



College Chatbot / Student Registration Module For ERP

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ABSTRACT:

These days, a lot of people use smartphones that are loaded with new apps; technology is advancing daily. These days, artificial intelligence is being used extensively in a wide range of sectors, from public relations and customer service to the manufacturing of products. Because there are a lot of chatbots and other online artificial intelligence (AI) systems available to assist individuals in solving their difficulties. Thus, we want to deploy an artificial intelligence (AI) virtual assistant that can respond to any question about education. This device functions as a machine for college-oriented intelligence. Students will get answers to their questions on college-related matters via this virtual computer. A chatbot uses data stored in its database to recognise phrases and decides how to respond to a question by itself. The chatbot designed to answer college inquiries will be constructed with an algorithm that interprets user messages and assesses queries. One kind of web application is the College Enquiry Chat Bot, whose primary goal is to disseminate information about colleges. It only provides information on colleges. The details could include things like the number of college branches. Which courses does the college offer? The number of pupils in each branch? We can integrate this project into the college's operational website by making simple adjustments and adding more functionality. This project involved creating a web-based chatbot that converses with people using artificial intelligence language and libraries for natural language processing. It's a straightforward bot that responds to inquiries about the college.

Keywords: *Artificial Intelligence, Database, Intelligence Machine, Machine Learning*

INTRODUCTION

An online chatbot is a software programme that uses text or text-to-speech to carry out text-based or live agent conversations instead of requiring direct human interaction. created to accurately mimic a human's behaviour as a conversational companion. Artificial Intelligence Mark-up Language (AIML), a language based on XML that enables developers to set rules for the bot to obey, is one way to design bots. Another disadvantage is that it takes a lot of time to establish rules for various scenarios, and it is difficult to write rules for every scenario that could arise. According to the report, these bots are capable of handling basic inquiries but not sophisticated ones. In this study, a chatbot system is conceived, designed, and incorporated into a Facebook page utilising the Chat Fuel platform. The chatbot's design aims to give students the impression of conversing with college officials, answering their questions with conversational language. The chat fuel offers a plethora of other functions in addition to text responses for the user. The AI component that is set up makes the bot intelligent and responds to user inquiries.

The idea behind this project is to create an intelligent chatbot system that will handle academic tasks such as inquiries about admissions, cost structures, scholarship information, departmental schedules, and information about the documents that must be attached, among other things. Students will find it simple and quicker to get immediate answers to their questions using our chatbot system.

OVERVIEW

The main objective of "College Chatbot" is to minimize the time required to solve the queries of an user , reduce the workload on the college's office staff , save the time and strength of an user of visiting and contacting the administration office often,keep the user fully updated about the ongoing and upcoming events of college, etc.

MOTIVATION

Over the course of our studies, as students, we often acquire more knowledge about our school, college, and university. Typically, getting these details is a highly time-consuming and laborious process. For example, finding out the structure of our fees or the amount of money still owed could require a very time-consuming process in which we have to go to the administration building, find the appropriate window, look for a form that says "no due," fill it out accurately, and give it to the appropriate person so they can inform us of the amount owed. So why go through this tedious and pointless effort only to obtain this basic information? As students studying computer science, we are constantly eager to apply the technology we learn to solve problems in the

world and make it easier for people to use in everyday life. This is where the idea of presenting this information via an intelligent bot crossed our minds. Consider a programme in which all you have to do is ask. Ask the bot whether something is clear or not if you want to understand a student's free structure, and it will respond.

PROBLEM STATEMENT

At the start of each academic semester,

registration opens for those wishing to join the university in various disciplines, and telephone calls for admission and registration abound. In today's fast-paced educational landscape, students, faculty, and administrators at our college face several challenges related to information access, communication, and operational efficiency

ORGANIZATION OF REPORT

The topic describes general overview about the college chatbot system, the application necessary and objective.

DESIGN OF MODEL

- a. This chapter introduces architecture of the system and module of the system. It also contain the registration, verification, System Architecture

Figure 1 shows the general system architecture of the application where in the user and the admin interact with the web server which fetches the data from the database. This project can play a vital role in providing solution for tasks of residential societies that are critical to handle manually, by reducing efforts and advancements in a reliable communication.

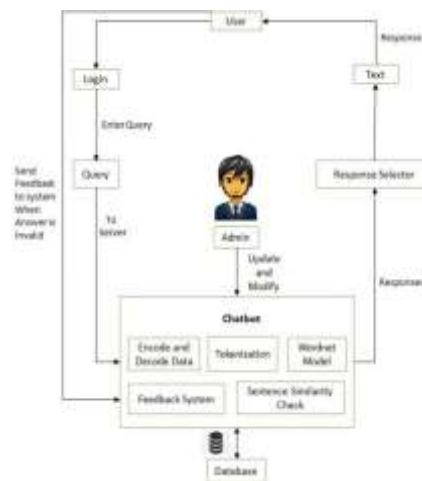


Figure 1: System Architecture

System Architecture has this major blocks

User Interface (UI)

Dialog Management Module

Data Integration Module

Authentication and Security Module

User Interface (UI)

This is the front-end module that provides the interface through which users interact with the chatbot. It can be a web application, mobile app, or integrated chat interface on the college website.

Dialog Management Module

Responsible for managing the flow of the conversation and maintaining context. It ensures that the chatbot can engage in meaningful and coherent exchanges with users.

Data Integration Module

Connects the chatbot to various data sources within the college's ecosystem, such as databases, websites, and APIs. This module enables the chatbot to retrieve real-time information, including academic schedules, campus events, or administrative details.

Authentication and Security Module

Ensures data security and user privacy. This module may involve user authentication, especially when accessing sensitive student information. It's crucial for compliance with data protection regulation.

DATA FLOW DIAGRAMS

A data flow diagram(DFD) is a graphical representation of the flow of data through information system, modeling it's 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.

DFD 0 LEVEL DIAGRAM

A context diagram is a top level(also known as

("Level 0") data flow diagram. Figure 2 shows a Level 0 diagram.It only contain one process node("Process 0") that generalizes the function of the entire system in relationship to external entities.

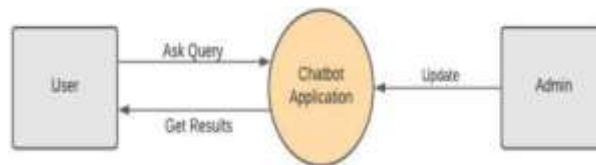


Fig. 2 DFD level 0 diagram

DFD 1 LEVEL DIAGRAM

The Level 1 DFD shows how the system is divided into sub-system(processes),each of which deals with one or more of the data flows to or from an external agent and which together provide all of the functionality of the system as a whole. Figure 3 shows a Level 1 diagram.

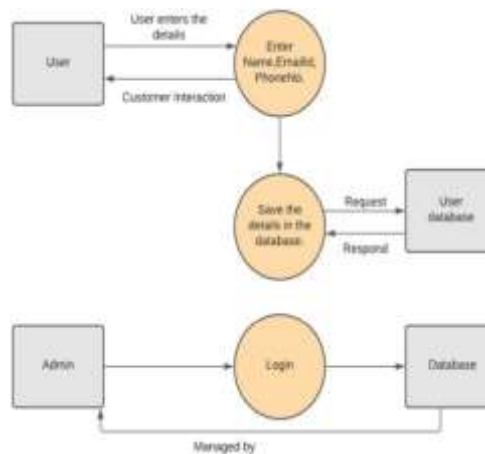


Figure 3 DFD Level 1 Diagram

I. UML DIAGRAMS

a. Use Case Diagram

Actor:

A coherent set of roles that users of use cases play when interacting with the use cases.

Use case:

UML stands for Unified Modeling Language. UML is a language for specifying visualization and documenting system. this is the step while developing any product after analysis. The goal from this is to produce a model of the entities involved in the project which later need to be build. The representation of the entities that are to be in the product being developed need to be designed.

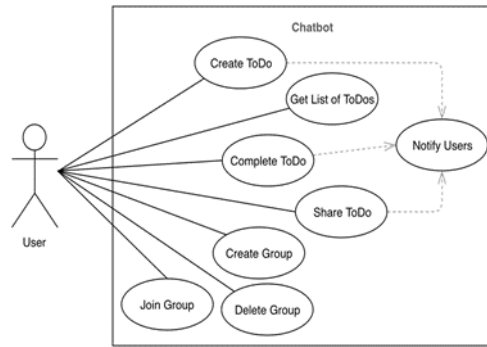


Fig 4 Use Case Diagram

b. Sequence Diagram

Sequence diagram and collaboration diagram are call INTERACTION DIAGRAM. An interaction diagram shows an interaction , consisting of set of object and their relationship including the message that may be dispatch among them sequence diagram simply depicts interaction between objects in a sequential order i.e. the order in which these interactions take place. We can also use the terms event diagrams or event scenarios to refer to a sequence diagram. Sequence diagrams describe how and in what order the objects in a system function .Figure 5 shows a Sequence Diagram.

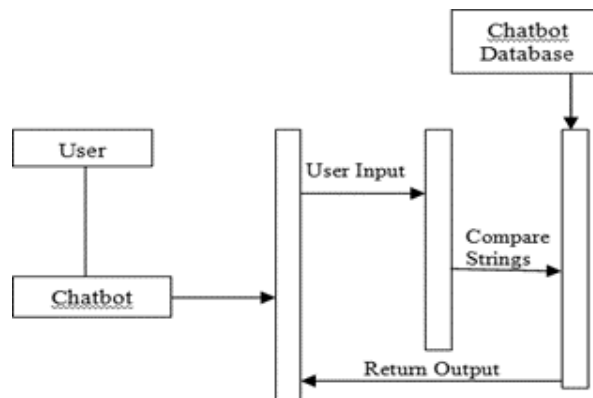


Figure 5: Sequence Diagram

c. Class Diagram

Class diagram are the most common diagrams used in UML. Class diagram consists of classes, interfaces, association and collaboration. It basically represent the object oriented view of a system which is static in nature. Figure 6 shows a class diagram.

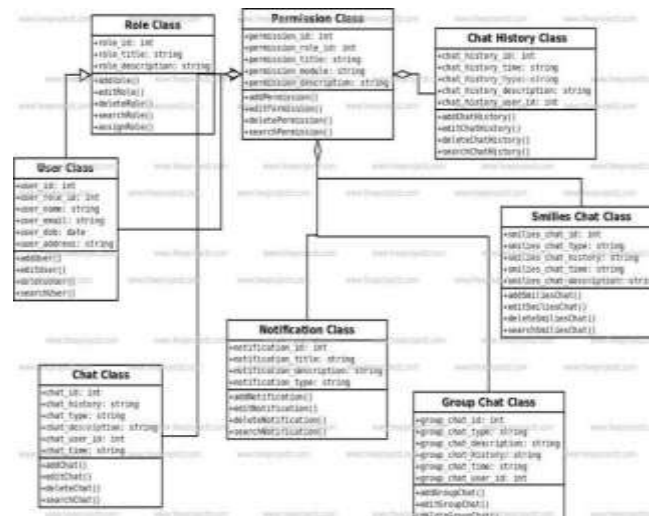


Figure 6: Class Diagram

d. Activity Diagram

Activity diagram are the graphical representation of work flows of step wise activ- ties and action with support for choice, iteration and concurrency. In this Unified Modeling Language, Activity diagram can be used to describe the business and op- erational step-by-step work flows of component in a system. An activity diagram are constructed from limited number of shapes, connected with arrows. The most important shape type: Arrows run from the start towards the end represent the order in which activity has done.

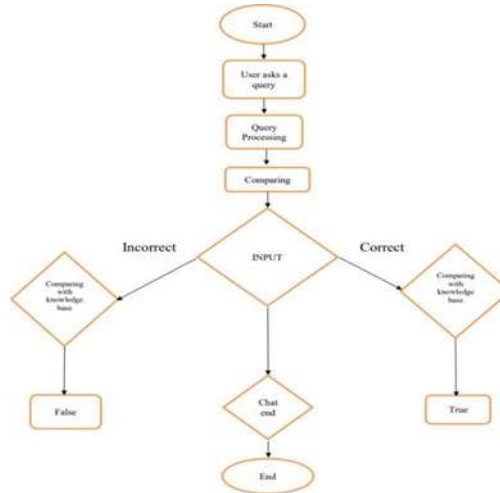


Figure 7: Activity Diagram of College Chatbot

MODULES OF RPORTAL

Maintenance Management Module

The upkeep of facilities in Society and Apartments is vital. So will it be in yours. Every member has different needs and has to be provided with these facilities accord- ingly and then billed for the same each month/yearly. This is much work when done manually. Then providing correct bills for the usage needs to be done meticulously. Have you attained this needed precision each time when done manually? Why not let this huge responsibility be handled digitally? We are here to provide this facility with our maintenance management module.

Function Of Module:

Going digital brings in many benefits to both the occupants and managers. So go for our maintenance management software to avail the benefits. You can manage the provision and billing of the facilities in your society, apartment buildings or corporate offices with efficiency, ease, and precision using this module.

Easy payment gateways

Different modes of payments

Generate reminders for late payment and nonpayment in Rportal

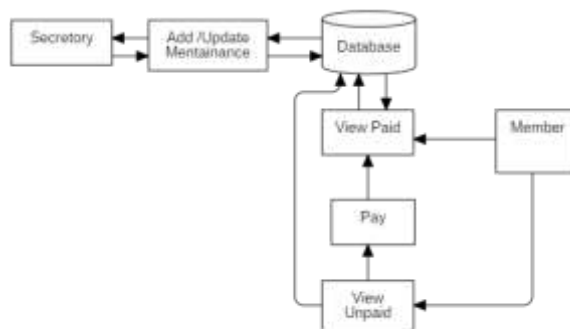


Figure 8: Maintenance Management Module Diagram

Input

Society account balance, yearly maintenance amount

Process

Add , update , view pay status ,pay amount

Output

Update, society balance and pay status

Working

Secretary can add and update annual maintenance then the data is stored into the database. A member can view there paid and unpaid status about the maintenance if the maintenance is unpaid then member can pay their bills and the status is updated in the database. The updated maintenance is also see by secretary.

Visitors Management Module

Visitors can't be stopped from calling in at apartment buildings or at the society/office buildings. For the safety of occupants here always such visits are tracked albeit manually. But doing so manually always has given room for lapses. These gaps have most of the time turned out to be truly costly for the residents and management. When we are here such slips can be done away with. Just visit our visitors management module at your place and keep every occupant safe from such attacks of culprits by tracking their details.

Function Of Module:

Going digital can be more beneficial as the manual lapses can be overcome with ease. The software can help running the society or community safely and securely once it is installed. Know the list of benefits and ensure occupants safety.

Register visitors digitally with image registration.

Make reports and run them

Know about the details immediately

Integrate security in all corners of the society

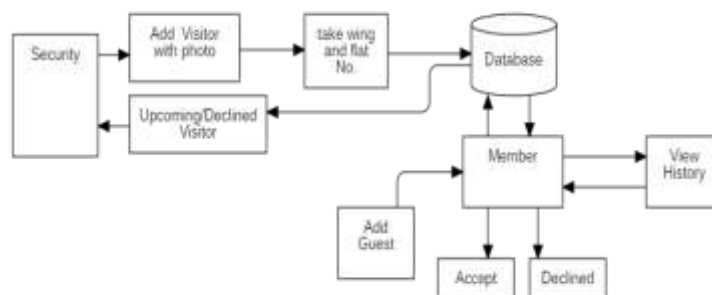


Figure 9: Visitors Management Module Diagram

Input

visitor details with Photo id ,member flat details

Output

view visitor in member side

Process

Add visitor, allow, declined, exit

Working

Security can add visitors with their photos he takes the member flat number and wing and stored into the database. Member are view new added guest if he know the guest are known Then he accepted the request and the guests are unknown he declined the guest request. Member can view history of past guests and also add upcoming guest information. This information is stored into a database. Security will view this information in upcoming guests/visitors.

Meetings Management Module

Holding meetings are a part and parcel of the residential world. These need to be scheduled and the venue and timings need to be arranged and planned. Again invites need to be sent and their seating arrangements have to be made. When such occasions are a frequent affair, managing this is really a tedious task. Again the agenda of each meeting and conference are different every time. But when using our Meetings module all this can be done with ease instead of doing everything manually.

Function Of Module:

Choosing to go digital over analog can bring about a lot of benefits for the users like you. So many tasks can be handled with ease which would have been difficult when done manually. Online meetings can be scheduled with the use of this module. So go about your meetings and video conference diligently availing the benefits.

Convene the meetings

Carry forward actions of meetings

Schedule meeting

Integrate with different tools

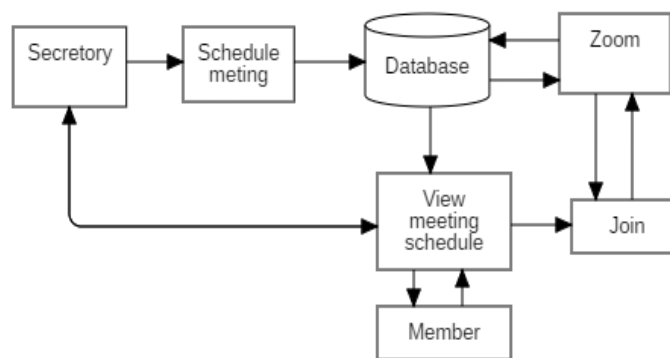


Figure 10. Meeting Management Module Diagram

Input

Create virtual meet with meeting details

Process

Generate zoom meeting link and share with society members

Output

Meeting is schedule

Working

Secretary will manage the schedule of society such as time date agenda, meeting duration and stored into a database. member will view the details of meeting and join with respective date and time.

Complaint Management Module

Making and managing complaints is one of the key features of the system. The system allows member to make complaint and secretary to manage those complaints. The member can raise an issue by making the complaint of it to the secretary. If the complaint is about security or staff member, member can also tag him into the complaint. Once the secretary receive the complaint, he can take the action on the complaint and if security or staff is tagged in it, they can give their justification / clarification to the secretary to and if complaint is resolved, secretary can close the complaint with proper reason of closing.

Function Of Module:

Immediate reply when contacted via any of these modes

Multilingual communication possible

Security and Staff can improve with suggestions

Heeding to complaints improves member/secretary/security/staff engagement and hence growth

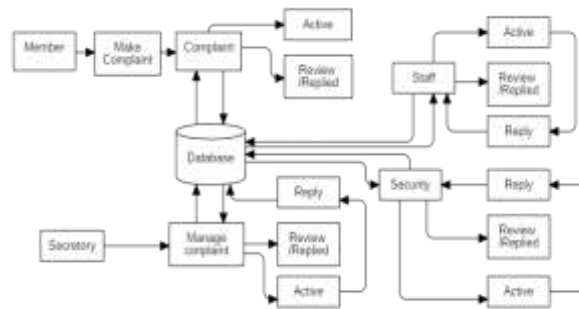


Fig 11: Complaint Management Module Diagram

Input:

Create complaint against secretary, security, staff.

Process

Complaint is register with specific user.

Output:

Complaint generated ,solve.

Working

Working of the complaint management system the member system the member can raise the complaint agents his staff and the security guard. If the complaint against the staff it will be seen only by staff, members and secretary. Secretary will take action against his staff. Staff also reply on that complaint. If the complaint against the security it will be seen only the security, member and secretary. Secretary will taken action against his security. Security also replied to that complaint, after that complaint will be close.

II. CONCLUSIONS

We have successfully implemented first module of project and with literature survey so we will implement our next modules within next semester.

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