



## An Automated chatbot Approach for Enabling Efficient handling in Institutions

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**Abstract**— This research intends to present a fresh approach to the problem of ongoing automation support in university and educational institution websites. The paper's goal is to address the issue of data storage and proper usage in the modern day, and it accomplishes this using a database, web and provide the relevant information to the users based upon the pre answered questions in the storage. The creation of an intelligent chatbot for institutions is the primary goal of this project. Any pertinent applications can later be incorporated with this code. The chatbots function both online and offline

**Index Terms**—Chatbot, Automation, JAVA, Educational Institutions, Data flow access.

### I. INTRODUCTION

In the modern day, data is the fundamental component. Data play a crucial role in everything from food items and groceries to sophisticated satellite and rocket components. To address the ever-expanding era of data science and its applications, a separate study on data analysis is being adopted in grade schools and institutions. Data is collected, and storage is used, but in recent years, proper and efficient use of the data with the right privileges has not been done, which has an impact on the system implementation process.

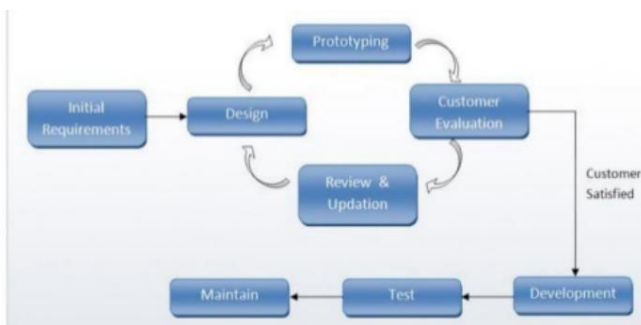


Fig 1. Development cycle of process development applications

Before being used in real time, any application procedure must be verified. The initial requirements must be organized, designed, and tested for accuracy under a variety of rigorous settings. The customer must then assess the requirements before putting them into development and maintenance once the end user has given their approval. The automated

placement process in educational institutions has been put into place using the same procedure. This suggested technique has the ability to enter data, eliminate duplicate data, assign access levels to each user based on the duplication check, and issue priority tokens to each user. This technique is more resource-efficient, secure, and doesn't have a time limit.

### II. EXISTING WORK AND SYSTEM

Although there are web-based portal systems for information providing in existence, they do not yet share complete data with all logged-in users and authorities. All the authorities are receiving either full information or incomplete information, which is either unnecessary or, on the other side, insufficient. The system is thrown into chaos as a result. The faculty member, staff member, or placement officer must be on hand at all times to ensure that the college information is accurate, current, and communicated with the businesses as needed.

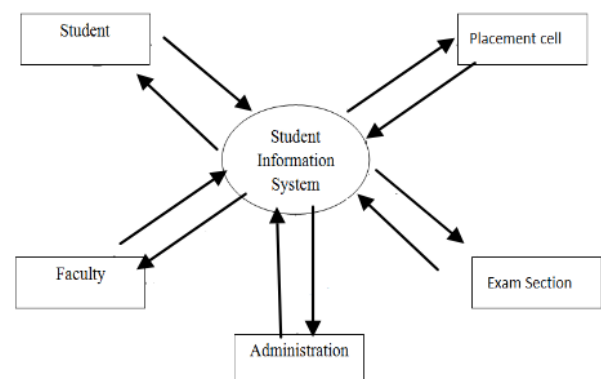


Fig 2. Existing system of the Placement process

The Faculty, Admin Team of the Systems, Placement cell, and the student themselves must all have access to the student's and college Information so they may make answers as and

when necessary. The employees and the system cell must be given the necessary permissions to cross-check the same in order for them to confirm the veracity of the data stored. All the authorities are given access to the stored data during the drive, even though it is not necessary. This has an impact on storage facilities, preventing the best utilization of cloud storage. As a result, they demand that de-duplication level storage solutions offer reliability on par with other more expensive systems. The ultimate goal is providing a hassle-free information providence system to the user, so that he gets answered automatically within a short span of time and with all relevant information that can be made available to him.

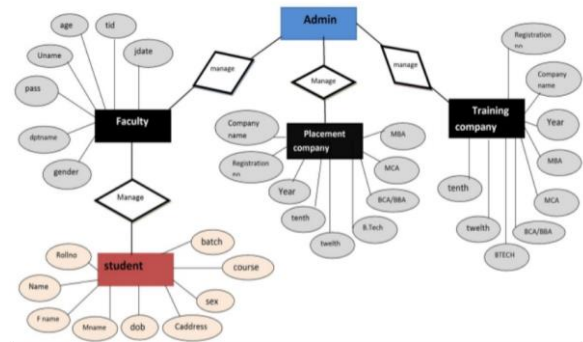


Fig 4. Process flow diagram of the Proposed System

### III. PROPOSED SYSTEM

We suggest a high-quality web architecture that makes use of shared information systems with access keys for users and reachable approved end users, in this case, recruitment agencies or parents. The address is saved, and the shared file is successfully stored. Provisional access has been made available to the professors, department staff, placement officer, specific student, and businesses in order to empower the information across the storage. The data stored can be accessed with relevant keywords and the answers to the keywords are stored in the web system. Whenever there is a query for the specific keyword, the system realizes the same and proceeds for the answers.

### IV. SYSTEM IMPLEMENTATION

The proposed system implementation consists of four different modules as the following, Welcome Module, Keyword Check Module, Q & A Maker, Display Module. Also the privilege to the staff and faculties to the same has been provided as an extension, so that the system can get updated information on the college activities and information. Student / user registration, Data File upload with access policies, process flow diagrams of models, User Download models and Front-End UI.

#### A. WELCOME MODULE

Welcome module consists of a certain query that come in handy when a user is logged in into the chatbot. The default display is the welcome message that has been set in the DB. Further queries and answers are based upon the interaction module .

#### B. KEYWORD PHRASE AND CHECK MODULE

The registered user can then have the privilege to access and any file or document to the storage. The file can be of any format such as document, pdf and others. Information about the college , placement activities and other relevant system that the management thinks to be provided to the user can be stored in the DB and can be fetched upon query.

#### C: Q & A MAKER MODULE:

Admin has the supreme power on the accessibility of the system. Q & A Maker Admin is the approval authority for the student as well as the user registration and documentation. Q & A Maker Admin console will be responsible for using the search engine for searching the data and the information. Also Q & A Maker Admin has access to delete or modify any file and has the authority to send mail or messages to any of the users within the system.

#### D. DISPLAY MODULE:

Visitor is the end user of the system. He / She can access and access the data to the system through proper channel on the website or any other means of app downloads. New user can create user account and upload the details, whilst the existing user can login through the user credentials prior provided / created.

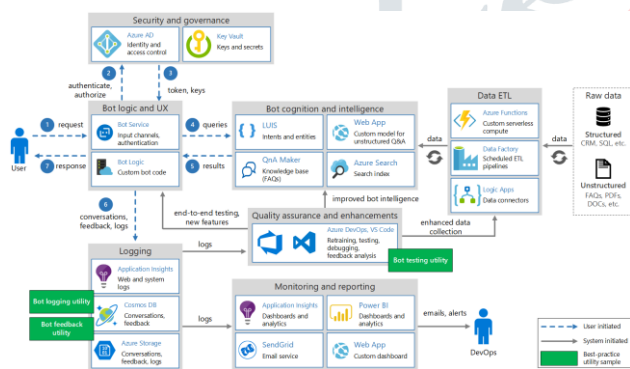


Fig 3. Architecture Diagram of the Proposed Chatbot

The proposed system design's process flow is intricate but effective. The system admin has access to submit all of his information. The faculty and the Training and Placement Officer have access to the information that the student has submitted. The information is accessible so that the faculty manager can verify the credentials of the student and the veracity of the information they have provided. The training and placement offices will have access to the entire student database, while the staff or professors will only have power over their specific group of students. This will prevent use permissions as well as unwanted access to irrelevant files and usage. All the details about the college , departments and the placement activities are stored in the database , so that they can be accessed whenever there is a web query.

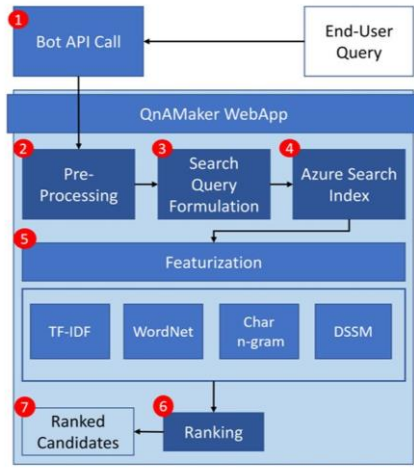


Fig 5. Data flow diagram of the Proposed System

**E. STAFF & TP ACCESS PRIVILEGE:**

The Faculty / Staff member and the TP Cell Member have the privilege to the college data, have authority to check and update the authenticity of the data upload and also keep track on the schedules of the activities within the college so as to provide the rightful information to the seeker.

**V. FLOW DIAGRAM MODELS**

Flow diagrams of each of the members is an indication of the process flow per user. Apart from the user managers, there are also some common features that is accessible to all

Fig 6. Data Flow Diagram for the Chatbot provision

the users within the system such as dashboard, placement notices, selected candidates, further notice regarding the placements and fee and transportation details and more.

**V. SCREENSHOTS OF IMPLEMENTATION**

The process of the automated approach to make the process of information provision in institutions more efficient has been successfully implemented and the following screenshots of the paper has been taken for consideration.

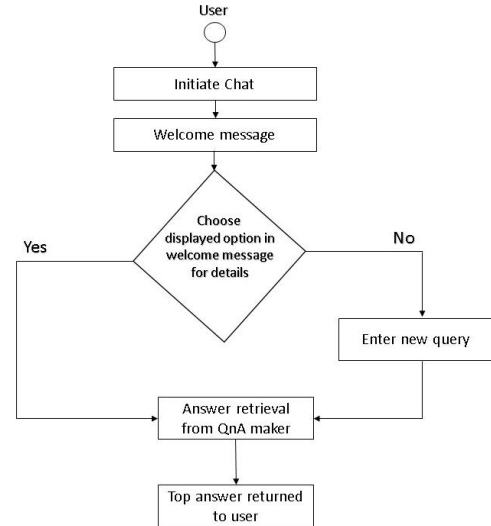


Fig7. Flow chart indication of the model

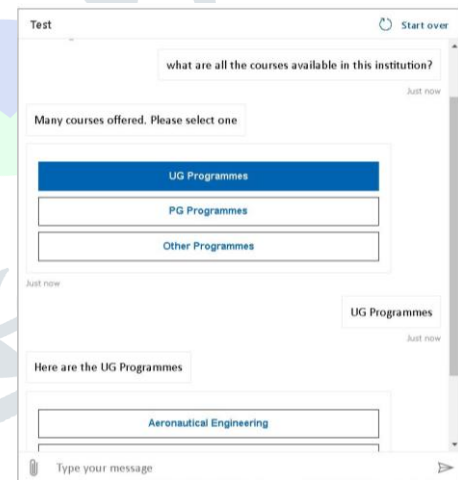
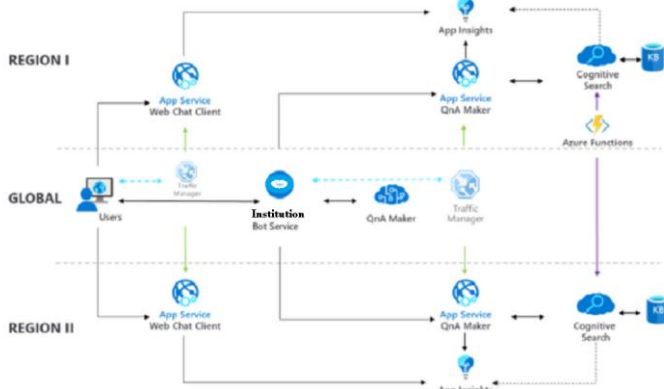


Fig8. Screenshot of College Information

The above screenshots present that multiple user credentials that has been saved in the server to allow ease of access to the user



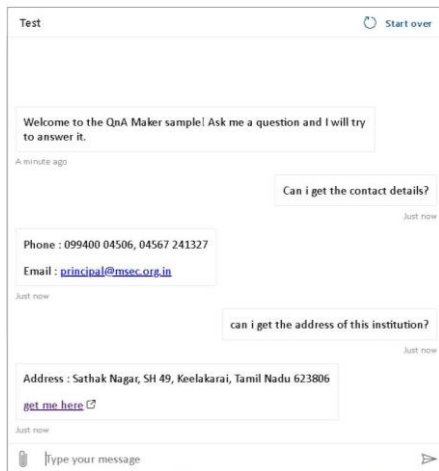


Fig 9 . . Screenshot of Contact Information

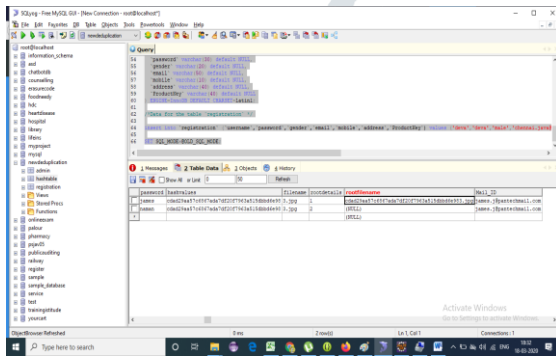


Fig 10 User Attributes – Back end

## VI. SOFTWARE SYSTEM

The Entire process is implemented using Java and the SQL Database.

### VI.A VISUAL STUDIO PLATFORM

The main reasons for selecting Visual Studio as the platform model for implementation are its usability (the user receives a response often in a matter of seconds) and platform stability. This portable application was created. Visual Studio has platform functionality is useful for both enhancing and adding new features.

VI.B. MySQL is the database implementation management system used in this process. This primarily helps in storing and retrieving the data from and to the system or the server upon requests from the user software applications.

## VII. CONCLUSION & FUTURE ENHANCEMENT

The paper is independently implemented. However, improvements to the status quo are always appreciated. In the future, it will be possible to forecast the placement statistics early on by using updated algorithms like ML and DL. However, this project was created with the goal of using the

absolute lowest amount of hardware and software while still delivering a quick response. Future feature additions can be made by widely deploying both hardware and software. There are no graphic illustrations in this paper. That might also be viewed as a potential upgrade in the future.

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