# HOSPITAL MANAGEMENT SYSTEM WITH CHATBOT

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*Abstract :*

Through chatbots one can communicate with text or voice interface and get reply through artificial intelligence. Typically, a chat bot will communicate with a real person. Chat bots are used in applications such as ecommerce customer service, call centres and Internet gaming. Chatbots are programs built to automatically engage with received messages. Chatbots can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning to adapt their responses to fit the situation. A developing number of hospitals, nursing homes, and even private centres, presently utilize online Chatbots for human services on their sites. These bots connect with potential patients visiting the site, helping them discover specialists, booking their appointments, and getting them access to the correct treatment. In any case, the utilization of artificial intelligence in an industry where individuals' lives could be in question, still starts misgivings in individuals. It brings up issues about whether the task mentioned above ought to be assigned to human staff. This healthcare chatbot system will help hospitals to provide healthcare support online 24 x 7, it answers deep as well as general questions. It also helps to generate leads and automatically delivers the information of leads to sales. By asking the questions in series it helps patients by guiding what exactly he/she is looking for.

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## INTRODUCTION

Computers give us information; they engage us and help us in a lot of manners. A chatbot is a program intended to counterfeit smart communication on a text or speech. Yet, this paper concentrates only on text. Computers give us information; they engage us and help us in a lot of manners. A chatbot is a program intended to counterfeit smart communication on a text or speech. Yet, this paper concentrates only on text. Computers give us information; they engage us and help us in a lot of manners. A chatbot is a program intended to counterfeit smart communication on a text or speech. Yet, this paper concentrates only on text. Computers give us information; they engage us and help us in a lot of manners. A chatbot is a program intended to counterfeit smart communication on a text or speech. Yet, this paper concentrates only on text. These systems can learn themselves and restore their knowledge using human assistance or using web resources. This application is incredibly fundamental since knowledge is stored in advance. The system application uses the question and answer protocol in the form of a chatbot to

answer user queries. This system is developed to reduce the healthcare cost and time of the users, as it is not possible for the users to visit the doctors or experts when immediately needed
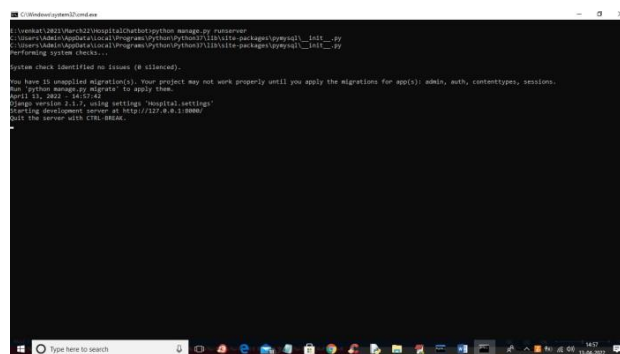
The response to the question will be replied based on the user query and knowledge base. The significant keywords are fetched from the sentence and answer to those sentences. If the match is discovered or the significant, answer will be given or similar answers will be displayed. The complex questions and answers present in the database are viewed and answered by an expert. Here the users can personally ask any questions regarding healthcare, as not much time will be wasted by the user for consulting a doctor. The input sentence of the chat pattern is stored in an Relational Database Management System (RDBMS). The chatbot would coordinate the input sentence from the user keywords are extracted from the given input sentence and the sentence similarity is found. The keyword ranking and sentence similarity are found using the N-gram, TF-IDF, and cosine similarity. The interfaces are standalone built using the PYTHON programming language. In this project we are designing hospital systems where chatbot will accept symptoms from patient and then suggest doctor availability date and time for that symptoms. To send SMS to doctor we need to have mobile service provider without that this service will not work and you are asking to generate prescription by chatbot but we don't have diseases and related medicines to generate prescription so we are not doing this but chatbot will suggest doctor by taking symptoms from patients.

EXISTING SYSTEM

In this project we are designing hospital systems where chatbot will accept symptoms from patient and then suggest doctor availability date and time for that symptoms. To send SMS to doctor we need to have mobile service provider without that this service will not work and you are asking to generate prescription by chatbot but we don't have diseases and related medicines to generate prescription so we are not doing this but chatbot will suggest doctor by taking symptoms from patients.

PROPOSED SYSTEM

a chat bot will communicate with a real person. Chat bots are used in applications such as ecommerce customer service, call centres and Internet gaming. Chatbots are programs built to automatically engage with received messages. Chatbots can be programmed to respond the same way each time, to respond differently to messages containing certain keywords and even to use machine learning to adapt their responses to fit the situation. A developing number of hospitals, nursing homes, and even private centres, presently utilize online Chatbots for human services on their sites.
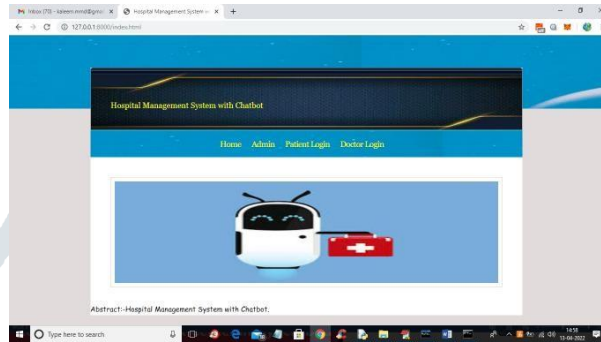
**II** WORKING AND IMPLEMENTATION

In above screen server started and now open browser and enter URL as http://127.0.0.1:8000/index.html and press enter key to get below output
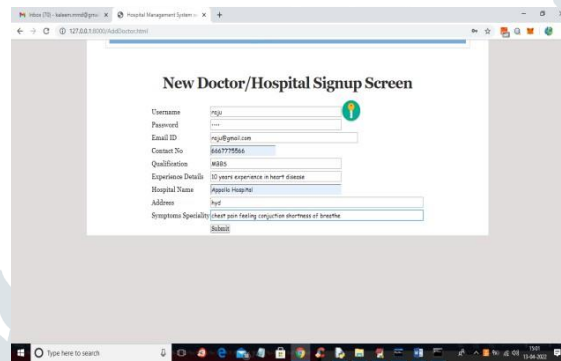


In above screen click on 'Admin' link to get below screen
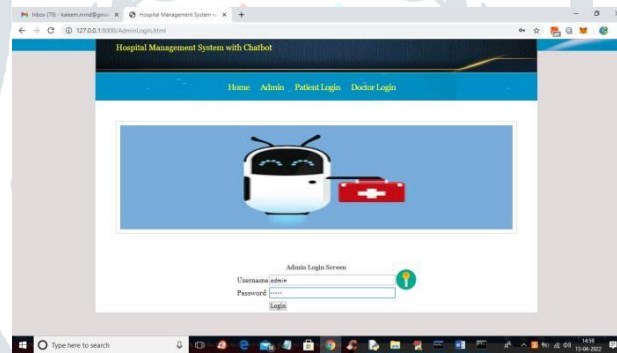
In above screen admin is login and after login will get below screen
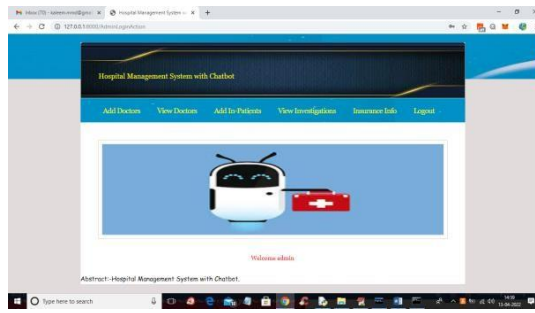


In above screen click on 'Add Doctors' link to add new doctor details



In above screen admin will ad doctor details and in last field admin will add doctor speciality separate with spaces so CHATBOT can match this with patient symptoms and suggest doctor and now press button to save details
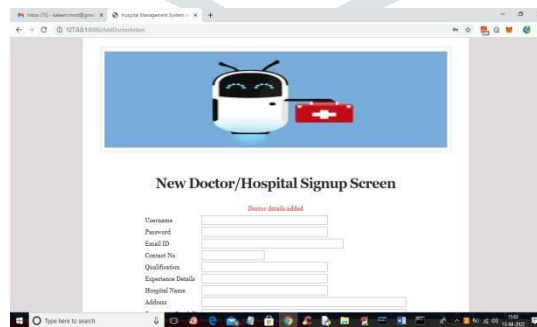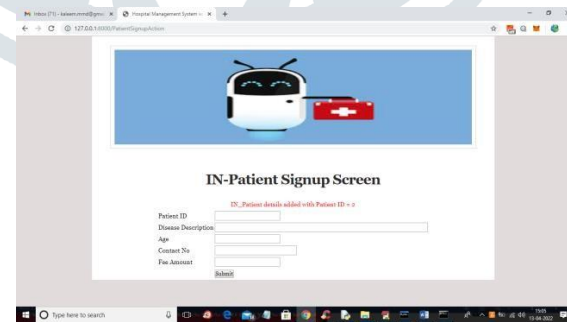
In above screen doctor details added and now click on 'View doctors' link to view all available doctors
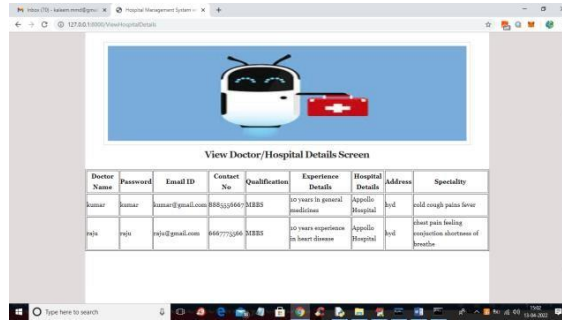


In above screen we can see all doctor details and now click on 'Add In- Patients' link to add patient details
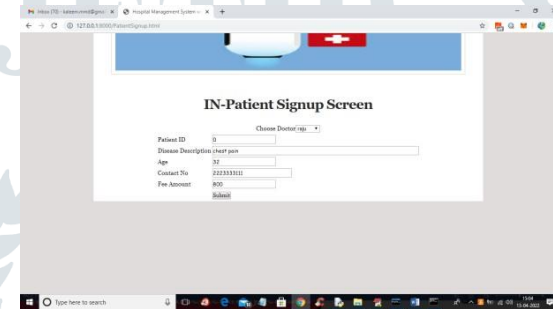


In above screen admin will select appropriate doctor for patient and then enter patient id as 0 if this patient is new so application will generate new ID and if old patient then you can enter existing patient ID and enter remaining details and press button to get below details
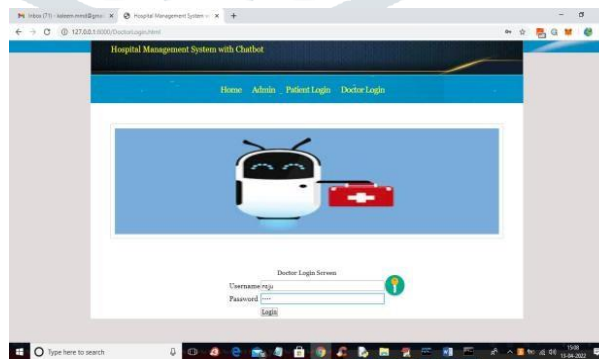
In above screen patient details added and generated ID is 2 and now click on 'View Investigations' link to view all patients details
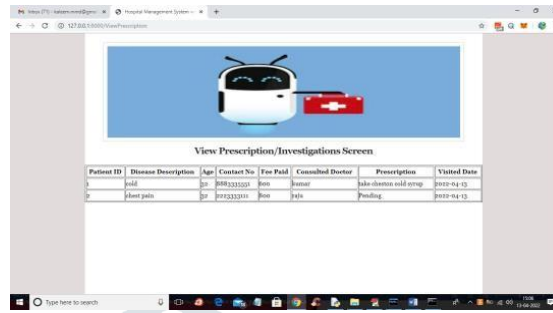


In above screen if doctor not given any prescription to any patient then it will display 'Pending' otherwise display the given prescription. Now click on "Insurance Info" link to view insurance details like below screen
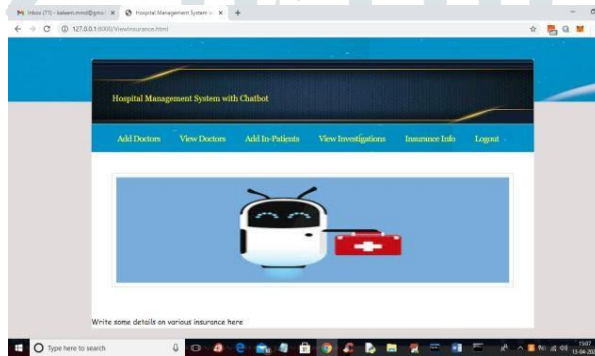


In above screen you need to write some insurance description so admin can explain to patients and now logout and login as patients
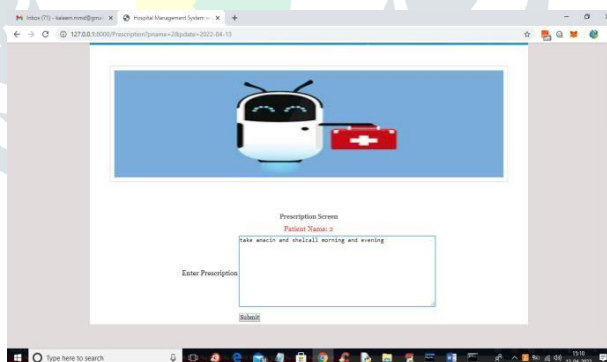
In above screen doctor is login and after login will get below screen
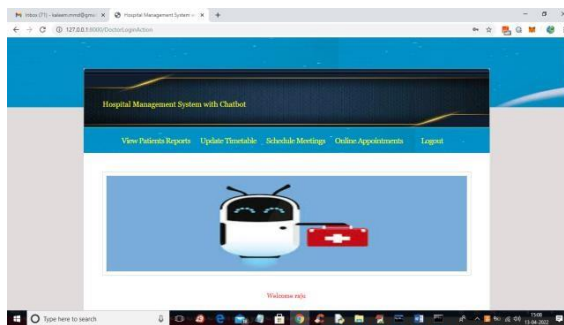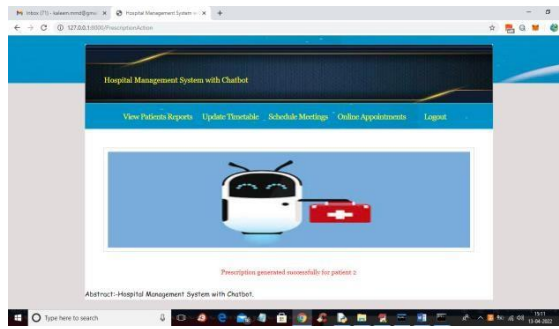


In above screen doctor can click on 'View Patients Reports' link to view In- Patient details and then generate prescription
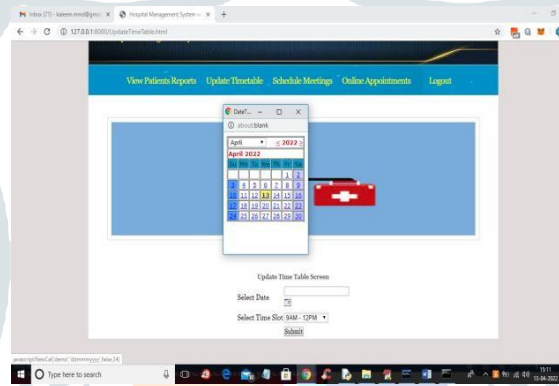


In above screen doctor can view all patient details and then click on 'Click Here' link to give prescription to patient
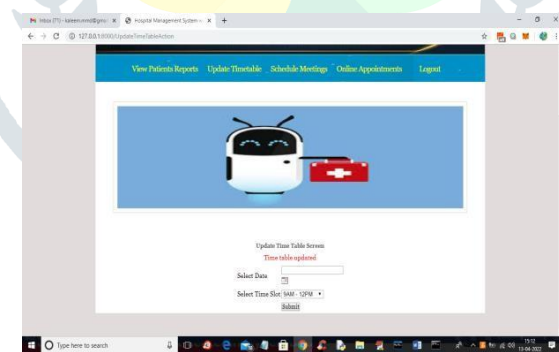


In above screen doctor is giving prescription to patient and press buttonto generate prescription like below screen
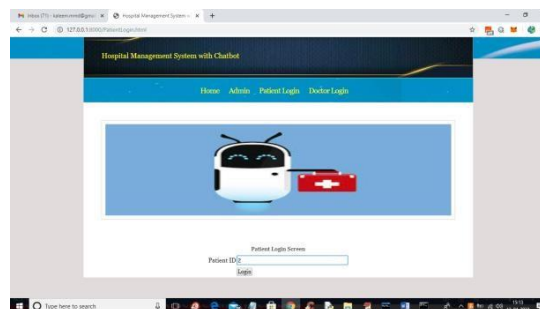
In above screen prescription generated and now click on 'Update Time Table' link to add time details
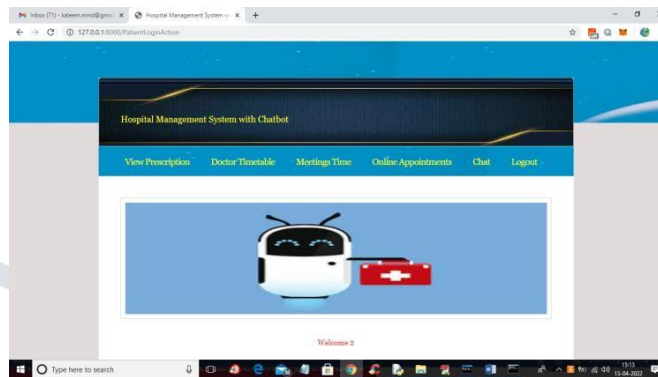


In above screen doctor will select date and then select time slot for time table and press button to update timing
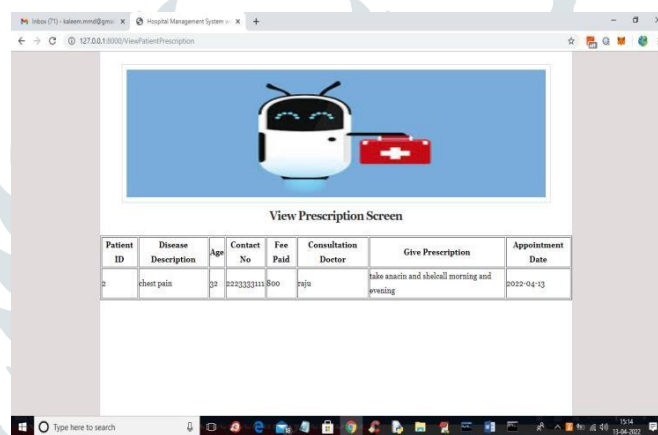


In above screen time table updated and similarly doctor can update meeting and online appointment timings and now logout and login as patient like below screen.
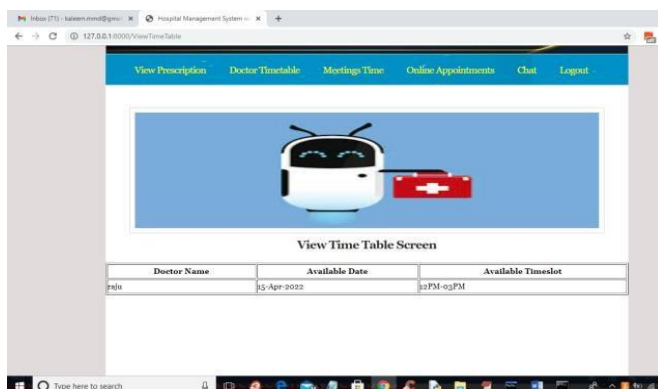
In above screen patient is login by entering his ID and press button to get below screen



In above screen patient can click on 'View Prescription' link to view prescription given by doctor



In above screen in prescription column patient can view the doctor prescription and now click on 'View Time Table' link to view all doctors available timing

In above screen patient can view the doctor availability details and similarly patient can view meetings and online appointment timing and now click on 'Chat' link to get below screen
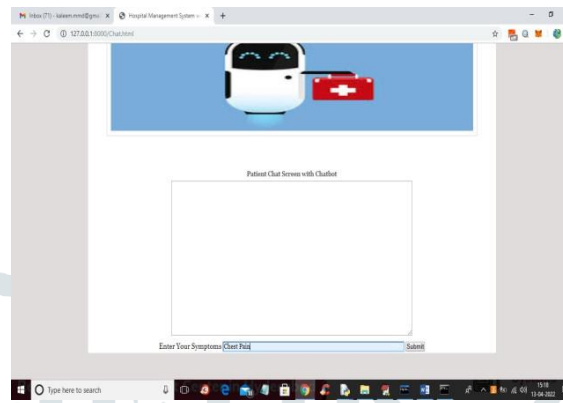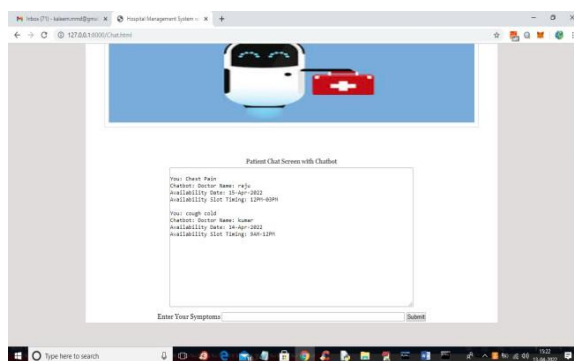


In above screen patient entered some symptoms and press button to get response from chatbot like below screen
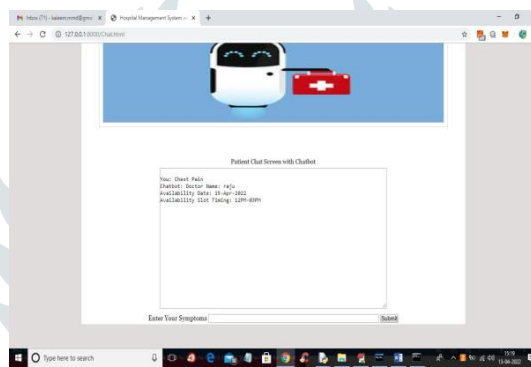


In above screen for given symptoms chatbot suggested doctor raju with date and time and now try another symptoms
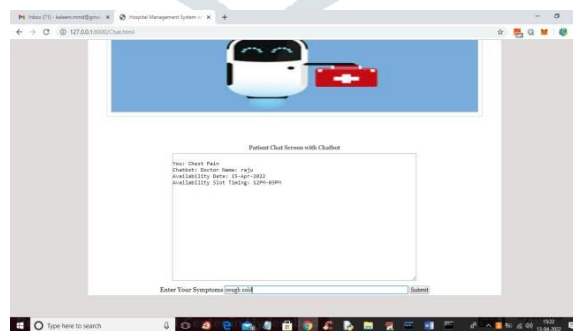
In above screen entered symptoms as cough and cold and below is the response



In above screen we got response from chatbot and if u give unrelated query then it will reply 'Not Available'

## CONCLUSION

The main objective of our hospital management system chatbot is to automate repeated tasks in a user-friendly manner such that it will provide hospital employees to focus on important tasks and also to enable fast response for customer instead of waiting for employee to solve their queries as user can interact with bot anytime. Enabling Speech recognition in our chatbot also helps customers to have a simple and fast conversation. The user interactive UI provides better navigation through the website. We have tested our application by trying various kinds of profiles. The results were satisfactory.

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