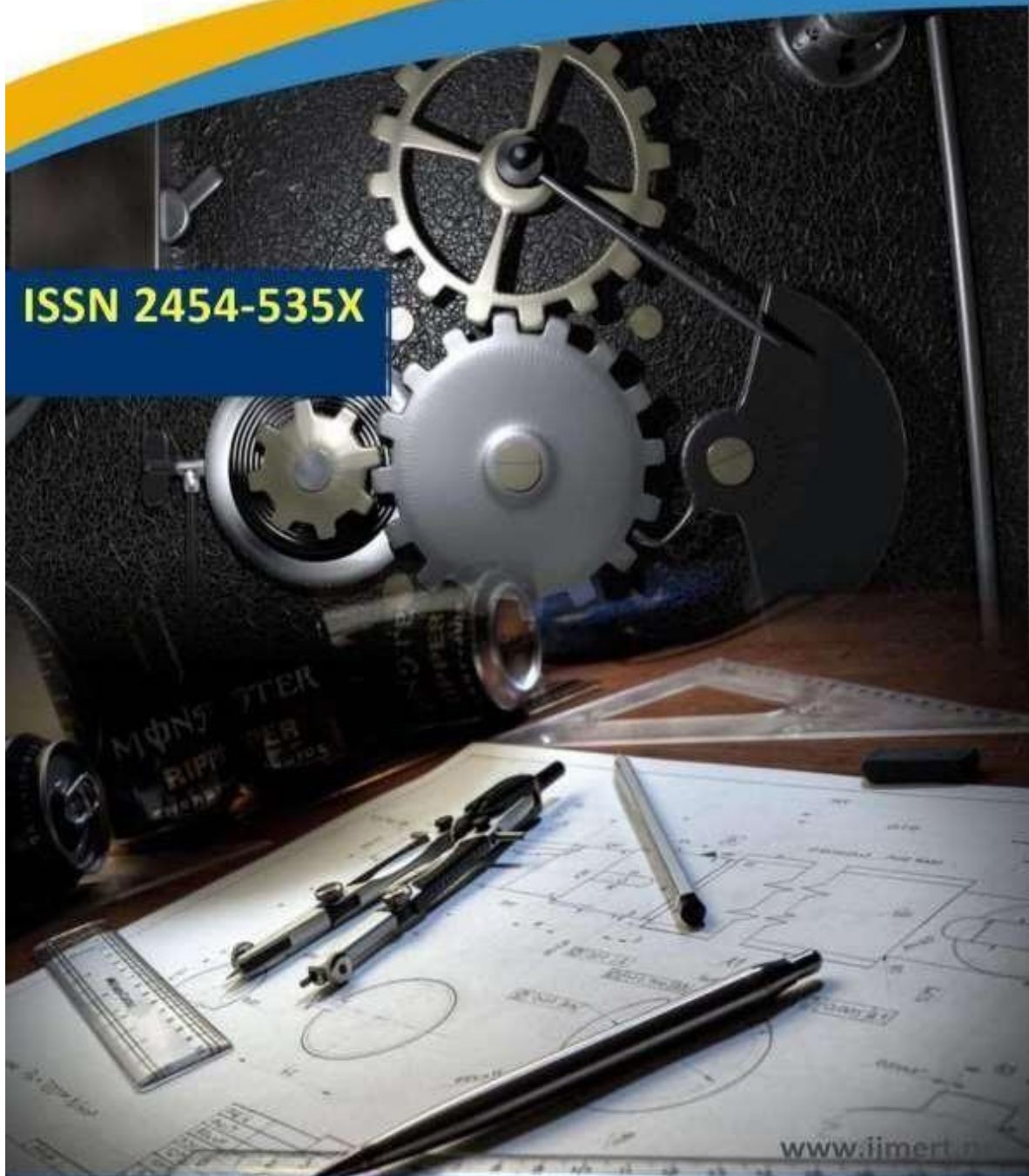




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HOSPITAL MANAGEMENT SYSTEM WITH CHATBOT

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ABSTRACT :

Through chatbots, individuals can engage in conversations via text or voice interfaces and receive responses generated by artificial intelligence. Typically, chatbots interact with real people, finding application in areas such as ecommerce customer service, call centers, and online gaming. These programs are designed to automatically respond to incoming messages. Chatbots can be configured to provide consistent responses, vary responses based on specific keywords, and even employ machine learning to adapt their interactions to different contexts. Increasingly, hospitals, nursing homes, and private healthcare facilities are integrating online chatbots into their websites. These chatbots engage with website visitors, assisting them in finding doctors, scheduling appointments, and accessing appropriate medical treatment. However, the use of artificial intelligence in critical sectors such as healthcare raises concerns about whether tasks traditionally performed by human staff should be delegated to automated systems. This healthcare chatbot system operates round-the-clock, providing comprehensive responses to both general inquiries and specific healthcare questions. It facilitates lead generation and automatically forwards lead information to sales teams. By guiding patients through a series of questions, the chatbot assists them in identifying their healthcare needs accurately.

I 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.

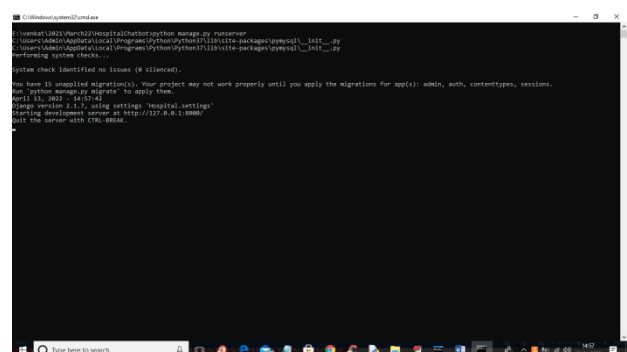
II EXISTING SYSTEM

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.

III PROPOSED SYSTEM

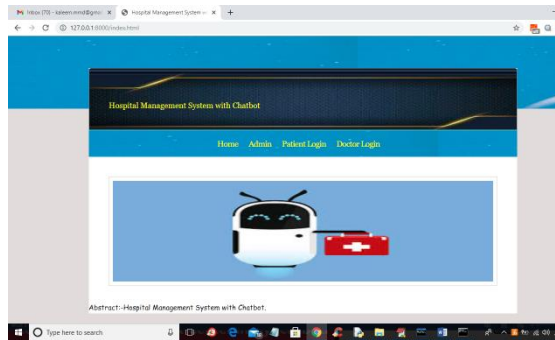
a chat bot will communicate with a real person. Chat bots are used in applications such as ecommerce customer service, call centres and Internet gaming. Chatbots are programs built to automatically engage with received messages. Chatbots can be programmed to respond the same way each time, to respond 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.

IV WORKING AND IMPLEMENTATION

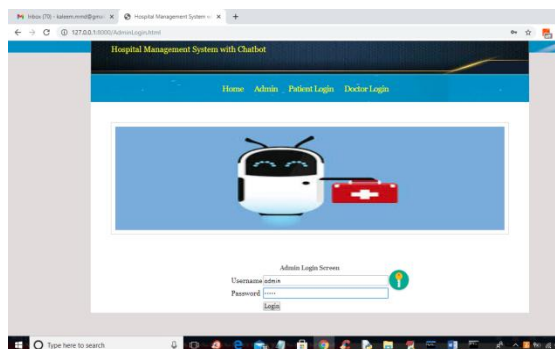


In above screen server started and now open browser and enter URL as

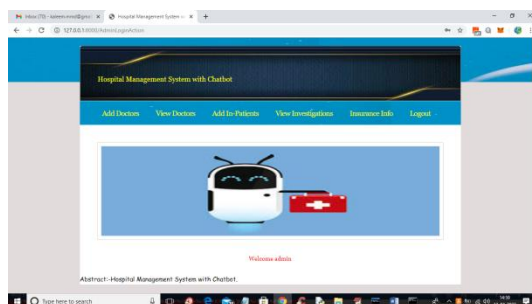
<http://127.0.0.1:8000/index.html> and
press enter key to get below output



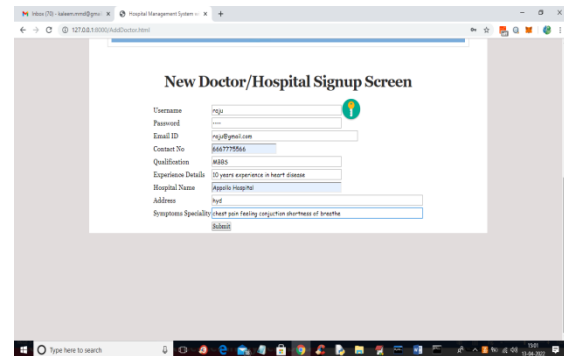
In above screen click on 'Admin' link to get below screen



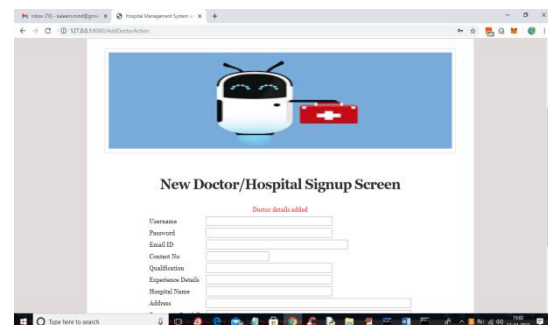
In above screen admin is login and after login will get below screen



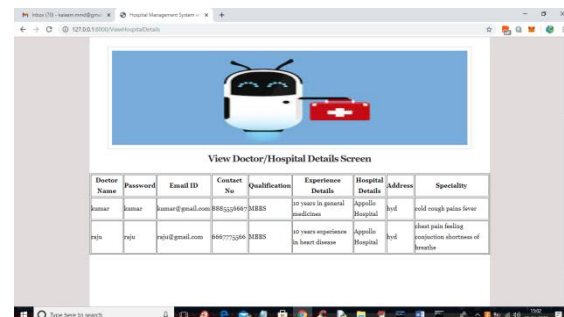
In above screen click on 'Add Doctors' link to add new doctor details



In above screen admin will add 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



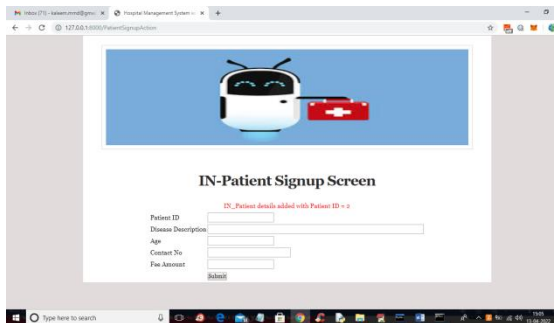
In above screen doctor details added and now click on 'View doctors' link to view all available doctors



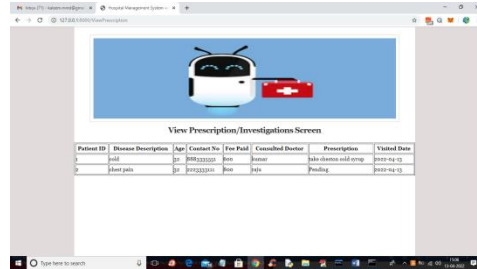
In above screen we can see all doctor details and now click on 'Add In-Patients' link to add patient details



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

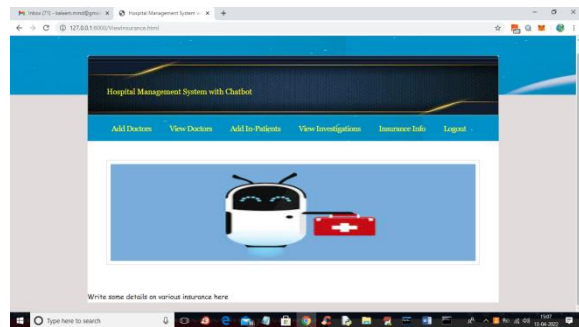


In above screen patient details added and generated ID is 2 and now click on 'View Investigations' link to view all patients details

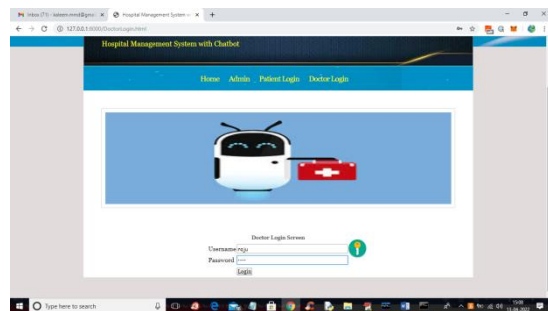


Patient ID	Disease Description	Age	Contact No	Fee Paid	Consulted Doctor	Prescription	Visited Date
2	Heart pain	32	123456789	500	Dr. Smith	Info disease add drug	2023-04-15
3	Heart pain	32	123456789	500	Dr. Smith	Pending	2023-04-15

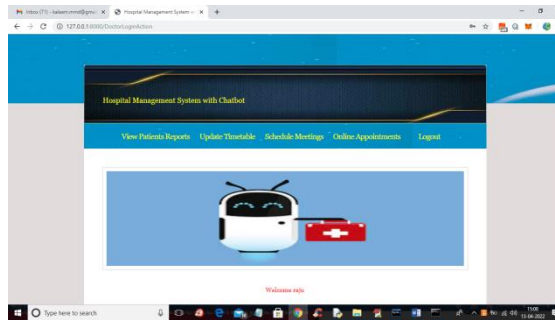
In above screen if doctor not given any prescription to any patient then it will display 'Pending' otherwise display the given prescription. Now click on "Insurance Info" link to view insurance details like below screen



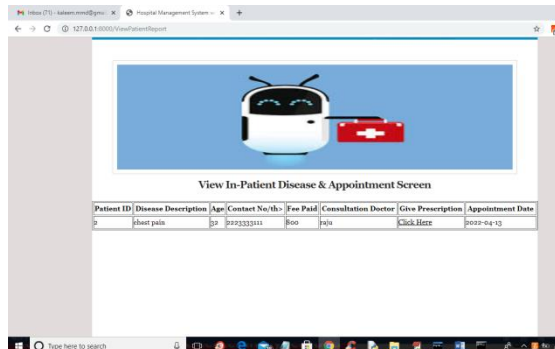
In above screen you need to write some insurance description so admin can explain to patients and now logout and login as patients



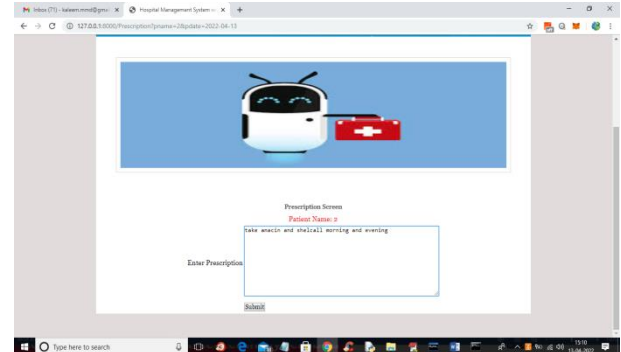
In above screen doctor is login and after login will get below screen



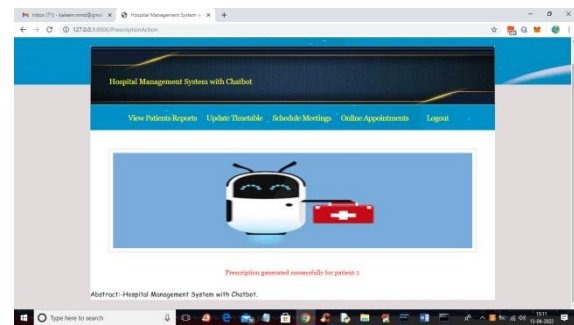
In above screen doctor can click on 'View Patients Reports' link to view In-Patient details and then generate prescription



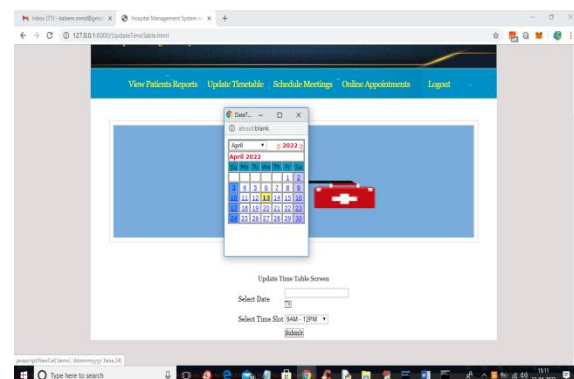
In above screen doctor can view all patient details and then click on 'Click Here' link to give prescription to patient



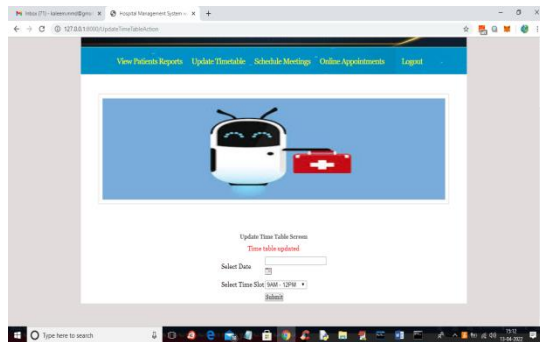
In above screen doctor is giving prescription to patient and press button to generate prescription like below screen



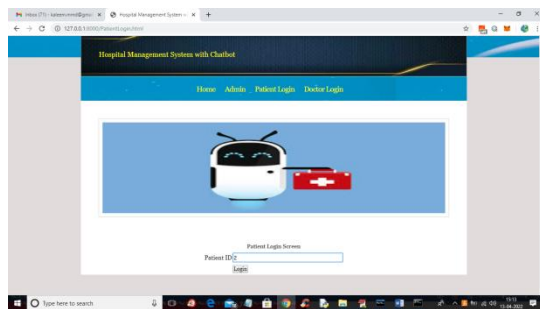
In above screen prescription generated and now click on 'Update Time Table' link to add time details



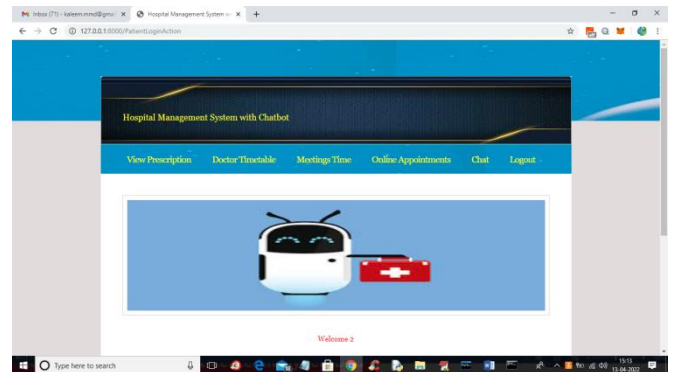
In above screen doctor will select date and then select time slot for time table and press button to update timing



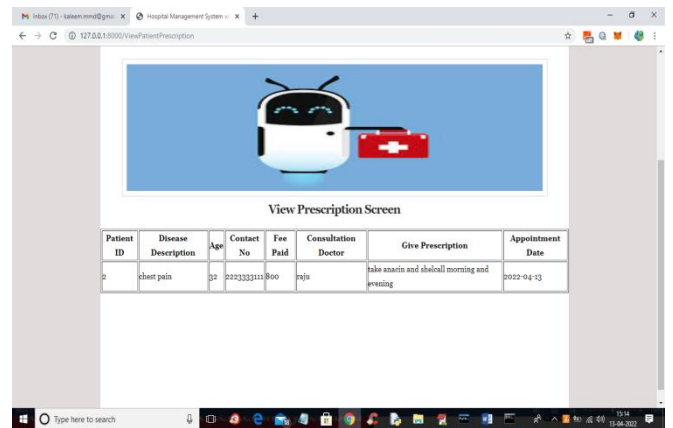
In above screen time table updated and similarly doctor can update meeting and online appointment timings and now logout and login as patient like below screen



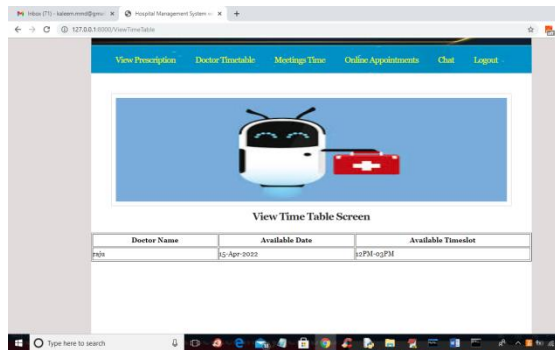
In above screen patient is login by entering his ID and press button to get below screen



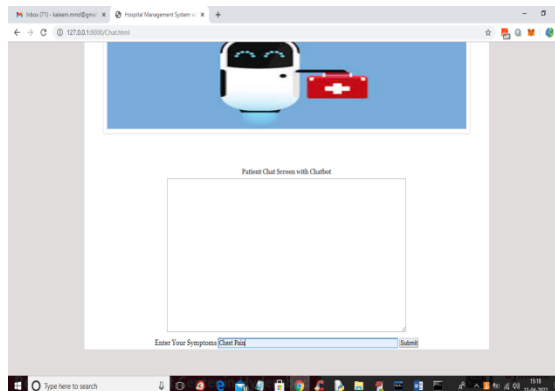
In above screen patient can click on ‘View Prescription’ link to view prescription given by doctor



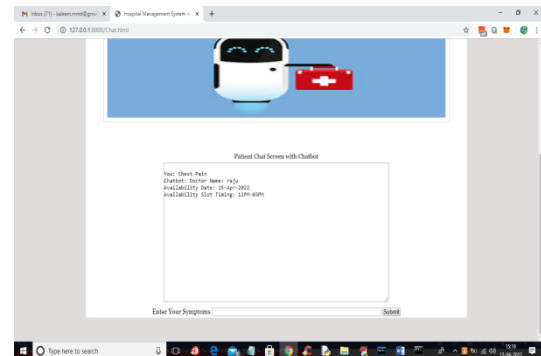
In above screen in prescription column patient can view the doctor's prescription and now click on ‘View Time Table’ link to view all doctors available timing



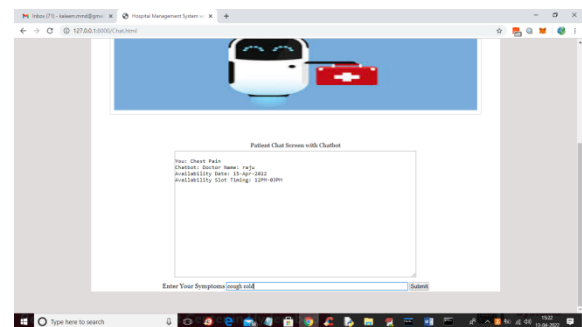
In above screen patient can view the doctor availability details and similarly patient can view meetings and online appointment timing and now click on 'Chat' link to get below screen



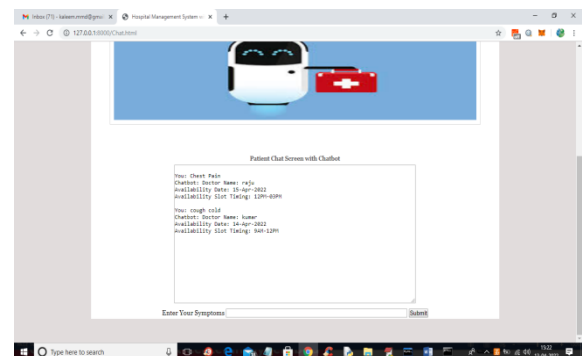
In above screen patient entered some symptoms and press button to get response from chatbot like below screen



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'

V.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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