

Chat Bot for College Management System

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Abstract:

This paper proposes a smart application for College Bus Tracking System, which runs on Android smart phones and web. This enables students to find out the location of the bus so that they will not get late or will not arrive at the stop too early. The main purpose of this application is to provide exact location of the student's respective buses in Google Maps besides providing information like bus details, driver details, stops, contact number, routes, etc. and to provide location of student to their parents. This application may be widely used by the college students since Android smart phones have become common and affordable for all. It is a real time system as the current location of the bus is updated every moment in the form of latitude and longitude, which is received by the students through their application on Google maps.

Introduction:-This proposed system replies using an effective Graphical user interface that implies as if a real person is talking to the user. The user just has to register himself to the system and then login to the system. After login, user can access to various helping pages. These helping pages have the bot through which the user can chat, asking queries related to college activities. The system replies to the user with the help of effective graphical user interface. The user can query about the college related activities through the application. The user can inquire about college related activities such as date and time of annual day, sports day, and other cultural activities. This system helps update the student about the college activities. This proposed system also has an online notice board, where any Text notices or PDF documents can be displayed. This helps the user to be updated with the important notices. Less time is consumed in search of notices. The answer to the query will be answered on the basis of the user's queries and the knowledge base. The important keywords will be fetched from the system's updated knowledge and the answer to those keywords will be searched in the knowledge base. If the match is found, the relevant answer will be provided to the user or the default message will be shown to the user that "Answer to this query is not available at the moment, please revert back after some time". The "Keyword Matching" A chat bot (also known as a talk bot, Bot, chatterbox, Artificial Conversational Entity) is a computer program which conducts a conversation via auditory or textual method . Such programs are often designed to convincingly simulate how a

human would behave as a conversational partner, thereby passing the Turing test. Chat bots are typically used in dialog systems for a number of practical purposes including customer service or information acquisition. Chat bots are often integrated into the dialog systems of, for example, automated online assistants, giving them the ability of, for example, small talking or engaging in casual conversations unrelated to the scopes of their primary expert systems. College Enquiry Chat Bot project is built using artificial intelligence algorithms that analyzes user's queries and understand it. This system is an Android application which provides answers to the queries of the students. Students will just have to select the category for the department queries and then ask the query to the bot that will be used for chatting. The student's queries will be answered using Artificial Intelligence. The student will receive appropriate answers to their queries. The answers will be given using the built in artificial intelligence algorithms. Students won't have to go to the college for enquiries. Algorithm will be used to match the keywords from the knowledge base In some cases, user may find out that the answer given to his/her query is irrelevant. In such cases, the user can mark this answer as Invalid, and an instance of this, invalid answer will be sent to the Admin panel at the same time. Whenever Admin will log in, he will get to see the answers which are marked invalid and then he can do the necessary changes to the knowledge base so that user will get the proper result when he will ask the same query next time. The main aim of our Proposed System is to develop an Android based bot Application, which answers to the query of the student very effectively. Students just have to put their query to the bot which is used for chatting. The system will use the artificial intelligence algorithms to give appropriate answers to the user. If the answer is found invalid, then some systems declare the answer as invalid that can be incorporated. These invalid answers can be deleted or modified by the admin of the system at the Admin panel. The student will not have to go to the college for enquiring anything. Student can use the chat bot to get the answers to their queries. Students can use this Android based system for making enquiries at any point of time. This system may help students to stay updated with the college activities.

Related work:-

A. ALICE used a simple pattern template to represent input and output, and also using simple pattern matching algorithm. Between Elizabeth uses Input rules, keyword patterns and output rules to generate a response.

B. The recursive techniques used in ALICE is considered as a power point of the system, it is used for simplifying the input by calling match categories recursively. Contradictory, the nature of some rules in Elizabeth may cause cycling or iteration, which is solved by applying the rule only once if it is applicable for the active text more than 10 times in succession.

C. In ALICE there is the ability to combine two answers in the case of splitting happened within Normalization Process, or the partitioning caused by the recursive process. The recursive process provide a way to partition the sentence to two sentences then combine their results which is not available by Elizabeth.

D. The most important and strong issue in ALICE is the pattern matching algorithm, which is easy and depend on depth first search. This algorithm try to find the longest pattern matching between Elizabeth gives the response according to the first Keyword pattern matched.

E. Both systems can change personal pronouns, a lot of complicated appear in Elizabeth related to writing some rules in upper case and others in lower, which may cause a lot of errors and give unsuitable answers. Also both systems allowed memorization for the previous input, output for further using. But Elizabeth allows other actions to occur while the conversation is under progress, which is called the dynamic process like adding, modifying and deleting script commands.

Sr. No.	Paper	Author	Review
1	Example - based chat-oriented dialogue system with personalized long-term Memory-2016	J. Bang, H. Noh, Y. Kim and G. G. Lee,	proposed three features: POS-tagged tokens for sentence matching, using NE types and values for searching proper responses, and using back-off responses for unmatched user utterances
2	Designing a Chat-bot that Simulates an Historical Figure-2014	E. Haller and T. Rebedea	Developed a historical figure for building a conversational agent that could be used in middle-school scenarios
3	Keyword-based search and exploration on databases-2012	Y. Chen, W. Wang and Z. Liu,	keyword-based search and top-k query processing has been applied for exploring Knowledge base

Data flow Diagram :-

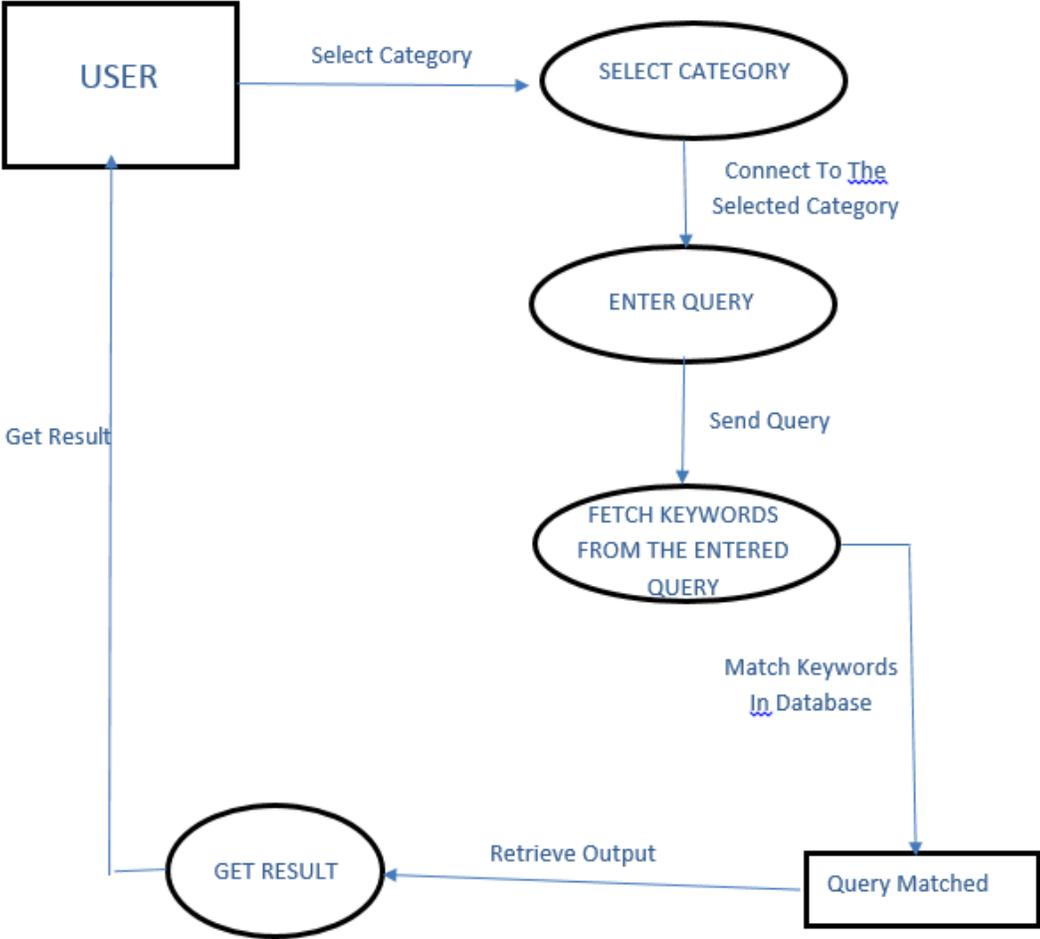
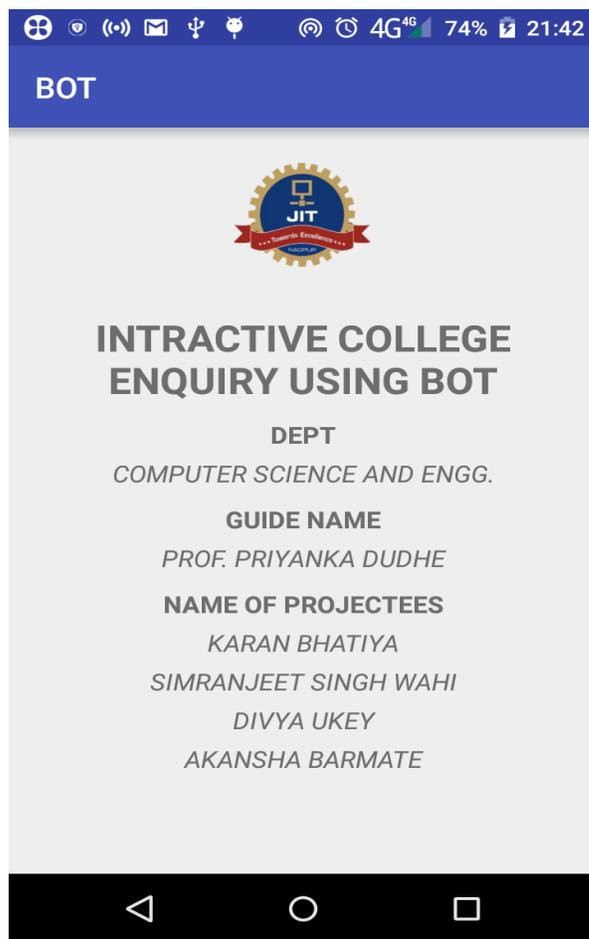
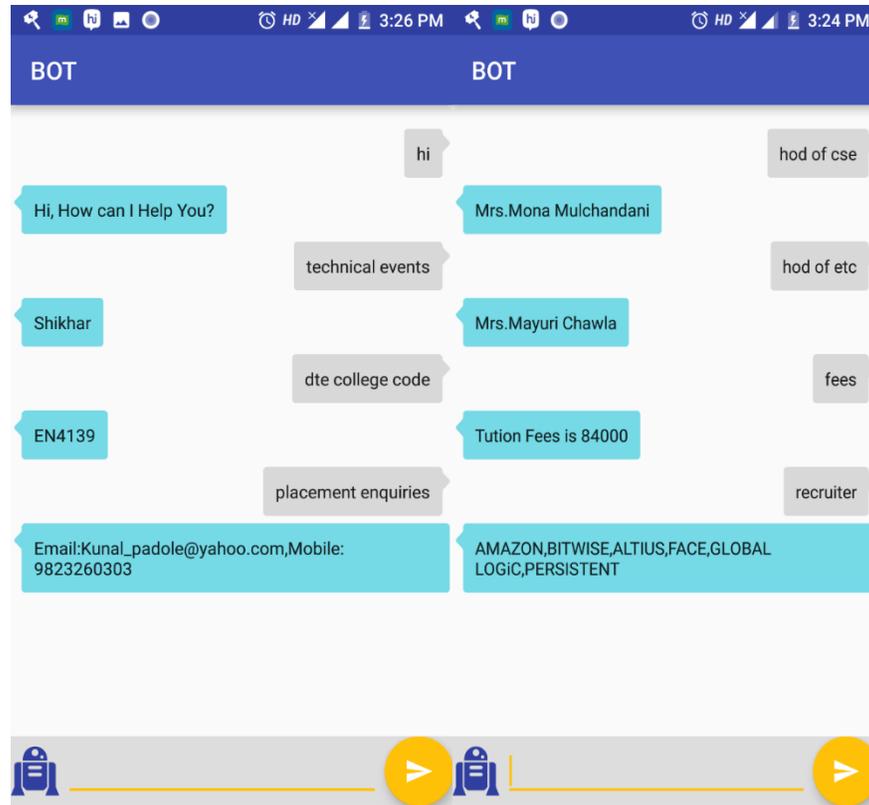


Figure:- Data flow diagram

Module Description:-



Landing page is our first page which will just flash for few second before entering /starting the main activity of chat-bot. This page will content information about all the projectees , college for which the chat-bot belongs and Guide name.



In this page we are using an markup language for giving the output to the users the language used is Artificial Intelligence Markup Language (AIML).The example are like the user gives the query “hi” and is getting an response answer “hi! Its delightful to see you” and further the chat may process further.

There are four modules in our project:-

Module 1 : Implementation of Complete Framework (all form Design)

Module 2 : Integration and Connectivity

Module 3 : Development Completion

Module 4 : Integration of complete system and Checking for correctness

Conclusion:-

The main objective of the project is to develop an algorithm that will be used to analyze answers related to user submitted queries. There is a need to develop a database where all the related data will be stored and to develop a web interface that helps solve students queries efficiently. The web interface developed will have two parts, one for simple users and one for the administrator.

A background research took place, which included an overview of the conversation procedure and analyses any relevant chat bots available. A database will be developed, which stores information about questions, answers, keywords, logs and feedback messages. A usable and effective system will be designed, developed and deployed to the web server.

References:-

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