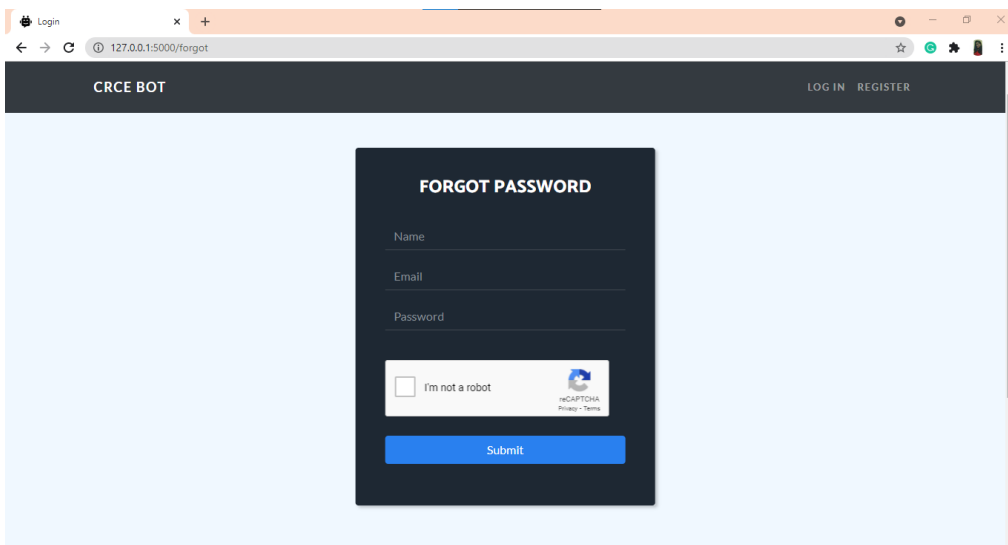
Register

Already a member? Login

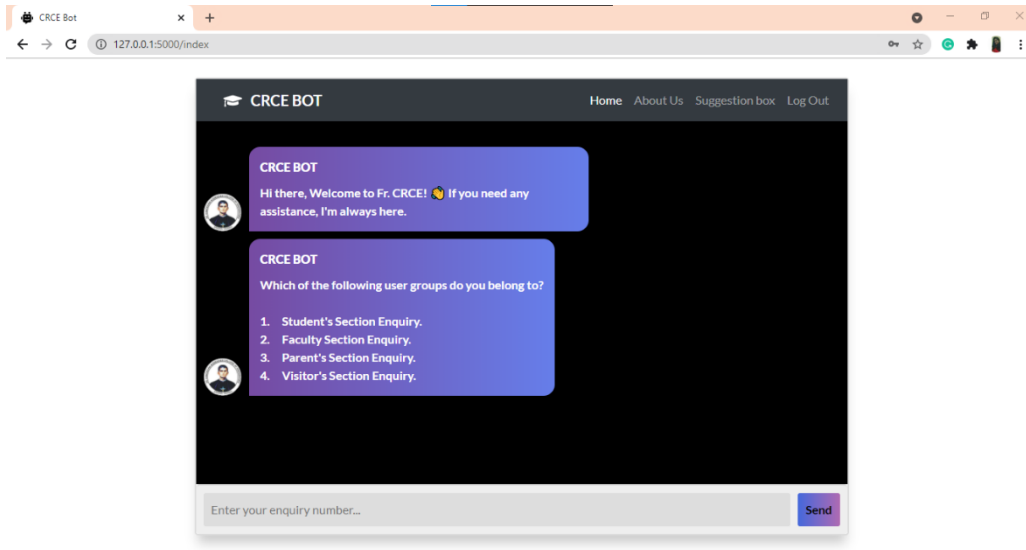
2. Login Page :



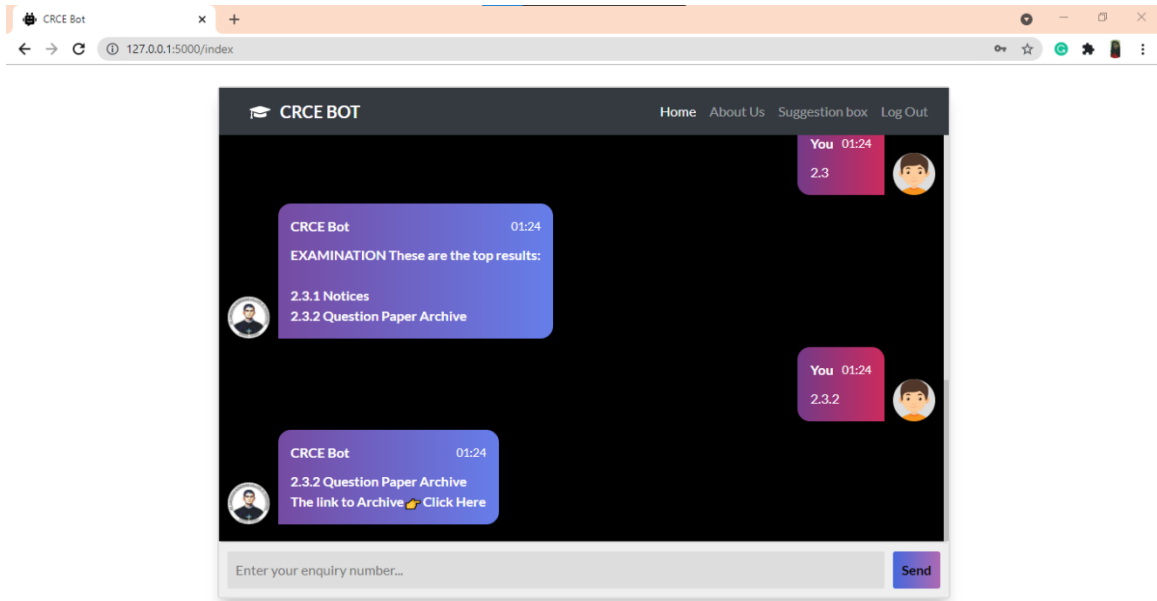
3. Forgot Password Page :



4. Chatbot - Default Screen :



5. Chatbot - Query :



6. Chatbot - Suggestion Box :

