COLLEGE BOT

A PROJECT REPORT

Submitted by

ANAND.S [711714104005]

ARUL KUMAR.T [711714104011]

DIVYA.U [711714104018]

MOHAMED SHARUK.CM [711714104033]

in partial fulfillment for the award of the degree

of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

KGiSL INSTITUTE OF TECHNOLOGY

ANNA UNIVERSITY :: CHENNAI 600 025

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BONAFIDE CERTIFICATE

Certified that this project report "**COLLEGE BOT**" is the bonafide work of "**ANAND.S, ARUL KUMAR.T, DIVYA.U, MOHAMED SHARUK.CM**" who carried out the project work under my supervision.

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Internal Examiner **External Examiner**

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ABSTRACT

A bot is more than a computer program that automates certain tasks, typically by chatting with a user through a conversational interface. The most advanced bots are powered by artificial intelligence, helping it to understand complex requests, personalize responses, and improve interactions over time. This technology is still in its infancy, so most bots follow a set of rules programmed by a human via a bot building platform. College bot is a Web based solution. This college bot can be used to get various information regarding that particular educational institution. This project is done using artificial intelligence. Artificial Intelligence is a way of making a computer, a computer-controlled robot, or a software think intelligently, in the similar manner the intelligent humans think. Every educational institution will have at least a person to attend the visitors and the phone calls regarding certain queries about the educational institution. In-spite of having a separate person for this operation who cannot work 24*7, a college bot is developed which will provide the user to acquire information about admission at any time. Therefore, in order to reduce the manpower and in order to increase the working hours, we are introducing the college bot which can work 24*7.

LIST OF FIGURES

LIST OF ABBREVIATIONS

AI	**-**	**Artificial Intelligence**
ML	**-**	**Machine Learning**
DL	**-**	**Deep Learning**
NLP	**-**	**Natural Language Processing**
API	**-**	**Application Program Interface**
UI	**-**	**User Interface**
JSON	**-**	**JavaScript Object Notation**
SQL	**-**	**Structured Query Language**
HCI	**-**	**Human Computer Interaction**
CPU	**-**	**Central Processing Unit**
TF	**-**	**Tensorflow**

INTRODUCTION

CHAPTER 1

INTRODUCTION

This chapter covers an introduction to the project including what is artificial intelligence, the problem description, a description of aims and objectives, a description of what has been achieved, contributions and the structure of the report.

Artificial intelligence (AI) is an area of computer science that emphasizes the creation of intelligent machines that work and react like humans. Some of the activities computers with artificial intelligence are designed for speech recognition, learning, planning, problem solving. Artificial intelligence is a branch of computer science that aims to create intelligent machines. It has become an essential part of the technology industry.

Research associated with artificial intelligence is highly technical and specialized. The core problems of artificial intelligence include programming computers for certain traits such as knowledge, reasoning, problem solving, perception, learning, planning, ability to manipulate and move objects.

Tensorflow is a research framework which is used for image recognition and machine learning. It was developed by google's brain team. The first version was introduced in NOV 19 2015 and the second version was introduced in FEB 9 2017.In google it is used for research and production. The stable version (1.6.0) of tensorflow was introduced in FEB 28 2018. Tensorflow is googles brain second generation system. Tensorflow can run in multiple CPUs and GPUs which supports various platforms such as Android, Linux, Mac, Windows. There are less TF chatbots till now since the training session takes more time. Similarly the UI development takes more time.

Dialogflow in other words formally known as api.ai and speaktoit is google's framework where Human Computer Interaction(HCI) technology is

used. It was introduced in the year 2010 and is used to create virtual assistant in android and windows, but they had several bugs in it. Initially dialogflow was not owned by google, later in 2016 it was bought by google. On OCT 10 2017 google introduced the Dialogflow as a new framework which supported 17and more languages and several integrations such as facebook, slack, skype, telegram, line, etc,.

1.1 PROBLEM DESCRIPTION

Although the admissions process works properly as it is, it is very difficult and time consuming to contact a member of staff of the university. However, the problem would be partially solved if the applicant could talk to a convincing chatbot, able to respond to their concerns with information about admissions, accommodation, fees structure, pre-sessional courses, etc.

The chatbot should be able to communicate with a user in a way similar to the following:

Chat Bot: Hello how can I help you?

User: Courses that are available in your college

Chat Bot: Computer Science and Engineering

Information Technology

Electronics and Communication Engineering

Mechanical Engineering

Civil Engineering

1.2 OBJECTIVE OF THE PROJECT

The objective of this project is to contribute to the solution of the problem of direct communication between applicants and the university. The main objectives of the project are as follows:

- **Database:** To develop a database were all the relevant information about questions, answers, keywords, logs and feedback will be stored.
- **Algorithm:** To develop a keyword matching algorithm and a string distance comparison algorithm and combine them in order to retrieve the best possible answer.
- **Interface:** To develop a web interface which aims to give the ability to potential students and their families to submit questions in a chatbot and get convincing replies.

1.3 SIGNIFICANCE OF THE PROJECT

- ❖ The College Bot helps the user to know information about an institution at any time anywhere
- ❖ It helps to gain information quickly.
- ❖ It allows easy retrieval of information.
- ❖ It saves time.

1.4 OUTLINE OF THE PROJECT

The outline of the project is to provide information about the college like admission details, transportation, accommodation, etc., are obtained by using the college bot (chatbot) via chat

SYSTEM ANALYSIS

CHAPTER 2

SYSTEM ANALYSIS

A chatbot is a program that is used to participate in conversations with humans. It uses an appropriate interface for input and output and with the use of AI techniques it can provide realistic answers so the user will think that the communication taking place is with another human. The implementation of such systems varies from using keyword matching, string similarity or complex natural language processing techniques. More sophisticated chatbots could learn from the user input. Nowadays chat bots are used widely in web applications in order to provide help or information when it is asked by the users.

"*Chatbots are computer programs that interact with users using natural languages*"

2.1 EXISTING SYSTEM

Chatbot is a computer program designed to simulate conversations with human users, especially over the Internet. The first chatbot, Eliza, was built in 1966 at the MIT Artificial Intelligence Laboratory by Joseph Weizenbaum to mimic human conversations. There are various chatbots already available such as Poncho (Messenger bot), Insomno bot (Chatting), Melody and Dr.AI. (Healthcare), Natasha (Messenger and chatting).

ELIZA:

The first chatbot developed was ELIZA. It was developed by Joseph Weizenbaum using a keyword matching technique. The idea was to read the user input and search for certain keywords, if a keyword was found then the answer was retrieved. If a keyword was not present then ELIZA would try, according to specified rules, to get more information from the user to keep the conversation going. Consider the following example to understand how this would work.

Fig: 2.1 A sample conversation with ELIZA

2.1.1 Drawbacks of existing methods:

- Lack of detailed information
- Lack of the unavailability of NLP (Natural Language Processing)

2.2 PROPOSED SYSTEM

College Bot using AI and machine learning which provides information about the college to the users.

2.2.1 Advantages over existing methods:

The College Bot gives detailed and specific information about the college. It helps the user to access information from anywhere and at anytime.

2.2.2 Future enhancement:

The College bot can be enhanced by developing it as an open domain which can be used by all the colleges in the city. It will help the user to know information about every college.

2.3 FEASIBILITY STUDY

Feasibility study is a high-level capsule version of the entire process intended to answer a number of questions like: What is the problem. Is there any feasible solution to the given problem? Is the problem even worth solving? Feasibility study is conducted once the problem clearly understood. Feasibility study is necessary to determine operational, and economical factors. By having a detailed feasibility study the management will have a clear-cut view of the proposed system. A feasibility study is used to determine the viability of an idea. The objective of such a study is to ensure a project is legally and technically feasible and economically justifiable. It tells us whether a project is worth the investment. The two criteria to judge feasibility are cost required and value to be delivered. A well-designed study should offer a historical background of the business or project, a description of the product or service, accounting statements, details of operations and management, marketing research and policies, financial data, legal requirements and tax obligations. Generally, such studies precede technical development.

The following feasibilities are considered for the project in order to ensure that the project is variable and it does not have any major obstructions. Feasibility study encompasses the following things

- Economical Feasibility
- Operational Feasibility
- Technical Feasibility

In this chapter, we study the feasibility of all proposed systems, and pick the best feasible solution for the problem. The feasibility is studied based on three main factors as follows.

2.3.1 ECONOMICAL FEASIBILITY

In this step, we verify which proposal is more economical. We compare the financial benefits of the new system with the investment. The new system is economically feasible only when the financial benefits are more than the investments an expenditure. Economical feasibility determines whether the project goal can be within the resource limits allocated to it or not. It must determine whether it is worthwhile to new system are not worth the costs. Financial benefits must be equal or exceed the costs. It helps organizations assess the viability, cost and benefits associated with projects before financial resources are allocated. It also serves as an independent project assessment, and enhances project credibility, as a result. It helps decision-makers determine the positive economic benefits to the organization that the proposed system will provide and helps quantify them. This assessment typically involves a cost/benefits analysis of the project. In this issue, we should consider,

- The cost to conduct a full system investigation.
- The cost of hardware and software for the class of application being considered.
- The development tool.
- The cost of maintenance etc.,

Our project is economically feasible because the cost of development is very minimal when compared to financial benefits of the application.

2.3.2 OPERATIONAL FEASIBILITY

In this step, we verify different operational factors of the proposed systems like man-power, time, etc., whichever solution uses less operational resources, is the best operationally feasible solution. This involves undertaking a study to analyse and determine whether your business needs can be fulfilled by using the

proposed solution. It also measures how well the proposed system solves problems and takes advantage of the opportunities identified during scope definition. Operational feasibility studies also analyse how the project plan satisfies the requirements identified in the requirements analysis phase of system development. To ensure success, desired operational outcomes must inform and guide design and development. These include such design-dependent parameters such as reliability, maintainability, supportability, usability. Disposability, sustainability, affordability, and others. The solution should also operationally satisfied user objectives could be fitted into the current system operation.

- The methods of processing and presentation are completely accepted but the clients since they can meet all user requirements.
- The clients have been involved in the planning and development of the system.
- The proposed system will not cause any problem under any circumstances.

Our project is operationally feasible because the requirements and personnel requirements are satisfied. We are a team of 4 members and we worked on this project for three working months.

2.3.3 TECHNICAL FEASIBILITY

In this step, we verify whether the proposed systems are technically feasible or not, i.e., all the technologies required to develop the system are available readily or not. This assessment is centred on the technical resources available to the organization. It helps organizations assess if the technical resources meet capacity and whether the technical team is capable of converting the ideas into working systems. Technical feasibility also involves evaluation of the hardware and the software requirements of the proposed system.

Technical Feasibility determines whether the organization has the technology and skills necessary to carry out the project and how this should be obtained. The system can be feasible because of the following grounds.

- All necessary technology exists to develop the system.
- This system is too flexible and it can be expanded further.
- This system can give guarantees of accuracy, ease of use, reliability and the data security.
- This system can give instant response to inquire.

Our project is technically feasible because, all the technology needed for our project is readily available.

2.2.4 BENEFITS OF CONDUCTING A FEASIBILITY STUDY

Conducting a feasibility study is always beneficial to the project as it gives you and other stakeholders a clear picture of your idea. Below are the key benefits of conducting a feasibility study.

- Gives project teams more focus and provides an alternative outline.
- Narrows the business alternatives.
- Identifies a valid reason to undertake the project.
- Enhances the success rate by evaluating multiple parameters.
- Aids decision-making on the project.

Apart from the approaches to feasibility study listed above, some projects also require for other constraints to be analyzed.

- Internal Project Constraints: Technical, Technology, Budget, Resource, etc.
- Internal Corporate Constraints: Financial, Marketing, Export, etc.
- External Constraints: Logistics, Environment, Laws and Regulations, etc.

SYSTEM SPECIFICATION

CHAPTER 3

SYSTEM SPECIFICATION

3.1 FUNCTIONAL REQUIREMENTS:

1. Chatting:

a. The system should allow users to chat.

b. The system shall inform the user if an answer is not available.

c. The system shall inform the user about spelling mistakes.

d. The system shall inform the user about the validity of the sentence.

2. Searching:

a. The system should allow users to search for information about admissions.

b. The system should allow users to search for information about tuition fees.

c. The system should allow users to search for information about accommodation.

3. Logs:

a. The system should maintain a log of the current question and answer if the user is not satisfied.

4. Feedback:

a. The user should be able to leave feedback, which is comprised of a text message and a rating.

5. Administrative system

a. Information management: The administrator should be able to to add, update and delete questions, answers and keywords. Log management: The administrator should be able to view and delete logs.

c. Feedback management: The administrator should be able to view and delete feedbacks.

3.2 NON-FUNCTIONAL REQUIREMENTS

1. User Interface:

a. The system shall maintain an easy to use interface across all functionality and for all users

b. The clients' user interface should be compatible with all commonly used browsers, such as Internet explorer, Firefox, Google chrome and Safari.

2. Scalability:

a. The system shall be able to scale based on the number of users using the system.

3. Security:

a. The administrative system should be protected from unauthorized access.

b. The database should protected from attacks and unauthorized access.

c. The interface should be protected from attacks.

d. All passwords should be stored as a secure hash of the administrator password.

4. Third party interactions:

a. The system should be able to interact with the Google spelling server, which handles the spelling.

b. The system should be able to interact with the Google search server, which is used for the customized search on the admissions website.

5. Portability:

a. The system should run on a variety of operating systems that support the Java language.

b. The system should run on a variety of hardware.

6. Maintainability:

a. The system should be easy to maintain.

b. There should be a clear separation between the interface and the business logic code.

c. There should be a clear separation between the data access objects that map the database and the business logic code.

7. Exception handling:

a. Exceptions should be reported effectively to the user if they occur.

8. Ethics:

a. The system shall not store or process any information about its users.

3.3 HARDWARE REQUIREMENTS

The following hardware requirements are needed in order to simulate the results.

- ❖ Processor : Intel i3
- ❖ Memory : 4GB RAM
- ❖ Browser : Google Chrome, Mozilla Firefox, etc.,
- ❖ Internet : An active network

3.4 SOFTWARE REQUIREMENTS

- Operating System : Windows 7
- Coding Language : Python
- Tool Kit : Anaconda Navigator, Jupiter Notebook, Command Prompt

SOFTWARE DESCRIPTION

CHAPTER 4

SOFTWARE DESCRIPTION

A Software description is a written description of a software product, that a software designer writes in order to give a software development team overall guidance to the architecture of the software project. An SSD usually accompanies an architecture diagram design. Practically, the description is required to coordinate a large team under a single vision, needs to be a stable reference, and outline all parts of the software and how they will work. Software description gives details about the software that are used to develop a project.

4.1 FRONT END

The front is an abstraction, simplifying the underlying component by providing a user-friendly interface. Front end allows to view the design of a software. Basically, a front end is one that is visible to the end user. It is the user interface which takes input or where the output is displayed to the user.

4.1.1 PYTHON

Python is used as front end in this project. Python is an interpreted high-level programming language for general-purpose programming. Python has a design philosophy that emphasizes code readability, and a syntax that allows programmers to express concepts in fewer lines of code.

4.1.1.1 FEATURES OF PYTHON:

Notable features:

- Uses an elegant syntax, making the programs you write easier to read.
- Is an easy-to-use language that makes it simple to get your program work. This makes Python ideal for prototype development and other ad-hoc programming tasks, without compromising maintainability.

- Comes with a large standard library that supports many common programming tasks such as connecting to web servers, searching text with regular expressions, reading and modifying files.
- Python's interactive mode makes it easy to test short snippets of code. There's also a bundled development environment called IDLE.
- Is easily extended by adding new modules implemented in a compiled language such as C or C++.
- Can also be embedded into an application to provide a programmable interface.
- Runs anywhere, including Mac OS X, Windows, Linux, and Unix, with unofficial builds also available for Android and iOS.
- Is free software in two senses. It doesn't cost anything to download or use Python, or to include it in your application. Python can also be freely modified and re-distributed, because while the language is copyrighted it's available under an open source license.

Programming-language features of Python:

- A variety of basic data types are available: numbers (floating point, complex, and unlimited-length long integers), strings (both ASCII and Unicode), lists, and dictionaries.
- Python supports object-oriented programming with classes and multiple inheritance.
- Code can be grouped into modules and packages.
- The language supports raising and catching exceptions, resulting in cleaner error handling.
- Data types are strongly and dynamically typed. Mixing incompatible types (e.g. attempting to add a string and a number) causes an exception to be raised, so errors are caught sooner.

- Python contains advanced programming features such as generators and list comprehensions.
- Python's automatic memory management frees you from having to manually allocate and free memory in your code.

4.1.1.2 ADVANTAGES:

1.Presence of Third Party Modules:

The Python Package Index (PyPI) contains numerous third-party modules that make Python capable of interacting with most of the other languages and platforms.

2. Extensive Support Libraries:

Python provides a large standard library which includes areas like internet protocols, string operations, web services tools and operating system interfaces. Many high use programming tasks have already been scripted into the standard library which reduces length of code to be written significantly.

3. Open Source and Community Development:

Python language is developed under an OSI-approved open source license, which makes it free to use and distribute, including for commercial purposes.

4. Learning Ease and Support Available:

Python offers excellent readability and uncluttered simple-to-learn syntax which helps beginners to utilize this programming language. The wide base of users and active developers has resulted in a rich internet resource bank to encourage development and the continued adoption of the language.

5. User-friendly Data Structures:

Python has built-in list and dictionary data structures which can be used to construct fast runtime data structures. Python also provides the option of dynamic high-level data typing which reduces the length of support code that is needed.

6. Productivity and Speed:

Python has clear object-oriented design, provides enhanced process control capabilities, and possesses strong integration and text processing capabilities and its own unit testing framework, all of which contribute to the increase in its speed and productivity. Python is considered a viable option for building complex multi-protocol network applications.

4.2 BACK END

Back-end means the parts that do the work, but the user is unaware of or cannot see. Back-end is the module to which all the input of the front end goes or from where all the output comes to front end after processing through various algorithms. This may include your processing layer, database layer etc.

4.2.1 JSON

JSON, or JavaScript Object Notation, is a minimal, readable format for structuring data. It is used primarily to transmit data between a server and web application, as an alternative to XML.

The two primary parts that make up JSON are keys and values. Together they make a key/value pair.

- **Key:** A key is always a string enclosed in quotation marks.
- **Value:** A value can be a string, number, boolean expression, array, or object.
- **Key/Value Pair:** A key value pair follows a specific syntax, with the key followed by a colon followed by the value. Key/value pairs are comma separated.

4.2.2 SQL Database

SQL(Structured Query Language) is a domain-specific language used in programming and designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). In comparison to older read/write APIs like ISAM or VSAM, SQL offers two main advantages: first, it introduced the concept of accessing many records with one single command; and second, it eliminates the need to specify how to reach a record, e.g. with or without an index. SQL deviates in several ways from its theoretical foundation, the relational model and its tuple calculus. In that model, a table is a set of tuples, while in SQL, tables and query results are lists of rows: the same row may occur multiple times, and the order of rows can be employed in queries.

PROJECT DESCRIPTION

CHAPTER 5

PROJECT DESCRIPTION

Project Description is a formally written declaration of the project and its idea and context to explain the goals and objectives to be reached, the business need and problem to be addressed, potentials pitfalls and challenges, approaches and execution methods, resource estimates, people and organizations involved, and other relevant information that explains the need for project startup and aims to describe the amount of work planned for implementation. The focus of the project description is put on creating a clear and correct understanding of the project in minds of the people and organizations involved in the planning and development process. The project team uses the document to get a general idea of what amount of work and under what requirements is planned for completion.

5.1 MODULE DESCRIPTION

A module is a separate unit of software or hardware. Typical characteristics of modular components include portability, which allows them to be used in a variety of systems, and interoperability, which allows them to function with the components of other systems. After analysis of the project, the system has been split up into the following modules.

- Tensor flow integration with python
- Framing Database Structure
- Bot creation
- Creating UI
- Implement NLP in the bot
- Train the bot
- Deploy the bot
- Handling information availability

5.1.1 TENSOR FLOW INTEGRATION WITH PYTHON

The module integration of tensor flow with python includes installation of tensor flow, python and their necessary packages. The installation of tensor flow can be done in various ways such as

- ❖ Installing with native pip
- ❖ Installing with Anaconda

Here we use the way of installing tensor flow in Anaconda. The following steps are used to install TensorFlow in an Anaconda environment.

1. Download and install anaconda by following the instructions on the Anaconda download site.

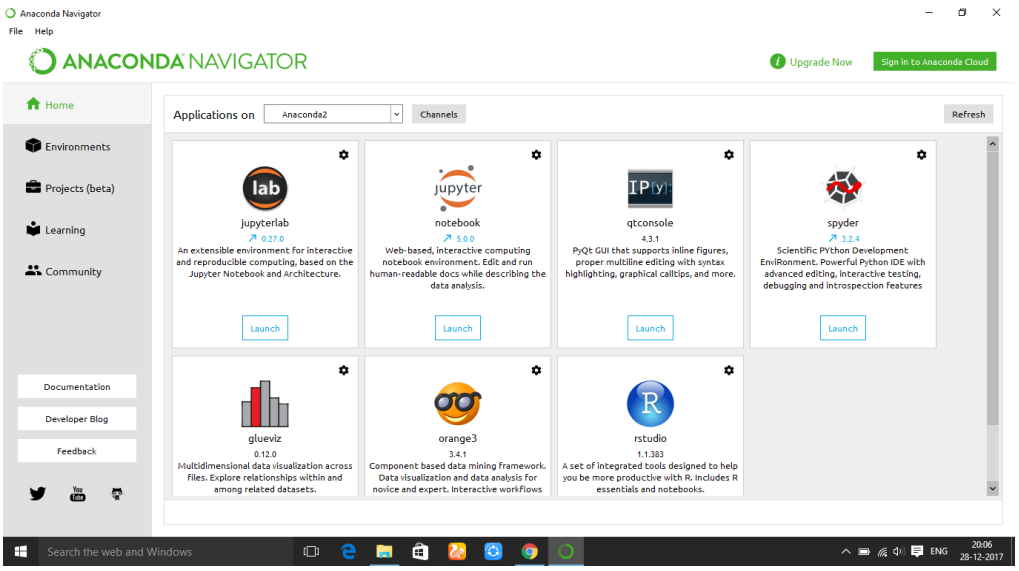


Fig:5.1 Anaconda Navigator

2. Create a conda environment named tensorflow by invoking the following command:

C:> conda create -n tensorflow pip python=3.5

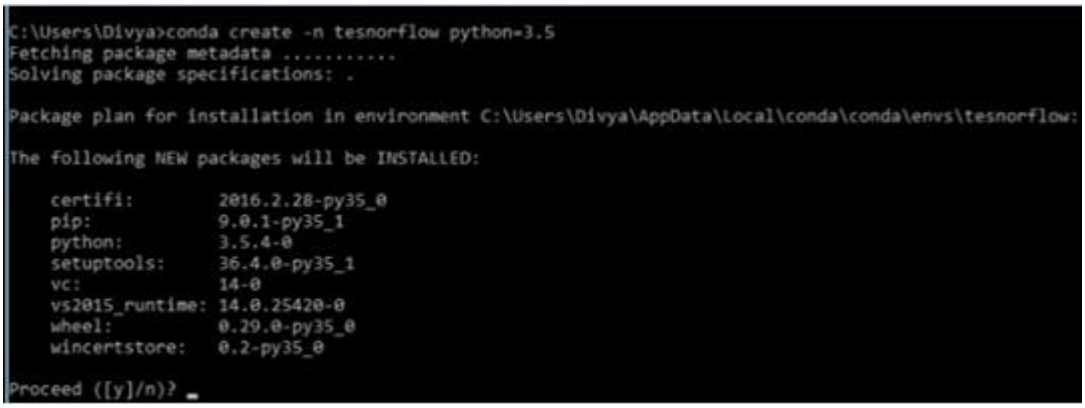


Fig:5.2 Conda environment

3. Activate the conda environment by using the following command

C:> activate tensorflow

(tensorflow)C:> # Your prompt should change

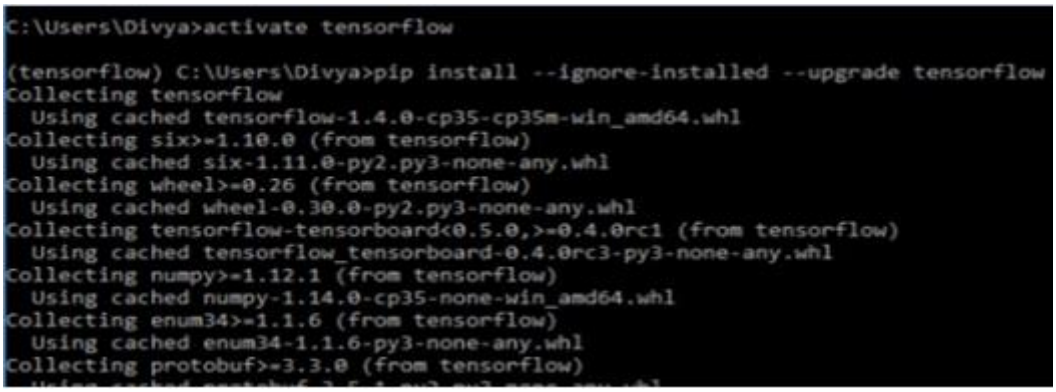


Fig:5.3 Activate Tensorflow

4. Install TensorFlow inside the conda environment by using the following command:

(tensorflow)C:> pip install --ignore-installed --upgrade tensorflow

Validating the installation:

Start the terminal. If the installation is through anaconda, activate the anaconda environment and invoke python from your shell as follows

$ python

Enter the following sample program inside python interactive shell.

```
>>> import tensorflow as tf
>>> hello = tf.constant('Hello, TensorFlow!')
>>> sess = tf.Session()
>>> print(sess.run(hello))
```

If the system outputs the following, then you are ready with the tensorflow programs.

Hello, TensorFlow!

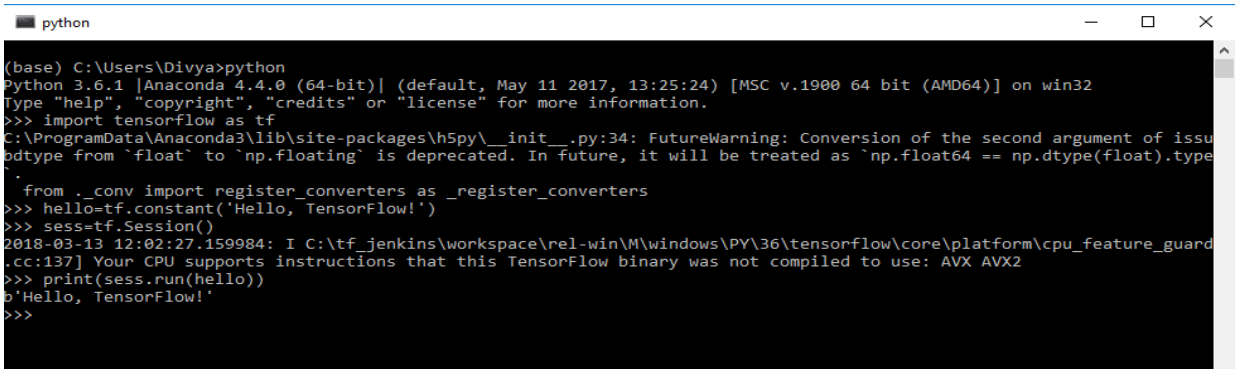


Fig:5.4 Sample Tensorflow output

5.1.2 FRAMING DATABASE STRUCTURE

This module includes a database that is used to store the database. Here we use JSON to store the user queries and their responses. JavaScript Object Notation (JSON) is an open, human and machine-readable standard that facilitates data interchange, and along with XML is the main format for data interchange used on the modern web. JSON supports all the basic data types you'd expect: numbers, strings, and boolean values, as well as arrays and hashes.

Document databases use JSON documents in order to store records, just as tables and rows store records in a relational database. A JSON database returns query results that can be easily parsed. It uses human-readable text to transmit data objects consisting of attribute–value pairs and array data types. JSON filenames use the extension **.json**.

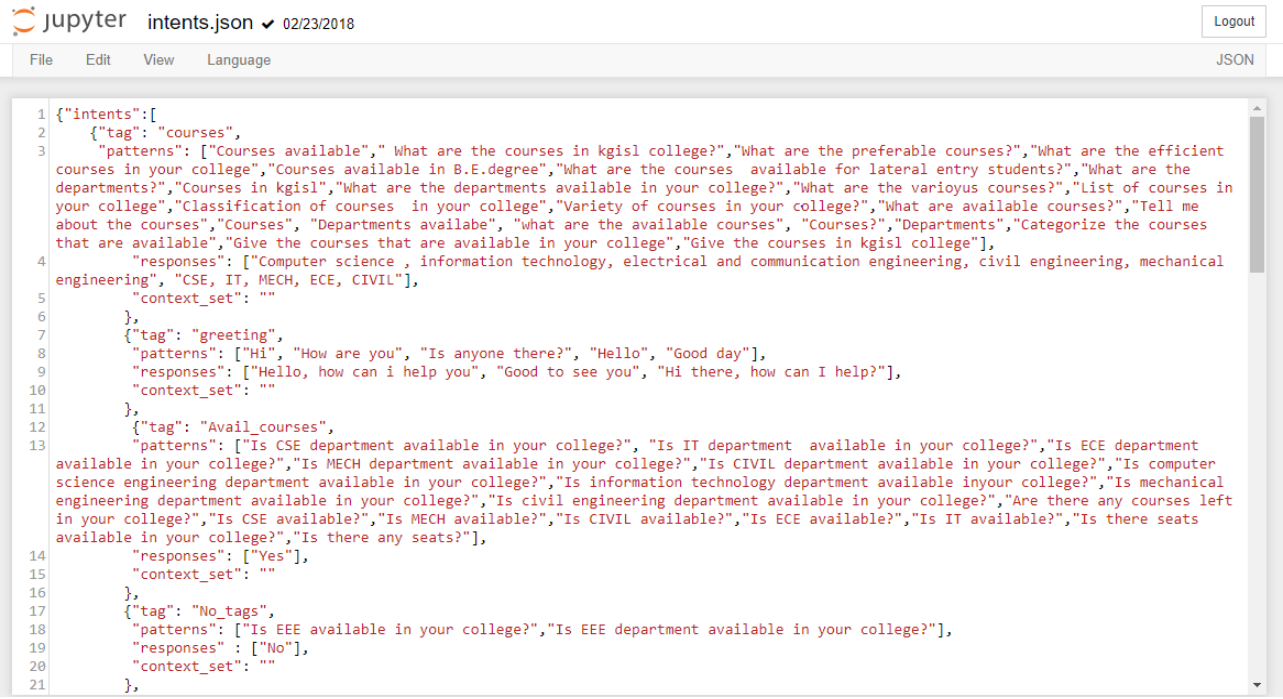


Fig:5.5 Json file

Simultaneously, we use dialog flow which is a Google-owned developer of human–computer interaction technologies based on natural language conversations. It performs tasks and answers users' question in a natural language. It supports 14+ languages. In dialog flow, we use phpMyAdmin SQL database.

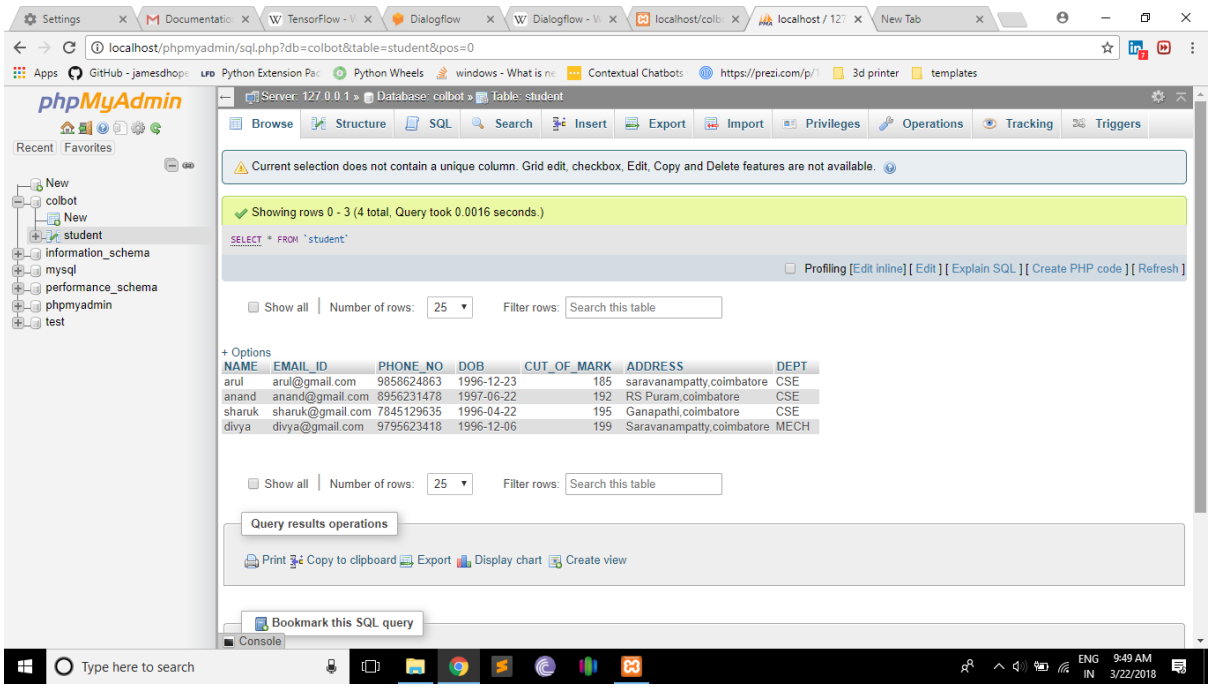


Fig:5.6 Database details

5.1.3 BOT CREATION

This module shows the development of bot that are processed automatically to interact with the user. Bots can automate tasks and perform them much faster than humans. The creation of bot helps to answer the queries whenever a query is requested by the user. It responds immediately by fetching the information from the database.

Here, we have created a bot using tensor flow that is executed in command prompt. Following steps are used to execute the bot in command prompt.

1. Open the data set and open the .ipynb file that contains the code

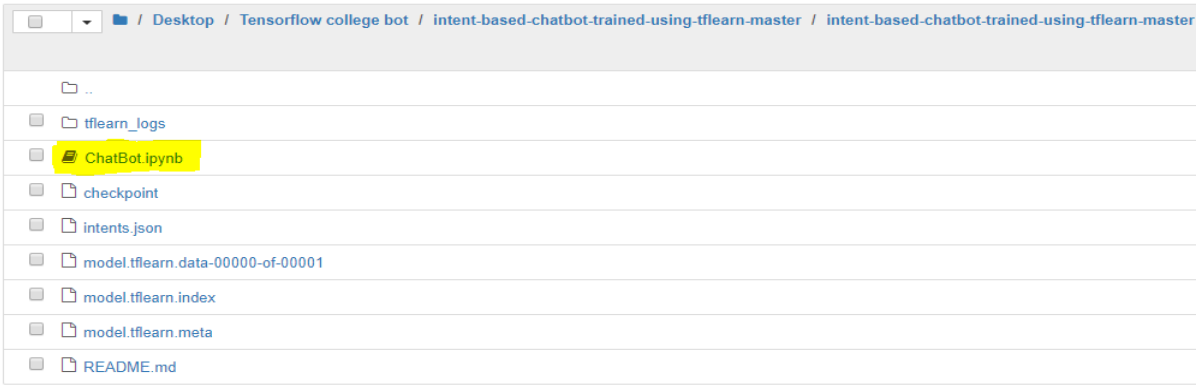


Fig:5.7 Jupiter Notebook

2. Then, click on Kernel ⟶ Restart and Clear Output and click on Restart and Clear All outputs

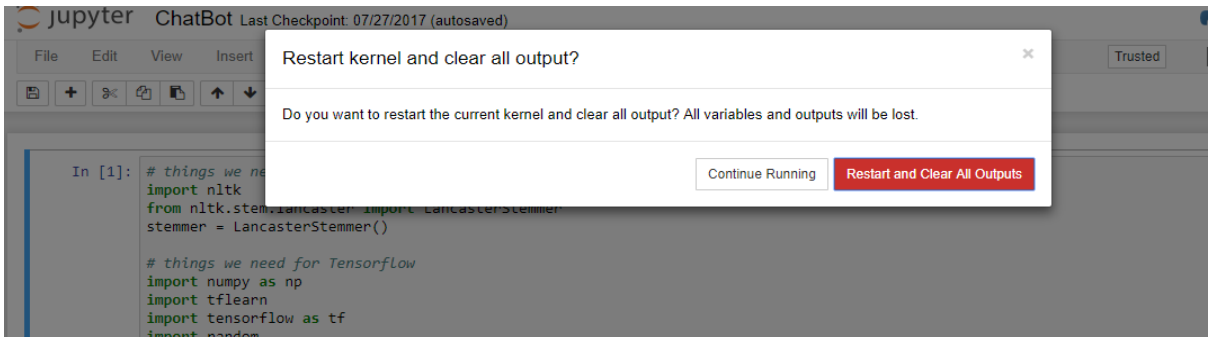


Fig:5.8 Restarting Kernel

3. In command prompt, give the command **python -m Pyro4.naming** for starting the name server.

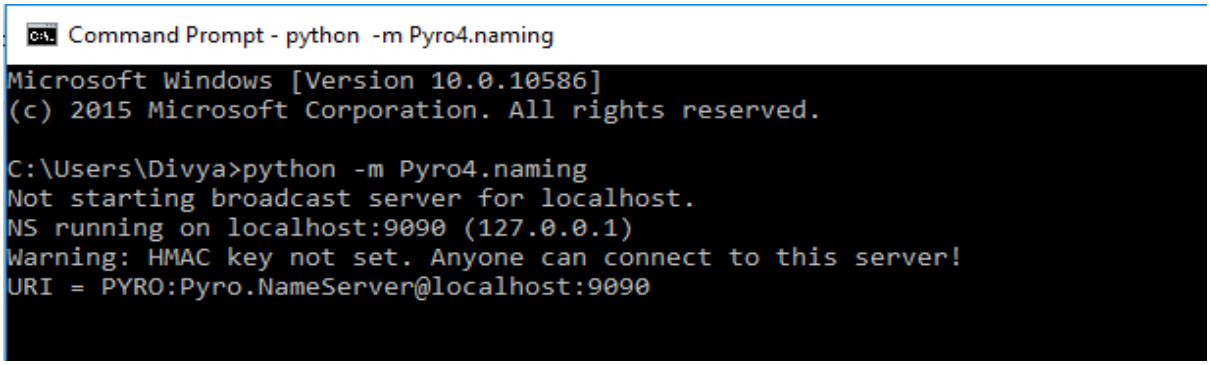


Fig:5.9 Start of Server

4. In the data set file, click on Cells ⟶ Run All to run the file

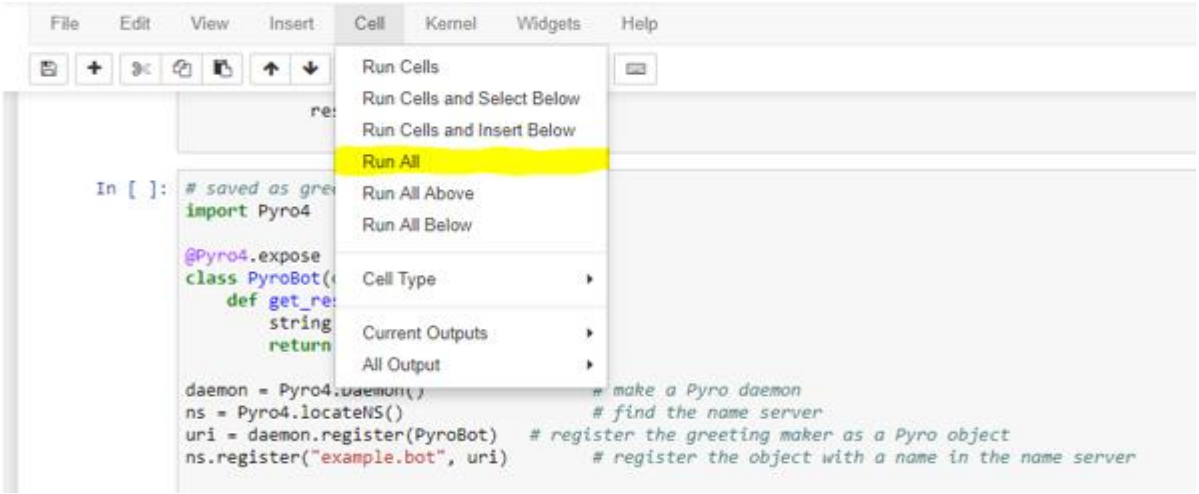


Fig:5.10 Running chatbot file

5. Once if the output is Ready, bot is created

```
@Pyro4.expose
class PyroBot(object):
    def get_response(self, name):
        string = response(name)
        return string.format(name)

daemon = Pyro4.Daemon()                # make a Pyro daemon
ns = Pyro4.locateNS()                  # find the name server
uri = daemon.register(PyroBot)   # register the greeting maker as a Pyro object
ns.register("example.bot", uri)        # register the object with a name in the name server

print("Ready.")
daemon.requestLoop()                   # start the event loop of the server to wait for calls
```

```
Ready.
```

Fig:5.11 Creation of bot

The bot creation in tensorflow is a research process and it takes immense time to train and create user interface, so we are using dialogflow to create a bot which is also a part of tensorflow.

Dialogflow contains the intents, entities, training, integrations, analytics, etc., Here are the list of intents that we have used.

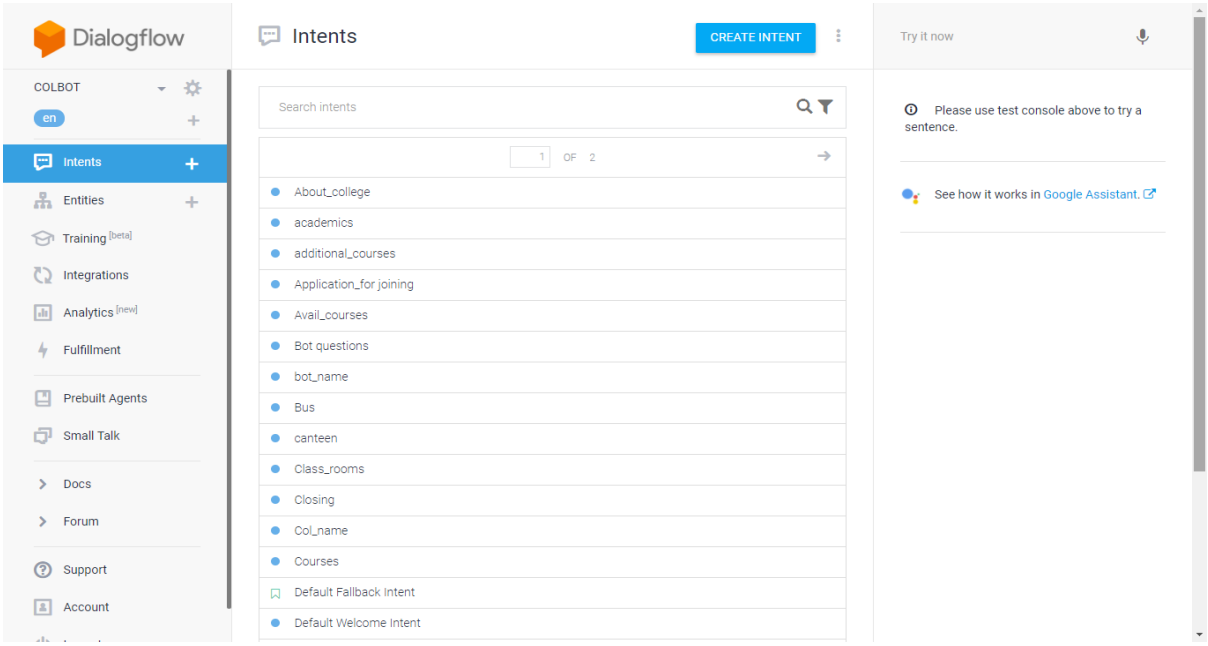


Fig:5.12 List of intents

The intent contains the intent name, contexts, events, training phrases, actions and parameters, responses etc.,

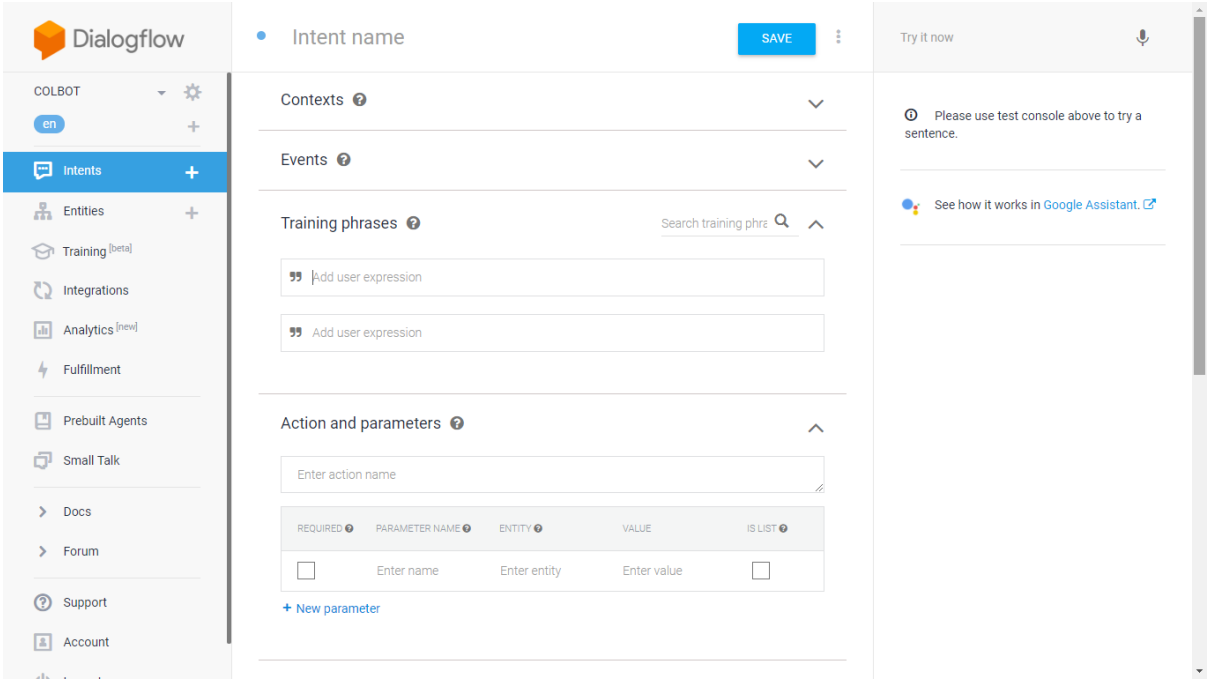


Fig:5.13 Contents of intent

More than one response to a particular training phrase are allowed.

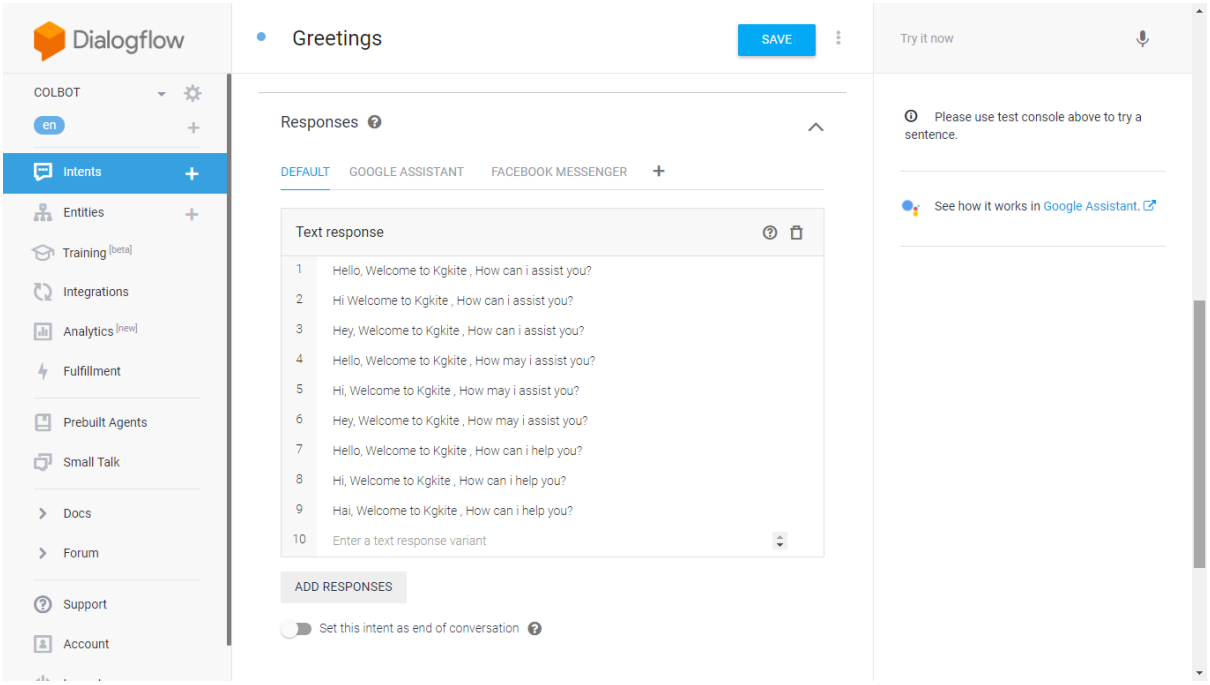


Fig:5.14 Response for greeting intent

The dialog flow can be integrated to one of the following

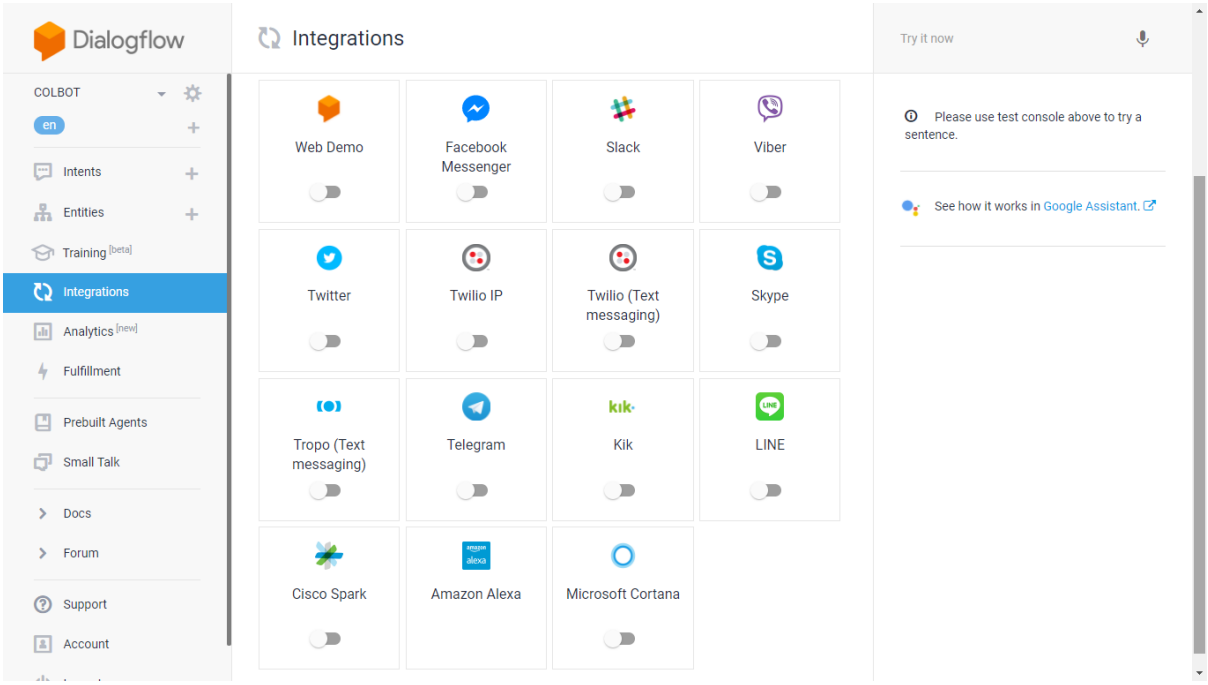


Fig:5.15 Dialogflow integrations

5.1.4 CREATING UI

The user interface (UI) is everything designed into an information device with which a person may interact. This can include display screens, keyboards, a mouse and the appearance of a desktop. It is also the way through which a user interacts with an application or a website. Web Demo acts as the user interface in dialog flow.

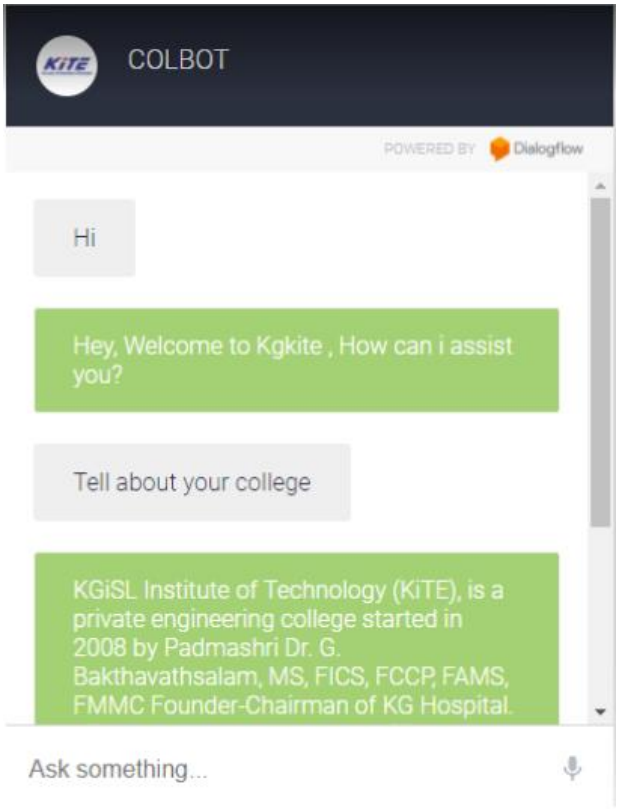


Fig:5.16 User Interface

5.1.5 IMPLEMENT NLP IN THE BOT

Natural Language Processing(NLP) refers to AI method of communicating with an intelligent system using everyday natural language such as English. NLP is related to human computer interaction. NLP encompasses anything a computer needs to understand natural language and also generate natural language. NLP is a subfield of artificial intelligence. The input and output of an NLP system can be in either speech or written text. NLP is a field that covers computer understanding and manipulation of human language, and it's ripe with possibilities for newsgathering. 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.

5.1.6 TRAIN THE BOT

College Bot includes tools that help simplify the process of training a chat bot instance. College Bot's training process involves loading example dialog into the chat bot's database. This either creates or builds upon the graph data structure that represents the sets of known statements and responses. When a chat bot trainer is provided with a data set, it creates the necessary entries in the chat bot's knowledge graph so that the statement inputs and responses are correctly represented. It involves loading example dialog into the chatbots database. We have to train the chat bot for multiple number of times to reinforce preferred responses to particular input statements. The training module have to run the training command for different example dialogs to increase the breadth of inputs that chat bot can respond to. This framework enables us to train the bot with text messages. For the training process, you will need to pass in a list of statements as follows

```
In [7]: ## Train the model

In [8]: # reset underlying graph data
        tf.reset_default_graph()

        # Build neural network
        net = tflearn.input_data(shape=[None, len(train_x[0])])
        net = tflearn.fully_connected(net, 8)
        net = tflearn.fully_connected(net, 8)
        net = tflearn.fully_connected(net, len(train_y[0]), activation='softmax')
        net = tflearn.regression(net)

        # Define model and setup tensorboard
        model = tflearn.DNN(net, tensorboard_dir='tflearn_logs')
        # Start training (apply gradient descent algorithm)
        model.fit(train_x, train_y, n_epoch=1000, batch_size=8, show_metric=True)
        model.save('model.tflearn')

        Training Step: 15999  | total loss: 0.18592 | time: 0.079s
        | Adam | epoch: 1000 | loss: 0.18592 - acc: 0.8815 -- iter: 120/124
        Training Step: 16000  | total loss: 0.17550 | time: 0.083s
        | Adam | epoch: 1000 | loss: 0.17550 - acc: 0.8933 -- iter: 124/124
        --
```

Fig:5.17 Training of bot

The training of the bot will be as follows

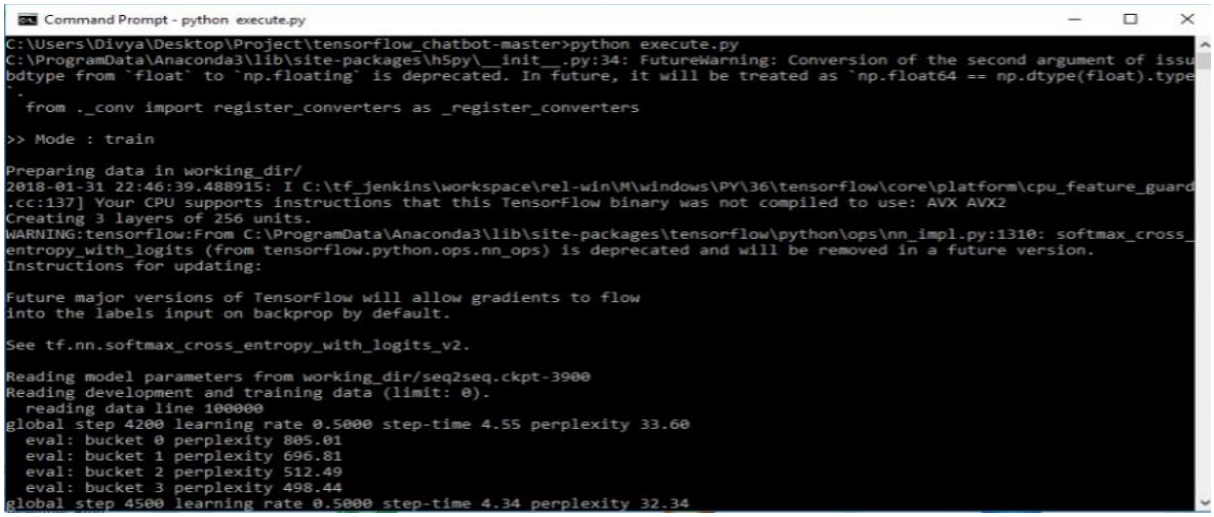


Fig:5.18 Bot training in command prompt

5.1.7 DEPLOY THE BOT

Deploying the bot includes combining all the packages, data sets, training and execution files which allows the bot to respond to the user queries. It integrates the chatbot code with the json file and makes it ready for chatting. This module allows the user to collect the details regarding the college. After creating the bot, the bot is trained with the necessary data files and once if the training is complete, it is finally deployed and executed in the command prompt by using tensor flow framework with the help of following code as follows.

```
#import Pyro4
#get = Pyro4.Proxy("PYRONAME:example.bot")
#get.get_response('Hi')
```

The command get.get_response(‘Hi’) will get response from the json database for the given input query ‘Hi’. This command in turn returns the response which can be viewed by the user. On repeating this command alone with different queries helps the user to get different responses.

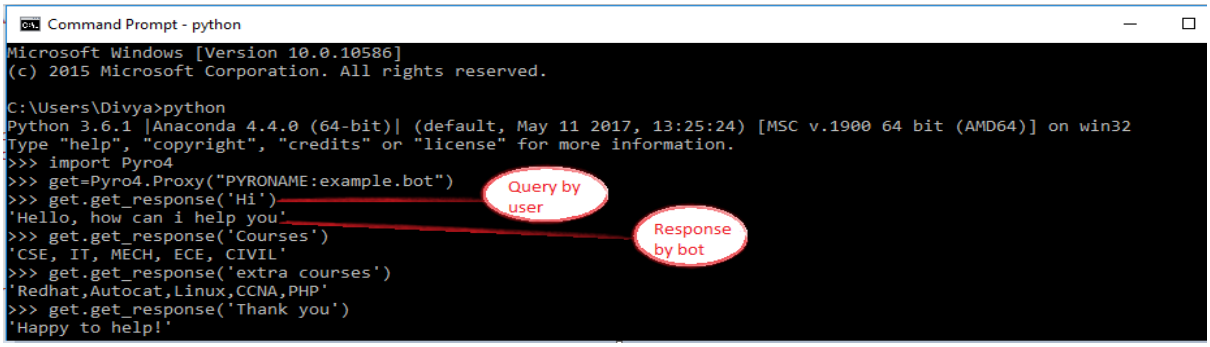


Fig:5.19 Bot Deployment

5.1.8 HANDLING INFORMATION AVAILABILITY

Handling information is the basic information that is collected to know the requirements that will help to reach the goal of the project. The basic information includes the queries or the questions that can be asked by the user to the bot and their respective responses. It involves framing the questions that can be asked by the user and feeding it in the form of intents to the bot. Some of the example questions which helps to handle information availability are

Queries based on college:

Courses:

1.What are the courses in kgisl college?

2.Tell me about the courses

3.Courses in kgisl

4.What are the departments available in your college?

5.What are the various courses?

6.List of courses in your college

7.Classification of courses in your college

8.Variety of courses in your college

9.What are available courses?

10.What are the preferable courses?

11.What are the efficient courses in your college?

12.Courses available in B. E. degree

13.What are the courses available for lateral entry students?

14.What are the departments?

15.Courses?

Yes/No type questions:

1.Is CSE department available in your college?

2.Is IT department available in your college?

3.Is ECE department available in your college?

4.Is MECH department available in your college?

5.Is CIVIL department available in your college?

6.Is computer science engineering department available in your college?

7.Is information technology department available in your college?

8.Is electrical engineering department available in your college?

9.Is mechanical engineering department available in your college?

10.Is civil engineering department available in your college?

11.Are there any courses left in your college?

12.Are there any courses available?

13.Are there any courses?

14.Is CSE available?

15.Is MECH available?

Single answer questions:

1.Which course has high number of seats?

2.Which course offers large number of placements?

3.Which course provides more campus?

4.Which course has better opportunities?

5.How many seats are there?

6. How many seats are there in CSE department?

7. How many seats are there in mechanical department?

8. How many seats are there in Civil department?

9. How many seats are there in IT department?

10. How many seats are there in ECE department?

11.Available seats

12.Number of seats that are available.

13.List the available number of seats in each department.

14.Available number of seats

15.Seat availability

Additional courses:

1.What are the extra courses?

2.What are the additional courses?

3.Courses other than academic

4.What are the special courses available?

5.What are the cocurricular activities available in your college?

6.Is there any extra course?

7.Is there any additional course?

8.Are there any additional courses?

Placements:

1.How about placements in your college?

2.Do students find that the college career center beneficial to most students?

3.What benefits does the colleges career center provide?

4.Do students typically find a job upon graduation?

5.Is there a work-study program? If so, what jobs are available?

6.Where have students interned, and are there any formal internship arrangements with local companies?

7.What's the job placement rate for last year's graduating class?

8.How long does it typically take recent grads to find a full-time job in their career field?

9.What career advising services are offered, and how long are they available to graduates?

10.What networking or career fairs are held each year?

11.Companies for placements

12.What kinds of on-campus or local part-time jobs are available?

13.What work-study opportunities are there?

14.What is the job placement rate?

15.What percentage of students at the college get internships?

Fees structure:

1.What is your four-year graduation rate?

2. Tuition fees?

3. Fees structure?

4.What is the exact fees structure of computer science department?

5.What is the exact fees structure of information technology department?

6.What is the exact fees structure of mechanical department?

7.What is the exact fees structure of civil department?

8.What is the exact fees structure of electronical engineering department?

9.Do you provide scholarships?

10.Do you award extra scholarships for such things as specific majors and talents?

11.Does your institution give out athletic scholarships?

12.Scholarships

13.What do my tuition fees include?

14.Are there any local discounts I can get as a student?

15.What is the yearly tuition fees?

Transportation and accommodation:

1.What kind of dorm choices are there?

2.What percentage of student live on campus?

3.How long are dorm accommodations guaranteed?

4.How many students live on campus?

5.Do most students go home on the weekend?

6.What percentage of the study body belongs to a sorority or fraternity?

7.What activities are offered to students?

8.Are dormitories an option after the freshmen year?

9.What are the meal plan options?

10.What kind of housing choices are there?

11.What percentage of students lives in campus housing?

12.How are roommates assigned?

13.What clubs do you have on campus?

14.What options are there for food or a meal plan?

15.Are there major-specific buildings?

16.Who can I speak to about health issues and disabilities?

17.What health services are there on campus?

18.What kind of campus security exists?

19.Is there any transport facility for students?

20.What about public transit?

Academics:

1.What type of tutoring program do you have?

2.How do you provide academic advice to students?

3.Do you have a writing center and how do I access it?

4.What kind of learning disability resources do you have?

5.How many students at the college get internships?

6.What type of career services do you have?

7. What is the average class size of introductory classes?

8. What is the average class size of upper-division courses?

9. How widely are teaching assistants used?

10.Is the college on a semester, trimester or quarter system?

11.How much time do students typically spend on homework?

12.How much writing and reading are expected?

13.How do you provide academic advice to students?

14.What type of tutoring services do you have?

15.What study spaces are available on campus?

5.2 DATA FLOW DIAGRAM

A data flow diagram (DFD) is a graphical representation of the flow of data through an information system, modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail, which can later be elaborated. DFDs can also be used for the visualization of data processing(structured design).

A DFD shows what kind of information will be input to and output from the system, how the data will advance through the system, and where the data will be stored. It does not show information about timing of process or information about whether processes will operate in sequence or in parallel, unlike a flowchart which also shows this information. Data flow diagrams are also known as bubble charts. DFD is a designing tool used in top-down approach to system design. Data flow diagrams can be used to provide the end user with a physical idea of where the data they input ultimately has an effect upon the structure of the whole system from order to dispatch to report. Data flow diagrams can be used in both analysis and design phase.

In this project College Bot, there are two levels of data flow diagram. Level 0 and Level 1

5.2.1 LEVEL 0 DFD:

The top-level context diagram is also known as Level 0 data flow diagram. It contains only one process node “Process 0” that generalizes the function of the entire system in relationship to external entities.

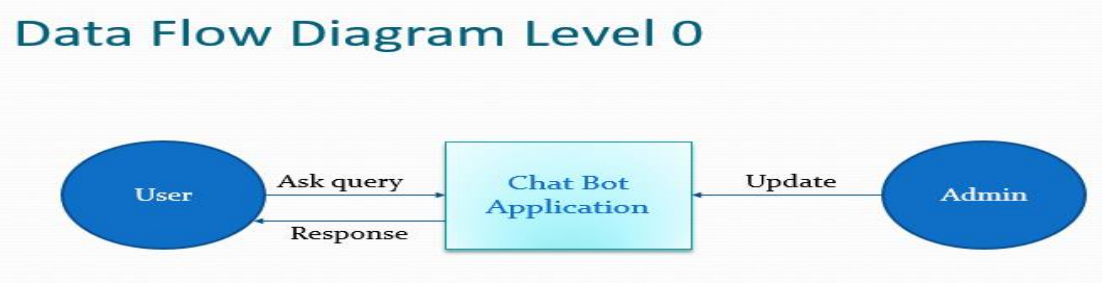


Fig:5.20 DFD - Level 0

In level 0 DFD, the user asks the query to the chat bot application. The bot retrieves the corresponding reply message from the database and produces it to the user. The Admin takes care of all the information that needed to be updated in the chat bot application.

5.2.2 LEVEL 1 DFD:

The next stage is to create the Level 1 data flow diagram. This highlights the main functions carried out by the system.

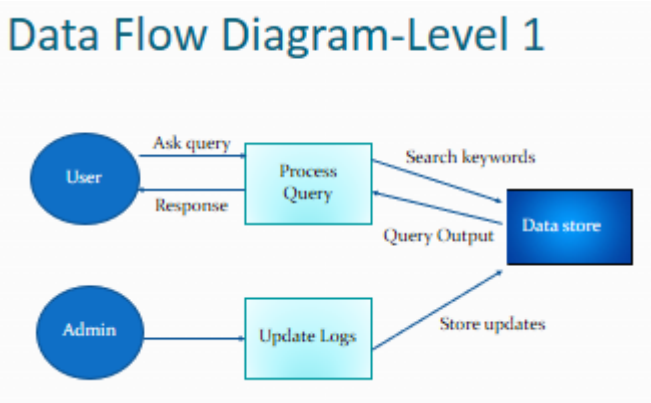


Fig:5.21 DFD - Level 1

Initially the user asks the query to the bot and the query is being processed and the main keywords are fetched and searched in the database. The database outputs the required query responses which in turn is sent to user. The admin will update the information regarding the college on the database.

5.4 ARCHITECTURE DIAGRAM

An architectural diagram is a rich and rigorous diagram created using available standards, in which the primary concern is to illustrate a specific set of tradeoff in the structure and design of a system.

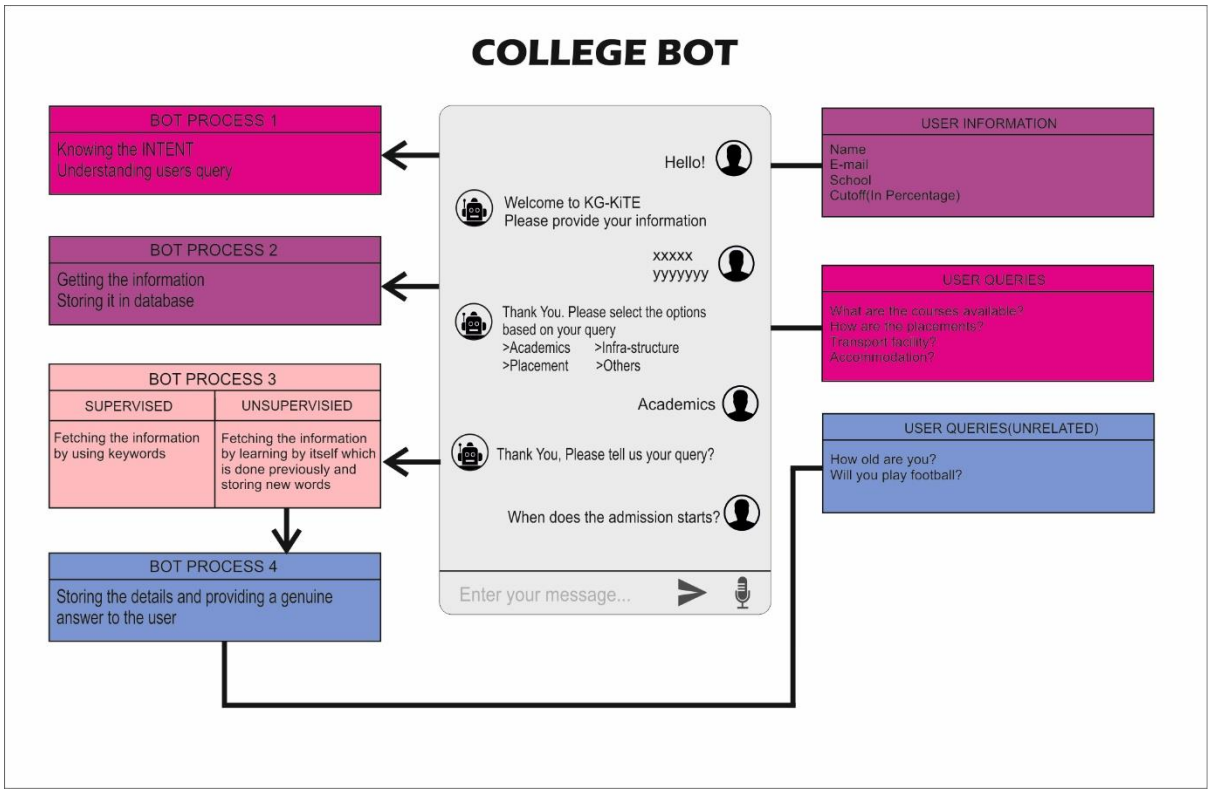


Fig:5.22 Architecture diagram

5.5 INPUT DESIGN

The input is given in the form of texts. The input to the json file contain intents. An intent can be defined as a mapping between what a user says and what action should be taken by your software. An intent represents the purpose of a user's input, such as question about the college. An intent is a purpose or goal expressed in a customer's input, such as answering a question. By recognizing the intent expressed in a customer's input, the conversation service can choose the correct dialog flow for responding to it. The intent has the following three, namely

- ❖ Tag (a unique name)
- ❖ Patterns (sentence patterns for our neural network text classifier)
- ❖ Responses (used as a response)

All the tag, patterns and responses should be inside the intents.

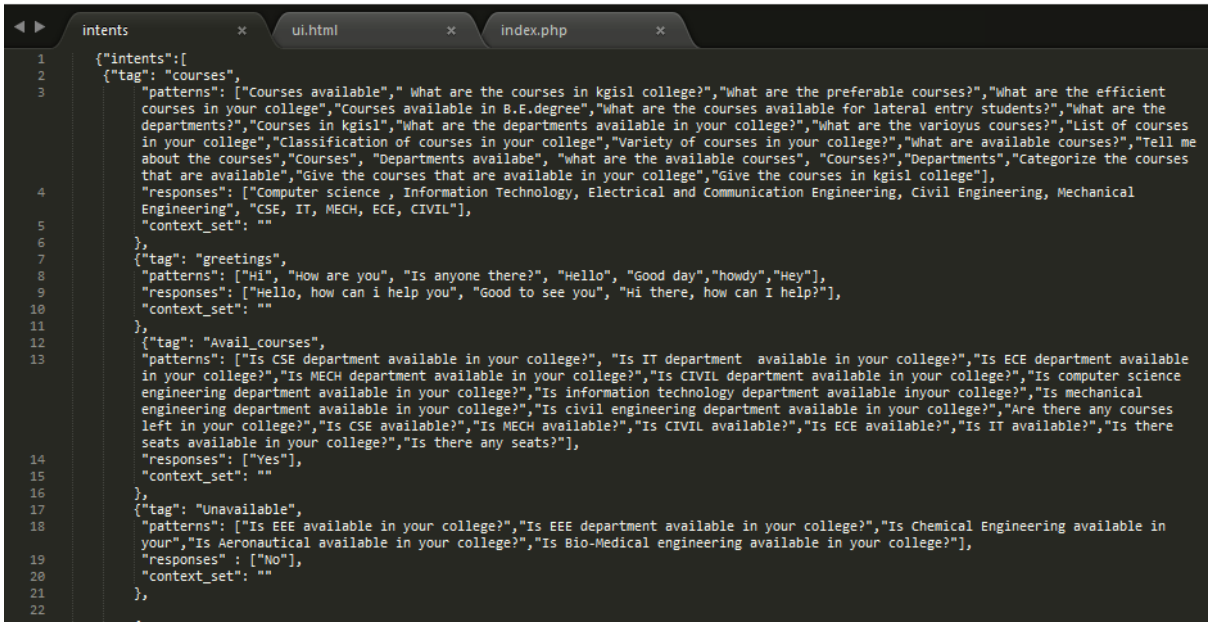


Fig:5.23 Intents, tags, patterns and responses

5.6 OUTPUT DESIGN

The design of output is the most important task of any system. During output design, developers identify the type of outputs needed, and consider the necessary output controls and prototype report layouts. A quality output is one, which meets the requirements of the end user and presents the information clearly. In output design, it is determined how the information is to be displaced for immediate need and also the hard copy output. It is the most important and direct source information to the user. Efficient and intelligent output design improves the system's relationship to help user decision-making. Designing computer output should proceed in an organized, well throughout manner; the right output must be developed while ensuring that each output element is designed so that people will find the system can use easily and effectively. While

designing the computer output, it should be specific that will meet the requirements

Here, the output will be in the form of conversational dialogs. A dialog is a branching conversation flow that defines how your application responds when it recognizes the defined intents and entities. The dialog component of the conversation service uses the intents and entities that are identified in the user's input to gather required information and provide a useful response. The output design contains both the user's input and the output response. It seems like a normal chat application which allows the user to know the details about the college.

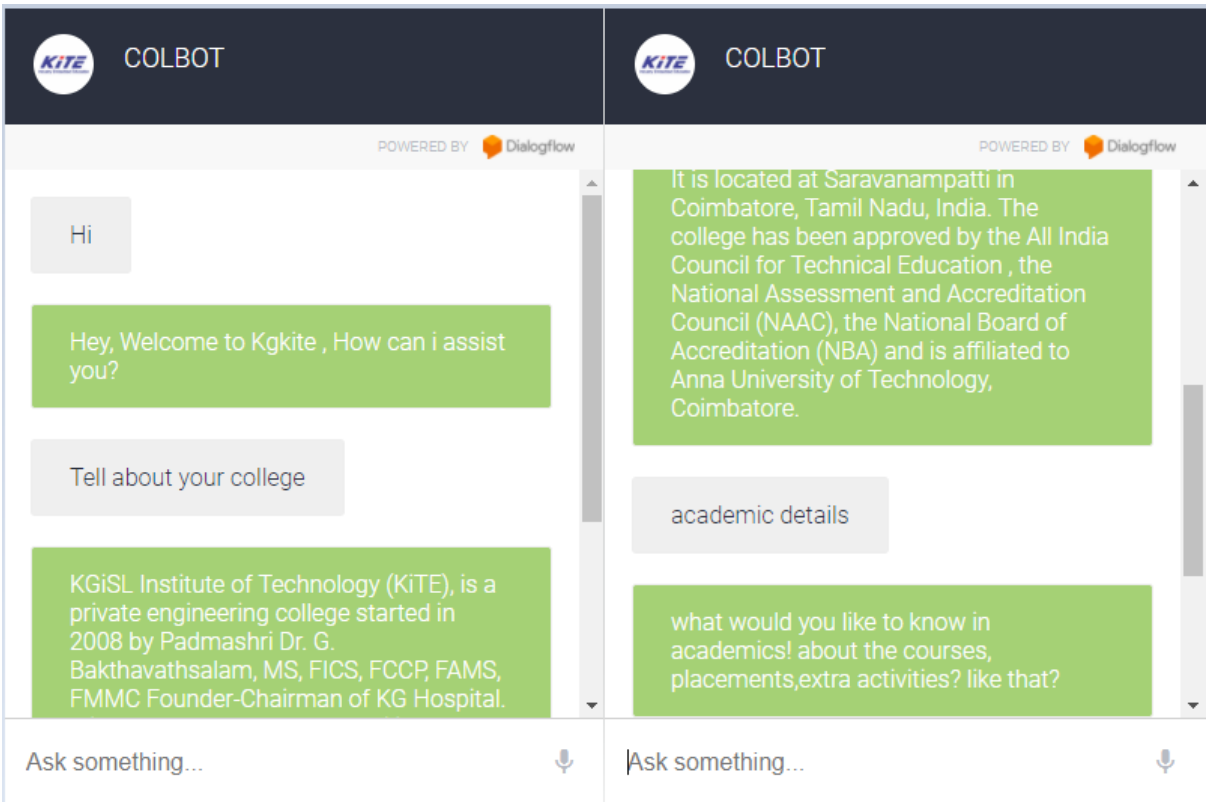


Fig:5.24 College bot

SYSTEM TESTING

CHAPTER 6

SYSTEM TESTING

6.1 TESTING

This chapter describes the system testing used in this project and the types of testing analysed to reduce the inefficiency of the project. The system testing includes the testing method and testing strategies used in the project.

6.2 TESTING METHODS

System testing of software or hardware is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements. System testing falls within the scope of black-box testing, and as such, should require no knowledge of the inner design of the code or logic. As a rule, system testing takes, as its input, all of the "integrated" software components that have passed integration testing and also the software system itself integrated with any applicable hardware system(s). System testing is a more limited type of testing; it seeks to detect defects both within the "inter-assemblages" and also within the system as a whole. System testing tests not only the design, but also the behaviour and even the believed expectations of the customer. It is also intended to test up to and beyond the bounds defined in the software/hardware requirements specification(s).

6.3 TESTING STRATEGY

The testing strategy includes the different types of testing which is used in the project to improve the efficiency.

6.3.1 FUNCTIONAL TESTING

Functional Testing is a quality assurance process and a type of black-box testing that bases its test cases on the specifications of the software component under test. Functions are tested by feeding them input and examining the output,

and internal program structure is rarely considered. Functional testing usually describes what the system does.

Functional testing does not imply that you are testing a function or method of your module or class. Functional testing tests a slice of functionality of the whole system.

Test Case 1:

Input : Hello

Output : Hello, how can I help you?

Test Case 2:

Input : Courses available

Output : CSE, IT, MECH, CIVIL, ECE

The user input “Hello” belongs to the intent name “greetings”. We see that the output displayed is the corresponding response message that is programmed by us under the intent “greetings”. Thus, our bot passes the Functionality test.

6.3.2 PERFORMANCE TESTING

Performance testing is in general, a testing practice performed to determine how a system performs in terms of responsiveness and stability under a particular workload. It can also serve to investigate, measure, validate or verify other quality attributes of the system, such as scalability, reliability and resource usage.

Performance testing, a subset of performance engineering, is a computer science practice which strives to build performance standards into the implementation, design and architecture of a system.

The response time for the given input message is just a fraction of a second. Hence this proves that the performance of the bot is very efficient.

The bot responses the user instantly with the correct response message that is programmed under respective intents. The response is accurate and faster. Thus, the bot passes the performance testing successfully.

6.3.3 STRESS TESTING

Stress testing, sometimes called torture testing, is a form of deliberately intense or thorough testing used to determine the stability of a given system or entity. It involves testing beyond normal operational capacity, often to a breaking point, in order to observe the results.

Multiple users from different geographical locations can chat with the bot simultaneously. The performance of the bot yet proves to be efficient and impressive.

All the intents, entities and dialog are stored in the knowledge base. Even though it contains large amount of data, the data retrieval have proven to be the fastest response time.

The bot works efficiently between cross browser. It handles stress effectively.

6.3.4 UNIT TESTING

In computer programming, unit testing is a software testing method by which individual units of source code, sets of one or more computer program modules together with associated control data, usage procedures, and operating procedures, are tested to determine whether they are fit for use. All the modules work effectively. The bot responses the user with the correct response message. Thus our bot successfully passed the unit testing.

6.3.5 ACCEPTANCE TESTING

Acceptance testing is a test conducted to determine if the requirements of a specification or contract are met. It may involve chemical tests, physical tests, or performance tests.

Our bot responds according to the user queries. Thus the bot passes the acceptance testing.

6.3.6 USABILITY TESTING:

Usability testing is a technique used in user-centered interaction design to evaluate a product by testing it on users. This can be seen as an irreplaceable usability practice, since it gives direct input on how real users use the system. This is in contrast with usability inspection methods where experts use different methods to evaluate a user interface without involving users.

6.3.7 COMPATIBILITY TESTING

Compatibility testing, part of software functional tests, is testing conducted on an application to evaluate its compatibility with the computing environment.

SYSTEM IMPLEMENTATION

CHAPTER 7

SYSTEM IMPLEMENTATION

System implementation is the process of defining how the information system should be built that is physically. It depends on ensuring that the information system is operational and used, and also system meets quality standard.

The process of putting the developed system in actual use is called system implementation. The system can be implemented only through testing is done. They check the feasibility of the system.

The most crucial stage is achieving a new successful system and giving confidence on the new system for the user that it will work efficiently and effectively. It involves careful planning, investigation of the current system and its constraints on implementation, design of the method to achieve the changeover. The more complex the system being implemented, the more involved will be the system analysis and the design effort required just for implementation. The system implementation has three main aspects. They are education and training, system testing and changeover.

The implementation stage involves tasks like

- Careful planning
- Investigation of the system and constraints
- Design of the methods to achieve the changeover.

CONCLUSION & FUTURE ENHANCEMENTS

CHAPTER 8

CONCLUSION AND FUTURE ENHANCEMENTS

8.1 CONCLUSION:

A College bot is an automated software program that is designed to enquire information about the college admission. This college bot helps to know the information such as admission details, college infrastructure, academic and non-academic courses available, fees structure, hostel facilities, availability of placements and companies, etc., just by chatting without logging on or browsing to particular websites. With the easy implementation and user-friendly interface, the College bot proves to be the best companion for all the users. It allows the user to chat with the bot. Since most of the users in the world are active in messaging platforms, this college bot will help them to acquire information easier and faster. Thus, College bot can turn out to be one of the best stand-alone application.

8.2 FUTURE ENHANCEMENTS

The following are some of the enhancements that can be done to the system in the near future.

1. Voice recognition
2. Implementing this system for every college
3. Fetching details about both technical and non-technical events related to college

APPENDIX

CHAPTER 9

APPENDIX

9.1 SOURCE CODE

Chatbot.iypnb

```
# coding: utf-8
# In[1]:
# things we need for NLP
        import nltk
        from nltk.stem.lancaster import LancasterStemmer
        stemmer = LancasterStemmer()
# things we need for Tensorflow
        import numpy as np
        import tflearn
        import tensorflow as tf
        import random
        debug = False
# In[2]:
# import our chat-bot intents file
        import json
        with open('intents.json') as json_data:
           intents = json.load(json_data)
#Each conversational intent contains
#a tag (a unique name)
#responses (one will be used as a response)
# In[3]:
## Class Construction
# In[4]:
        words = []
        classes = [] #each document is associated with an intent (or class)
        documents = [] #a list of sentences
        ignore_words = ['?']
# loop through each sentence in our intents patterns and build a bag of
words
        for intent in intents['intents']:
           for pattern in intent['patterns']:
      # tokenize each word in the sentence
              w = nltk.word_tokenize(pattern)
      # add to documents in our corpus
```

```
            documents.append((w, intent['tag']))
        # add to our classes list
            if intent['tag'] not in classes:
               classes.append(intent['tag'])

# stem and lower each word and remove duplicates
        words = [stemmer.stem(w.lower()) for w in words if w not in
        ignore_words]
        words = sorted(list(set(words)))

# remove duplicates
        classes = sorted(list(set(classes)))
        if debug == True:
           print (len(documents), "documents", documents)
           print (len(classes), "classes", classes)
           print (len(words), "unique stemmed words", words)

# In[5]:
## Create the training data
# In[6]:

        training = []
        output = []
# create an empty array for our output
        output_empty = [0] * len(classes)

# training set, bag of words for each sentence
        for doc in documents:
   # initialize our bag of words
         bag = []
   # list of tokenized words for the pattern
            pattern_words = doc[0]
   # stem each word
            pattern_words = [stemmer.stem(word.lower()) for word in
        pattern_words]

   # create our bag of words array (this will be the input x)
            if debug == True: print("pattern words", pattern_words)
            for w in words:
               bag.append(1) if w in pattern_words else bag.append(0)
            if debug == True: print("bag",bag)
   # identify the class for the current (this will be the output y)
   # output is a '0' for each tag and '1' for current tag
```

```
        output_row = list(output_empty)
        output_row[classes.index(doc[1])] = 1
        training.append([bag, output_row])
            random.shuffle(training)
            training = np.array(training)
            train_x = list(training[:,0])
            train_y = list(training[:,1])

# In[7]:
## Train the model
# In[8]:
# reset underlying graph data
        tf.reset_default_graph()

# Build neural network
        net = tflearn.input_data(shape=[None, len(train_x[0])])
        net = tflearn.fully_connected(net, 8)
        net = tflearn.fully_connected(net, 8)
        net = tflearn.fully_connected(net, len(train_y[0]), activation='softmax')
        net = tflearn.regression(net)

# Define model and setup tensorboard
        model = tflearn.DNN(net, tensorboard_dir='tflearn_logs')
# Start training (apply gradient descent algorithm)
        model.fit(train_x, train_y, n_epoch=1000, batch_size=8,
        show_metric=True)
        model.save('model.tflearn')

# In[9]:

        def clean_up_sentence(sentence):
    # tokenize the pattern
            sentence_words = nltk.word_tokenize(sentence)
    # stem each word
            sentence_words = [stemmer.stem(word.lower()) for word in
        sentence_words]
            return sentence_words

# return bag of words array: 0 or 1 for each word in the bag that exists in
the sentence
        def bow(sentence, words, show_details=False):
    # tokenize the pattern
            if debug==True: print("sentence", sentence)
```

```
        sentence_words = clean_up_sentence(sentence)
        if debug==True: print("tokenized sentence", sentence_words)
    # bag of words
        bag = [0]*len(words)
        for s in sentence_words:
            for i,w in enumerate(words):
                if w == s:
                    bag[i] = 1
                    if show_details:
                        print ("found in bag: %s" % w)
        if debug==True: print("bag of words",np.array(bag))
        return(np.array(bag))

# In[10]:
## Create a data structure to hold user context
# In[ ]:

        context = {}
        ERROR_THRESHOLD = 0.25
        def classify(sentence):
    # generate probabilities from the model
        results = model.predict([bow(sentence, words)])[0]
        if debug==True: print("model prediction of bag (bag returns
        probability of each class):", results)
    # filter out predictions below a threshold
        results = [[i,r] for i,r in enumerate(results) if
        r>ERROR_THRESHOLD]
    # sort by strength of probability
        results.sort(key=lambda x: x[1], reverse=True)
        return_list = []
        for r in results:
            return_list.append((classes[r[0]], r[1]))
    # return tuple of intent and probability
        if debug==True: print("model prediction list:", return_list)
        return return_list

        def response(sentence, userID='123', show_details=True):
        results = classify(sentence)
        if debug==True: print("results:", results)
    # if we have a classification then find the matching intent tag
        if results:
      # loop as long as there are matches to process
            while results:
```

```
                for i in intents['intents']:
            # find a tag matching the first result
                    if i['tag'] == results[0][0]:

                        if debug==True: print("associated data:", i)
                # set context for this intent if necessary
                        if 'context_set' in i:
                            if show_details: print ('set context:', i['context_set'])
                            context[userID] = i['context_set']

                # check if this intent is contextual and applies to this user's
conversation
                if debug == True: print("context:", context)
                if not 'context_filter' in i or                    (userID in context and
'context_filter' in i and i['context_filter'] == context[userID]):
                    #print(userID, context)
                        if show_details: print ('tag:', i['tag'])
                    # a random response from the intent
                    #return print(random.choice(i['responses']))
                        return (random.choice(i['responses']))

                results.pop(0)

# In[ ]:
# saved as greeting-server.py
        import Pyro4
        @Pyro4.expose
        class PyroBot(object):
            def get_response(self, name):
                string = response(name)
                return string.format(name)

daemon = Pyro4.Daemon()             # make a Pyro daemon
ns = Pyro4.locateNS()               # find the name server
uri = daemon.register(PyroBot)   # register the greeting maker as a Pyro object
ns.register("example.bot", uri)      # register the object with a name in the name
server

print("Ready.")
daemon.requestLoop()                # start the event loop of the server to wait for
calls

# In[ ]:
```

#from command line run
#import Pyro4
#get = Pyro4.Proxy("PYRONAME:example.bot")
#get.get_response('What hours are you open?')
 # In[ ]:

#import Pyro4
#name = input("What hours are you open?").strip()
#get = Pyro4.Proxy("PYRONAME:example.bot") # use name server object lookup uri shortcut
#print(get.get_response(name))

intents.json

{"intents":[
{"tag": "courses",
"patterns": ["Courses available"," What are the courses in kgisl college?","What are the preferable courses?","What are the efficient courses in your college","Courses available in B.E.degree","What are the courses available for lateral entry students?","What are the departments?","Courses in kgisl","What are the departments available in your college?","What are the varioyus courses?","List of courses in your college","Classification of courses in your college","Variety of courses in your college?","What are available courses?","Tell me about the courses","Courses", "Departments availabe", "what are the available courses", "Courses?","Departments","Categorize the courses that are available","Give the courses that are available in your college","Give the courses in kgisl college"],
"responses": ["Computer science , Information Technology, Electrical and Communication Engineering, Civil Engineering, Mechanical Engineering", "CSE, IT, MECH, ECE, CIVIL"],
"context_set": ""
},
{"tag": "greetings",
"patterns": ["Hi", "How are you", "Is anyone there?", "Hello", "Good day","howdy","Hey"],
"responses": ["Hello, how can i help you", "Good to see you", "Hi there, how can I help?"],
"context_set": ""
},
{"tag": "Avail_courses",
"patterns": ["Is CSE department available in your college?", "Is IT department available in your college?","Is ECE department available in your college?","Is MECH department available in your college?","Is CIVIL

department available in your college?","Is computer science engineering department available in your college?","Is information technology department available inyour college?","Is mechanical engineering department available in your college?","Is civil engineering department available in your college?","Are there any courses left in your college?","Is CSE available?","Is MECH available?","Is CIVIL available?","Is ECE available?","Is IT available?","Is there seats available in your college?","Is there any seats?"],
"responses": ["Yes"],
"context_set": ""
},
{"tag": "Unavailable",
"patterns": ["Is EEE available in your college?","Is EEE department available in your college?","Is Chemical Engineering available in your","Is Aeronautical available in your college?","Is Bio-Medical engineering available in your college?","Is aero space available in your college?"],
"responses" : ["No"],
"context_set": ""
},

{
"tag":"additional_courses",
"patterns":["What are the extra courses?","What are the additional courses?","extra courses","additional courses","Courses other than academic","What are the special courses available?","Special courses","Other courses","Non-academic courses"],
"responses":["Additional courses is based on the department you choose.Eg:Oracle,Autocad,Circuitry,Architectural designs etc,"],
"context_set":""
},
{
"tag":"class_rooms",
"patterns":["How large are the classes?","What is the capacity of the class rooms?","About class rooms","How many student can occupy a class room?","What is the size of the classroom?","Number of students a classroom can hold","Strength of students who can occupy a classroom","How the classrooms are?","classroom capacity"],
"responses":["There are more than 10 classrooms for each and every department. Every classroom can occupy about 60 students."],
"context_set":""
},
{
"tag":"s_accommodation",

"patterns":["Is there any accommodation available in your college?","Is there dorms in your college?","Does the college have accommodation facilities?","Does the college have dorm facilities?","Does the college have hostel facilities?"],
"responses":["Yes"],
"context_set":""
},
{
"tag":"dorms",
"patterns":["About accommodation","About hostel facilities","About dorm facilities","About accommodation facilities","What kind of dorm choices are available","Facilities for accommodation","How long are the dorms guaranteed?","What are dorms like?"],
"responses":["There are separate dorms available for both boys and girls.Candidates can make use of the dorms till they complete the course by paying respecting dorm fees."],
"context_set":""
},
{
"tag":"canteen",
"patterns":["Are there canteens available in your campus","Is there cafeteria in your college","Are canteens available","Is cafeteria available?"],
"responses":["Yes we have canteen and cafeteria in college."]
},
{
"tag":"Hostel_foods",
"patterns":["About food facilities","Food facilities","What kind of food does the dining hall serve?","About meals","About food in hostel","About hostel food","Hostel food"],
"responses":["Both veg. and non-veg foods are available which will be served according to daily menus"],
"context_set":""
},
{
"tag":"extra_curricular activities",
"patterns":["Activities other than academics","Extra curricular activities","Other activities","Sports activities","What are the extra curricular activities that are available in your college?","What activities are offered to students","What are some of the popular extra curricular activities","Extra curricular activities?"],
"responses":["Sports such as football, tennis, badminton, etc courts are available where students are allowed to play in the evening. Sport day is also conducted.","Other clubs like music, dance, singning are available"],

```
   "context_set":""
        },
        {
        "tag":"sports",
        "patterns":["Does sports play a large role on campus?","Does the college conduct sports day?","Does the college give importance to sports","Are there any sports activities in college?","Does the role of sports considered important?","Does the college have sports activities"],
        "responses":["Yes"],
        "context_set":""
        },
        {
        "tag":"Bus",
        "patterns":["Bus facilities available","Bus facilities","What are the bus facilities in college","Transport facilities","What are the transport facilities available for students","What type of transports does college offer for students?"],
        "responses": ["College buses are available for students coming from various locations in and around coimbatore","Bus facilities are available"],
        "context_set":""
        },
        {
        "tag":"Facilities",
        "patterns":["What are the facilities available in your college?","Facilities?","Facilities available?"],
        "responses":["What facility you would like to know, hostel, transportation,like that?"],
        "context_set":""
        },

       {"tag": "goodbye",
         "patterns": ["Bye", "See you later", "Goodbye","Text you later","See you then"],
         "responses": ["See you later, Thanks for visiting", "Have a nice day", "Bye! Come back again soon."]
        },
        {"tag": "thanks",
         "patterns": ["Thanks", "Thank you", "That's helpful","Thank you so much","Thanks for your help"],
         "responses": ["Happy to help any time!", "My pleasure","Glad to help you","Welcome"]
        },
        {
```

"tag":"Infrastructure",
"patterns":["How is the infrastructure ?","Infrastructure","Campus Infrastructure"],
"resposes":["We have colleges and various IT companies in our capmus"]
},
{
"tag":"placements",
"patterns":["How are the placements in your college","How are the placments","How about placements","Placements","Placement availability"],
"responses":["We provide on campus placements with more than 75+ companies.We also provide off campus drive."]
},
{
"tag":"companies",
"patterns":["What are the leading companies?","Leading companies","Companies",""],
"responses":["The leading companies are KGiSL,TATA Consultancy services,WIPRO,BOSCH,Cognizant,DELL,HCL,HIROTEC,Infosys,I/Nautix"],
"context_set":""
},
{
"tag":"Timings",
"patterns":["What is the college timing","college timings","when does the college starts","When does the college gets over","How abot the timings","What time does the college starts","what time does the college gets over"],
"responses":["The college starts by 8.30AM and ends by 4.30PM"]
},
{
"tag":"Lunch_timings",
"patterns":["When is the lunch break","How much time is given for lunch","Lunch timings?","Lunch break","Timing for lunch"],
"responses":["Lunch is between 12.15PM to 01.00PM"]
},
{
"tag":"Intervals",
"patterns":["Breaks","Break timings?","Break intervals?","Break intervals other than lunch","Duration of break","Intervals"],
"responses":["Two break intervals, one in the morning between 10.20 to 10.30 and other in the afternoon between 2.40 to 2.50"]
},
{
"tag":"college_name",

"patterns":["college name","college","what is your college name?","Name of the college","What is the name of your college?"],
"responses":["KGiSL Institue of Technology"]
},
{
"tag":"location",
"patterns":["Where is your college","Where is your college located","location of your college","Location","KGiSL location","Where is KGiSL located","Location of KGiSL college"],
"responses":["KGiSL is located in Saravanamapatty, Coimbatore"]
},
{
"tag":"Symposium & cultural events",
"patterns":["Does your college have culturals","Does the college has any extra events","Does the college have any cultural events","Do your coollege have symposium every year","what about the extra events in the college","How about the symposiums in the college","does the college has any functions"],
"responses":["Yes we conduct Symposium and cultural events every year"]
},
{
"tag":"other_events",
"patterns":["Is there any events for seasonal occasion","is there any functions for festivals","Is there any celebrations for seasonal occasions","are there any celebrations for festivals","are there any celebrations every year","are there any funtions in your college for festivals","are there any celebrations for occasions in the college","Are there any special days celebrated in the college"],
"responses":["Yes we do celebrate seasonal occasions and festivals"]
},
{
"tag":"About",
"patterns":["About KGiSL","About your college","Information about KGiSL","Details about your college","Details about KGiSL","Tell about your college"],
"responses":["KGiSL Institute of Technology (KiTE) is a private engineering college started in 2008 by Padmashri Dr. G. Bakthavathsalam, MS, FICS, FCCP, FAMS, FMMC Founder-Chairman of KG Hospital. It is located at Saravanampatti in Coimbatore, Tamil Nadu, India. The college has been approved by the All India Council for Technical Education , the National Assessment and Accreditation Council (NAAC), the National Board of Accreditation (NBA) and is affiliated to Anna University of Technology, Coimbatore."]
},
{

```
        "tag":"Fees",
        "patterns":["Fees structure", "Fees details","What about fees","Fees regarding your college","Fees","What is the fees structure in your college?"],
        "responses":["Fees are managed by the accounts department.For more information, please contact 0422 266 6187"]
      }

  ]
}
```

index.php

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
</head>

<style type="text/css">
.form-style-9{
    max-width: 500px;
    background: #FAFAFA;
    padding: 30px;
    /*margin: 50px auto;*/
    box-shadow: 1px 1px 35px rgb(0,0,255,0.2);
    border-radius: 10px;
    border: 3px solid #305A72;
     position: relative;
   /* left: 270px;*/
}
.form-style-9 ul{
    padding:0;
    margin:0;
    list-style:none;
}
.form-style-9 ul li{
    display: block;
    margin-bottom: 10px;
    min-height: 35px;
}
.form-style-9 ul li  .field-style{
```

```
    box-sizing: border-box;
    -webkit-box-sizing: border-box;
    -moz-box-sizing: border-box;
    padding: 8px;
    outline: none;
    border: 1px solid #B0CFE0;
    -webkit-transition: all 0.30s ease-in-out;
    -moz-transition: all 0.30s ease-in-out;
    -ms-transition: all 0.30s ease-in-out;
    -o-transition: all 0.30s ease-in-out;

}.form-style-9 ul li  .field-style:focus{
    box-shadow: 0 0 5px #B0CFE0;
    border:1px solid #B0CFE0;
}
.form-style-9 ul li .field-split{
    width: 49%;
}
.form-style-9 ul li .field-full{
    width: 100%;
}
.form-style-9 ul li input.align-left{
    float:left;
}
.form-style-9 ul li input.align-right{
    float:right;
}
.form-style-9 ul li textarea{
    width: 100%;
    height: 130px;
}
.form-style-9 ul li input[type="button"],
.form-style-9 ul li input[type="submit"] {
    -moz-box-shadow: inset 0px 1px 0px 0px #3985B1;
    -webkit-box-shadow: inset 0px 1px 0px 0px #3985B1;
    box-shadow: inset 0px 1px 0px 0px #3985B1;
    background-color: #216288;
    border: 1px solid #17445E;
    display: inline-block;
    cursor: pointer;
    color: #FFFFFF;
    padding: 8px 18px;
    text-decoration: none;
```

```
   font: 12px Arial, Helvetica, sans-serif;
}
.form-style-9 ul li input[type="button"]:hover,
.form-style-9 ul li input[type="submit"]:hover {
   background: linear-gradient(to bottom, #2D77A2 5%, #337DA8 100%);
   background-color: #28739E;
}

h1 {
   text-align: center;
   text-transform: uppercase;
   color: #000000;
          }

          h4{
   text-align: justify;
   text-indent: 100px;
   color: #000000;
   font-style: italic;
   color: #00008B;

}
h4
{
          text-indent: 100px;
          font-style: italic;
          color: black;
}

</style>
<h1>ADMISSIONS ENQUIRIES ARE NOW OPEN</h1>
<div class="row" style="padding-top: 30px;">
          <div class="col-md-6" style="padding-top:100px;">
                    <h4>KGISL INSTITUTE OF TECHNOLOGY</h4>
<h4>KG Information Systems Private Limited</h4>
<h4>KGiSL Campus, 365, Thudiyalur Road,</h4>
<h4>Saravanampatti, Coimbatore – 641035.</h4>
<h4>Phone : 0422 266 6187</h4>
<h4>Email : admission@kgkite.ac.in</h4>


</div>
<div class="col-md-6" style="padding-top: 0px;">
```

```
<form class="form-style-9" action="insert.php" method="POST">
<ul>
<li>
   <input type="text" name="aname" class="field-style field-full align-left"
placeholder="Name" />
</li>
<li>
   <input type="email" name="email" class="field-style field-full align-left"
placeholder="Email" />

</li>
<li>
   <input type="text" name="pno" class="field-style field-full align-left"
placeholder="Phone" />
</li>
<li>
   <input type="text" name="dob" class="field-style field-split align-left"
placeholder="YYYY-MM-DD" />
          <input type="text" name="cut" class="field-style field-split align-right"
placeholder="Cut-Off" />
</li>
<li>
<textarea name="adr" class="field-style" placeholder="Address"></textarea>
</li>
<li><label>Willing to join: </label>
          <input  type="radio" name="dept" value="CSE"> CSE
   <input  type="radio" name="dept" value="IT"> IT
   <input  type="radio" name="dept" value="MECH"> MECH
   <input  type="radio" name="dept" value="ECE"> ECE
   <input  type="radio" name="dept" value="CIVIL"> CIVIL
</li>
<center>
<li>
<input type="submit" value="SUBMIT" />
</li>

<span style="font-weight:900;">Counselling Code :<span style="    font-
weight: 900;color: red;">2751</span></span>
</center>
</ul>
</div>
</div>
```

```
</form>

</body>
</html>
```

insert.php

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet"
href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
</head>

<style type="text/css">
.form-style-9{
    max-width: 500px;
    background: #FAFAFA;
    padding: 30px;
    /*margin: 50px auto;*/
    box-shadow: 1px 1px 35px rgb(0,0,255,0.2);
    border-radius: 10px;
    border: 3px solid #305A72;
     position: relative;
   /* left: 270px;*/
}
.form-style-9 ul{
    padding:0;
    margin:0;
    list-style:none;
}
.form-style-9 ul li{
    display: block;
    margin-bottom: 10px;
    min-height: 35px;
}
.form-style-9 ul li  .field-style{
    box-sizing: border-box;
    -webkit-box-sizing: border-box;
    -moz-box-sizing: border-box;
    padding: 8px;
    outline: none;
    border: 1px solid #B0CFE0;
```

```
    -webkit-transition: all 0.30s ease-in-out;
    -moz-transition: all 0.30s ease-in-out;
    -ms-transition: all 0.30s ease-in-out;
    -o-transition: all 0.30s ease-in-out;

}.form-style-9 ul li  .field-style:focus{
    box-shadow: 0 0 5px #B0CFE0;
    border:1px solid #B0CFE0;
}
.form-style-9 ul li .field-split{
    width: 49%;
}
.form-style-9 ul li .field-full{
    width: 100%;
}
.form-style-9 ul li input.align-left{
    float:left;
}
.form-style-9 ul li input.align-right{
    float:right;
}
.form-style-9 ul li textarea{
    width: 100%;
    height: 130px;
}
.form-style-9 ul li input[type="button"],
.form-style-9 ul li input[type="submit"] {
    -moz-box-shadow: inset 0px 1px 0px 0px #3985B1;
    -webkit-box-shadow: inset 0px 1px 0px 0px #3985B1;
    box-shadow: inset 0px 1px 0px 0px #3985B1;
    background-color: #216288;
    border: 1px solid #17445E;
    display: inline-block;
    cursor: pointer;
    color: #FFFFFF;
    padding: 8px 18px;
    text-decoration: none;
    font: 12px Arial, Helvetica, sans-serif;
}
.form-style-9 ul li input[type="button"]:hover,
.form-style-9 ul li input[type="submit"]:hover {
    background: linear-gradient(to bottom, #2D77A2 5%, #337DA8 100%);
    background-color: #28739E;
```

```
}

h1 {
   text-align: center;
   text-transform: uppercase;
   color: #000000;
          }

          h4{
   text-align: justify;
   text-indent: 100px;
   color: #000000;
   font-style: italic;
   color: #00008B;

}
h4
{
          text-indent: 100px;
          font-style: italic;
          color: black;
}

</style>
<h1>ADMISSIONS ENQUIRIES ARE NOW OPEN</h1>
<div class="row" style="padding-top: 30px;">
          <div class="col-md-6" style="padding-top:100px;">
                    <h4>KGISL INSTITUTE OF TECHNOLOGY</h4>
<h4>KG Information Systems Private Limited</h4>
<h4>KGiSL Campus, 365, Thudiyalur Road,</h4>
<h4>Saravanampatti, Coimbatore – 641035.</h4>
<h4>Phone : 0422 266 6187</h4>
<h4>Email : admission@kgkite.ac.in</h4>


</div>
<div class="col-md-6" style="padding-top: 0px;">
<form class="form-style-9" action="insert.php" method="POST">
<ul>
<li>
   <input type="text" name="aname" class="field-style field-full align-left"
placeholder="Name" />
</li>
```

```
<li>
   <input type="email" name="email" class="field-style field-full align-left"
placeholder="Email" />

</li>
<li>
   <input type="text" name="pno" class="field-style field-full align-left"
placeholder="Phone" />
</li>
<li>
   <input type="text" name="dob" class="field-style field-split align-left"
placeholder="YYYY-MM-DD" />
          <input type="text" name="cut" class="field-style field-split align-right"
placeholder="Cut-Off" />
</li>
<li>
<textarea name="adr" class="field-style" placeholder="Address"></textarea>
</li>
<li><label>Willing to join: </label>
          <input  type="radio" name="dept" value="CSE"> CSE
   <input  type="radio" name="dept" value="IT"> IT
   <input  type="radio" name="dept" value="MECH"> MECH
   <input  type="radio" name="dept" value="ECE"> ECE
   <input  type="radio" name="dept" value="CIVIL"> CIVIL
</li>
<center>
<li>
<input type="submit" value="SUBMIT" />
</li>

<span style="font-weight:900;">Counselling Code :<span style="    font-
weight: 900;color: red;">2751</span></span>
</center>
</ul>
</div>
</div>
</form>
</body>
</html>
```

colbot.html

```
<!DOCTYPE html>
<html>
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">


<style>
.mySlides {display:none;}

body {
    margin: 0;
}

.center {
    margin: auto;
    width: 80%;
    text-align: center;
    color: #414141;
    padding: 40px;
}
.img{
            padding :30px;
}
#navbar {
  overflow: hidden;
  background-color: #545454;
}

#navbar a {
  float: left;
  display: block;
  color: #f2f2f2;
  text-align: center;
  padding: 16px 65px;
  text-decoration: none;
  font-size: 17px;
}

#navbar a:hover {
  background-color: #4E7CFF;
```

```
  color: #000;
}
.content {
  padding: 16px;
}

.sticky {
  position: fixed;
  top: 0;
  width: 100%;
}

.sticky + .content {
  padding-top: 60px;
}

</style>
<!-- ..... -->

</head>
<body>
 <div id="navbar">
    <a href="#campus">CAMPUS</a>
    <a href="#it">IT</a>
    <a href="#cse">CSE</a>
    <a href="#ece">ECE</a>
    <a href="#mech">MECHANICAL</a>
    <a href="#civil">CIVIL</a>
    <a href="index.php">RESERVE</a>

 </div>

 <!-- Campus Images -->
 <div id="campus" class="img">
 <div class="w3-content w3-section" style="max-width:900px">
  <img class="mySlides" src="1.jpg" style="width:100%">
  <img class="mySlides" src="2.jpg" style="width:100%">
  <img class="mySlides" src="3.jpg" style="width:100%">
  <img class="mySlides" src="4.jpg" style="width:100%">
  <img class="mySlides" src="5.jpg" style="width:100%">
  <img class="mySlides" src="6.jpg" style="width:100%">
  <img class="mySlides" src="7.jpg" style="width:100%">
  <img class="mySlides" src="8.jpg" style="width:100%">
```

```
</div>
</div>
</div>

<button class="w3-button w3-display-left w3-black" onclick="plusDivs(-
1)">&#10094;</button>
<button class="w3-button w3-display-right w3-black"
onclick="plusDivs(1)">&#10095;</button>

</div>



<br>
<!-- .....INFORMATION TECHNOLOGY..... -->

<div class="center" id="it">

  <h3>INFORMATION TECHNOLOGY</h3>
   <h4>You've got questions, we've got answers.</h4>
 <p>The B-Tech degree programme is a 4-year course in Information
Technology and is organizedit on a semester pattern from the second semester
to the eighth semester, the first semester being common to all branches of
Engineering. The students of IT department are specifically trained in the areas
of computer hardware, software engineering and communication
Technologies.</p>
 <img src ="it.png">
 <p>Our well experienced faculty members are imparting knowledge to the
students on the latest technologies in the field of Information Technology. We
have two teams of faculty, one from academic and another from industry. The
academic team handles the stipulated academic course-work and the other team
from the industry imparts the value added programs offered by the department.
Also the department offers four streams of training, namely programming,
software testing, networking and data base administration. Our infrastructure
speaks volumes about the quality education and training imparted by the
department.</p>
 <p>All the students are provided with computer facility and faculty members
have individual systems. Internet facilities are available round the clock, and the
department boasts robust Wi-Fi connectivity. The faculty handle classes with
audio video based teaching aids to facilitate a richer and more long lasting
academic experience. With the help of professionals from leading educational
institutions and the industry, the department organizes weekly seminars and
lectures on topics in-trend on a regular basis. The technical symposium called
```

"ARISTA" was conducted every year to enrich student learning capacity in all aspects and also in developing leadership qualities.
IT department students are encouraged to take seminars for higher secondary students of participating schools, and also their fellow college mates. The Seminars, Workshops, Lecture programmes and Industrial visits enrich student's learning capability. Weekly tests, monthly tests, assignments, model examination and a University end semester examination helps in assessing the student's performance. The students are encouraged to work on projects of Industry stalwarts including IBM, KGiSL and KGfSL in order to obtain a hands-on exposure to the industry.

<!-- .....CSE..... -->

<h3>COMPUTER SCIENCE ENGINEERING</h3>
<h4>There is no place like 127.0.0.1</h4>
Computer science is at the intellectual forefront of the digital revolution cse-500that will define the 21st century. In the last three decades, Computer science has grown from a somewhat obscure academic discipline into one of the driving forces of technological advance. Contrary to popular belief, the job market in computer science is robust and growing. Over the next several decades, computer scientists will continue to reshape the world in which we live.The jobs of tomorrow will use technologies not yet invented. Many of the software and hardware tools that enable these technologies are being invented by Computer Professionals. Such innovation requires dedication to learning, in the classroom, in the research laboratory, and throughout one's professional career.
<img src ="cs.png">
The Department of Computer Science at KiTE, offers a unique educational opportunity for students to achieve excellence through classes, rigorous practical sessions and participation in research. Our course gives skills essential to practicing engineering professionals; it is also an objective to provide experience in leadership, management, planning, and organization. And finally, an objective is to pass on to our students our passion for what we do, and to have the students comprehend that we also desire to continue to learn.

<!-- .....RESERVE..... -->

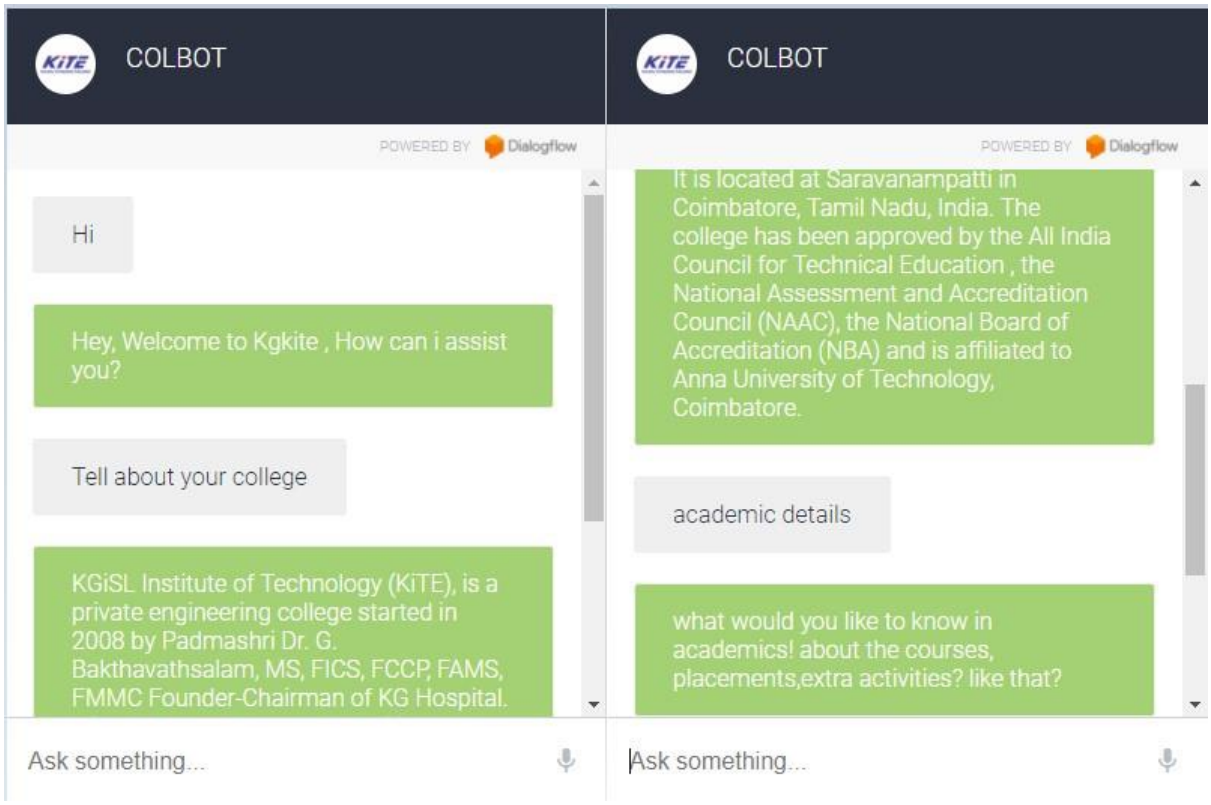
<!-- .....Script..... -->

```
<script>
window.onscroll = function() {myFunction()};

var navbar = document.getElementById("navbar");
var sticky = navbar.offsetTop;

function myFunction() {
  if (window.pageYOffset >= sticky) {
    navbar.classList.add("sticky")
  } else {
    navbar.classList.remove("sticky");
  }
}

</script>
<script>
var myIndex = 0;
carousel();

function carousel() {
    var i;
    var x = document.getElementsByClassName("mySlides");
    for (i = 0; i < x.length; i++) {
       x[i].style.display = "none";
    }
    myIndex++;
    if (myIndex > x.length) {myIndex = 1}
    x[myIndex-1].style.display = "block";
    setTimeout(carousel, 3000); // Change image every 2 seconds
}
</script>

<script>
var slideIndex = 1;
showDivs(slideIndex);

function plusDivs(n) {
  showDivs(slideIndex += n);
}

function showDivs(n) {
  var i;
```

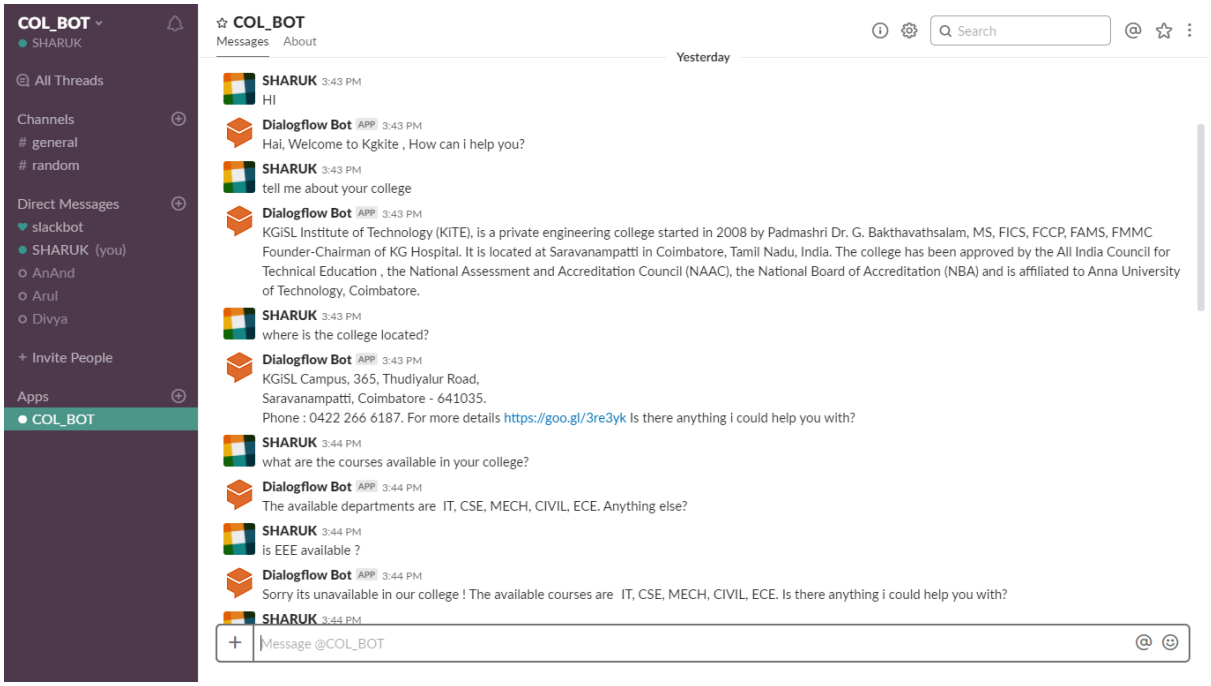
```
  var x = document.getElementsByClassName("mySlides");
  if (n > x.length) {slideIndex = 1}
  if (n < 1) {slideIndex = x.length}
  for (i = 0; i < x.length; i++) {
     x[i].style.display = "none";
  }
  x[slideIndex-1].style.display = "block";
}
</script>
</body>
</html>
```

9.2 SCREENSHOTS

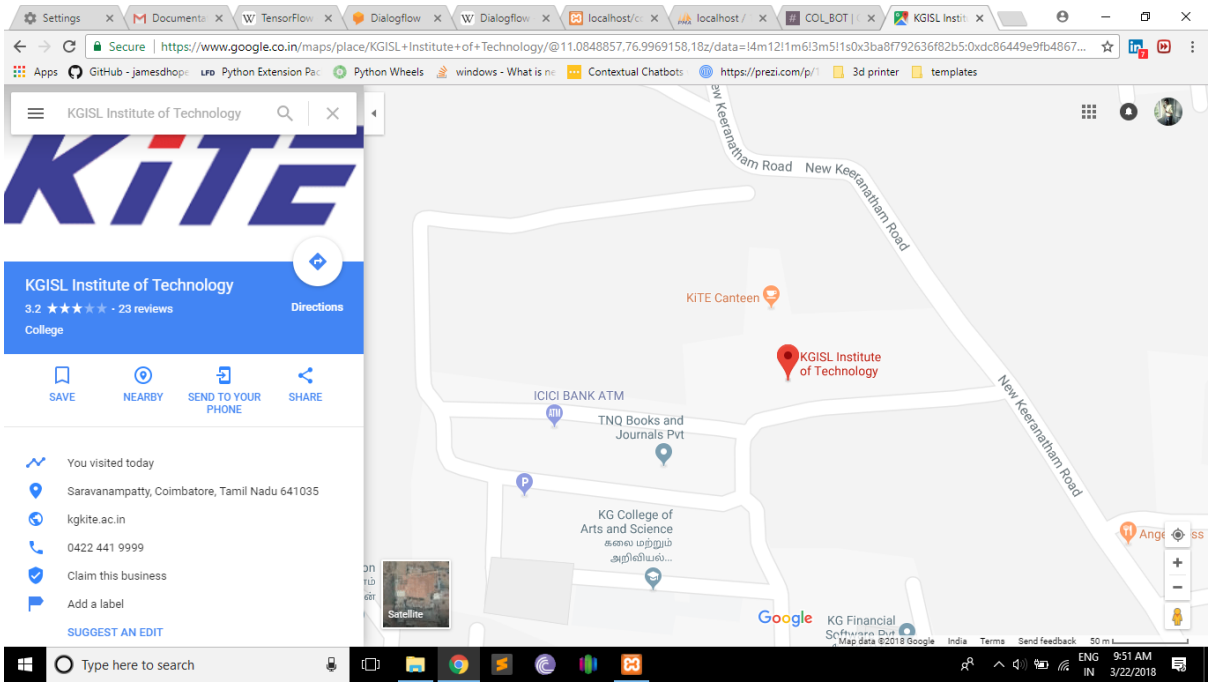
College Bot



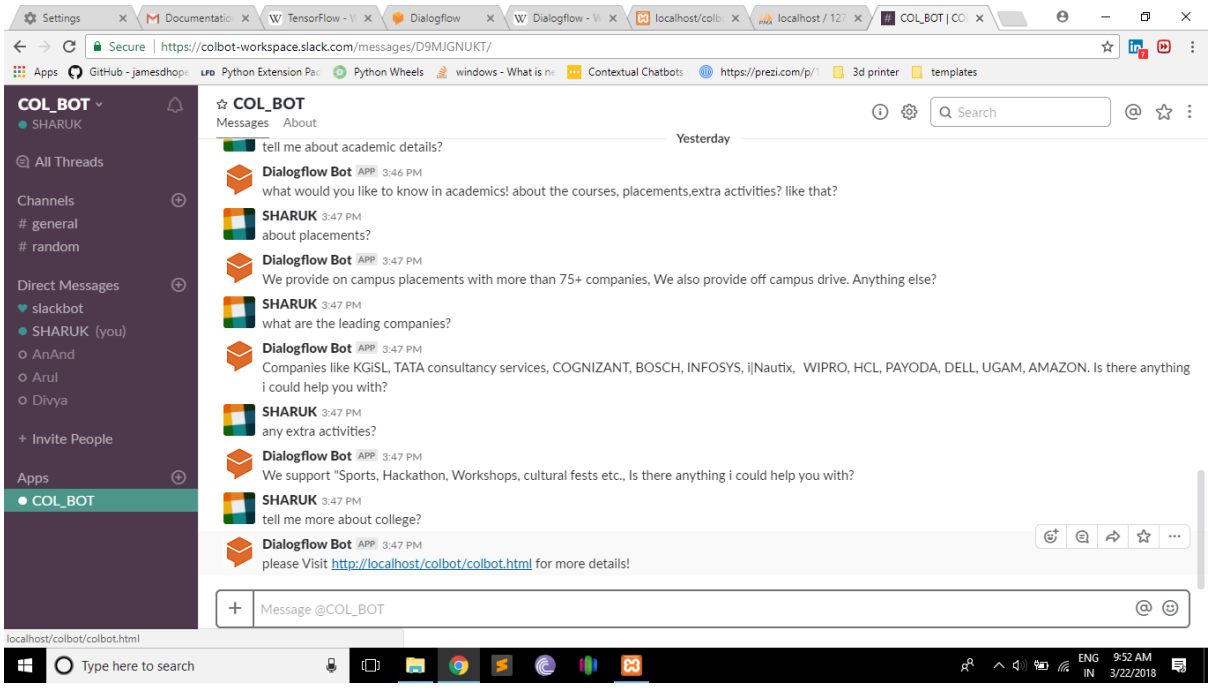
Slack integration



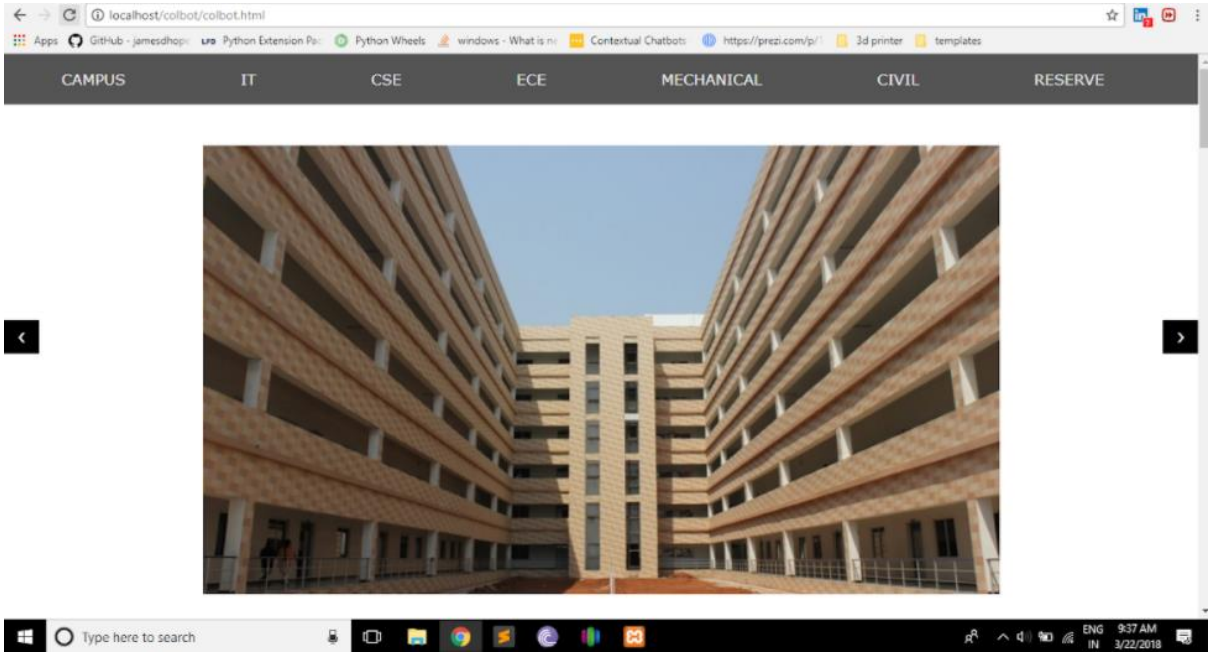
Location of College



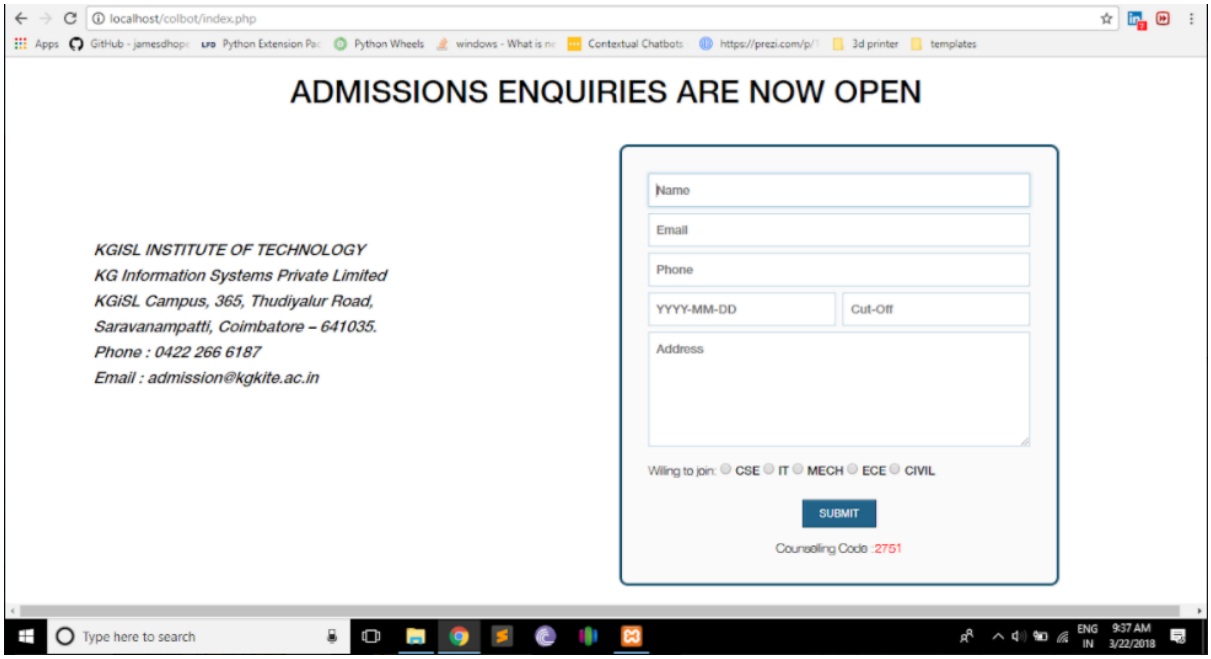
Chat with bot



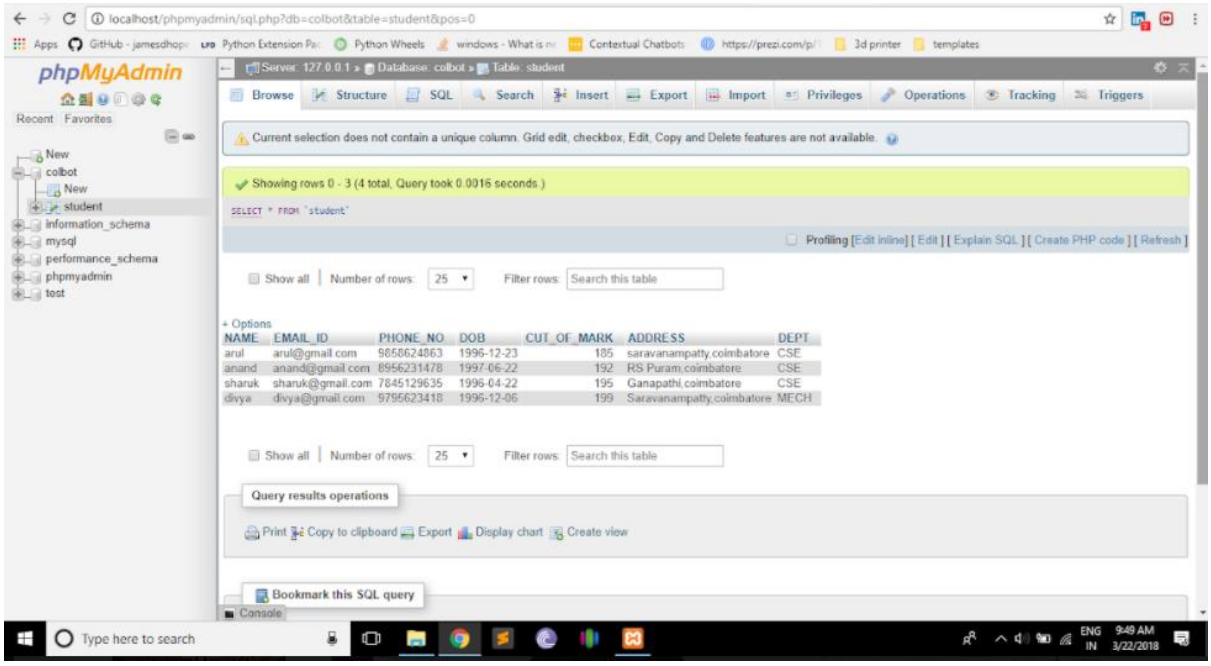
College Website



Admission form



Database


localhost/phpmyadmin/sql.php?db=colbot&table=student&pos=0
phpMyAdmin
Recent Favorites
New
colbot
New
student
information_schema
mysql
performance_schema
phpmyadmin
test
Server: 127.0.0.1 » Database: colbot » Table: student
Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers
Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.
Showing rows 0 - 3 (4 total, Query took 0.0016 seconds.)
SELECT * FROM `student`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table
+ Options
NAME EMAIL_ID PHONE_NO DOB CUT_OF_MARK ADDRESS DEPT
arul arul@gmail.com 9858624863 1996-12-23 185 saravanampatty,coimbatore CSE
anand anand@gmail.com 8956231478 1997-06-22 192 RS Puram,coimbatore CSE
sharuk sharuk@gmail.com 7845129635 1996-04-22 195 Ganapathi,coimbatore CSE
divya divya@gmail.com 9795623418 1996-12-06 199 Saravanampatty,coimbatore MECH
Show all | Number of rows: 25 Filter rows: Search this table
Query results operations
Print Copy to clipboard Export Display chart Create view
Bookmark this SQL query
Console
Type here to search
ENG IN 9:49 AM 3/22/2018

REFERENCES

CHAPTER 10
REFERENCES

https://viblo.asia/p/build-a-machine-learning-application-with-tensorflow-a-chatbot-Qpmleqdklrd#download-source-code-2

https://www.tensorflow.org/

https://dialogflow.com/

https://chatbotsmagazine.com/

https://github.com/jamesdhope/intent-based-chatbot-trained-using-tflearn

https://github.com/rfuchimi/chatbot-master

BOOKS

1. Chatbots – An introduction and easy guide to making your own by Oisin Muldowney
2. Hands-on chatbots and Conversational UI development by Srini Janarthanam
3. Zero to Bot by Aravind Mohanoor
4. Artificial Intelligence with Python Prateek Joshi