COLLEGE ENQUIRY CHAT BOT

(Software Requirement Specification)

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1. Introduction:

2. Modules and their description

2.1 Bot chat

User can chat with the bot it implies as if enquiring to the college person about college related activities. The chat can be regarding the areas of finding academic calendar, wardens information, timings of certain places in the college, college map, information about faculty of all departments.

2.2 Text to speech

User can chat with the bot it implies as if enquiring to the college person about college related activities. College guide agent is trained with training phrases which contain these entities. Database is fed with entities as the attributes and relations. Based on these agent replies back with appropriate answer by querying the entities available in the users input.

2.3 Admin

Admin can create entities and intents .He can also modify (update, delete) data existing data in the database.

* 1. Disadvantages of existing system
* Most of the people aren’t advanced in the present day technology so chat bot is not known to the people.
* Even, the Present day chat bot are not responding appropriately to the users question making the user losing his interest in the chat bot.
* Students need to go to their college’s main office to get the required details he needs.
* This present system wastes a lot of time in just finding the details about the college if the help desk is far away in miles.
* If the student isn’t able to get the details of the college it may lead to communication gap between the student and college.

3.2 Advantages of Chat bot

* Users does not have to go personally to NITK hostel office or any such physical places for the enquiry.
* This application enables the students to be updated with college cultural activities.
* This application saves time for the student as well as staff.

1. Requirements
   1. Hardware requirements

Operating system: Windows, Linux

Keyboard: 122 keys

Monitor

Hard disk: 20 GB

RAM: 256 MB

Processor: Dual core CPU

* 1. Hardware requirements

Front end: HTML, CSS, JavaScript

Back end: Python

Database: Mysql

Framework: python flask, Dialog flow API.

1. Proposed system
   * + - * Our college bot project is built using dialog flow API which takes users queries and understands the message in it and replies back accordingly.
         * It is a web application responding to general enquiries of students and also other activities like booking a night canteen order.
         * This simplifies the task of user and reduces the burden of searching explicitly on the internet.
         * Dialog flow handles the NLP part of the application and is responsible for extracting parameters from user input.
         * We train the agent with similar phrases and allows it expand by itself so that it can recognize user text and extract the parameters.
         * Default questions are replied with default answers.
         * Agent searches entities present in the query of the user.
         * Based on the training agent replies back by analyzing what intent the training phrase is referring to.
         * The system replies back with effective GUI as if real person is chatting from the other side.
         * This system keeps the student updated with the college information.
2. Documentation of Intents

The below table contains about the list of intents, what are the list of utterances for every intent, identifying the entities , specifying the actions determined by the intents and the extracted entities

|  |  |  |  |
| --- | --- | --- | --- |
| Intent | Sample Utterances | Entities | Actions |
| Academic\_calendar | Show academic calendar for 2018 odd sem  2015 even sem | {Semester}  {academic\_calendar-year} | Look the Academic\_calendar and direct to a web page containing the academic calendar of that year and sem the user wanted. |
| Faculty.search | I want all the professors with PhD qualification in CS dept. | {Professors}  {Department} | Look up the Faculty and display the names of all professors with qualification phd and department CSE. |
| HostelWardens\_Info | can you tell me phone number of warden of Mega tower 1 | {Block} | Look up the warden relation and display the phone number of the warden of block mega tower 1 |
| Campus.Timings | What are the timings of Health Care centre | {place} | Look up the Campus\_timings relation and display the block timings of the Block name Health care center. |
| Food.search | Can you tell the items available in 7th NC | {NC\_name} | Look up the food relation and direct to web page containing menu of 7th Block |
| Food.Order | I want one Biryani from 7Th NC | {NC\_name}  {Item}  {Quantity} | Place order in the NC\_Order relation with Quantity 1,Item Biryani, NC\_name 7Th block |
| Library.search | Where are the Ansi C books available in the library | {Book} | Look up the Library relation and display the shelf, floor and availability of the book Ansi C |
| Sports\_Complex | When can we play the cricket. | {Game} | Look up the Sports\_Complex and display the timings for the game cricket. |
| HCC.DoctorTimings | When will be the dermatologist in the HCC | {Specialist} | Look up the HCC relation and display the day, time and doctor name of the specialist Dermatologist. |
| Event.calendar | When is the Engi happening this year? | {event\_name} | Look up the event calendar table and respond with the corresponding dates. |
| Fest.schedule | When is the pro show in incident | {event\_name}  {Fest\_name} | Look up in the schedule table and respond accordingly. |

8. Algorithm:

* User enters his query.
* The bot extracts the action parameters from the given query.
* The parameter are passed onto the system.
* We perform the required action on the database using the passed parameters.
* The appropriate values from the database are returned.
* The bot converts the return values into text format and displays it to the user.
* The conversation is continued until the user stops it or default fall back intent occurs.

1. Conclusion:

The main objectives of the project were to develop an algorithm that will be used to identify answers related to user submitted questions. To develop a database were all the related data will be stored and to develop a web interface. The web interface is for students in the particular college. A background research took place, which included an overview of the conversation procedure and any relevant chat bots available. A database was developed, which stores information about questions, answers, keywords, logs and feedback messages. A usable system was designed, developed and deployed to the web server.