Doctor Finder and Appointment Booking Website using DJANGO

Dr. Usha Chauhan
DEECE
Galgotias University
Greater Noida, India
ushachauhan@galgotiasuniversity.edu.in

Hrithik Jha
DEECE
Galgotias University
Greater Noida, India
hrithikjha2000@gmail.com

Deepak Singh
DEECE
Galgotias University
Greater Noida, India
deepaksingh4520@gmail.com

Dr. S.P.S Chauhan
Professor
Galgotias University
Greater Noida, India
sps.chauhan@galgotiasuniversity.edu.in

2022 2nd International Conference on Innovative Practices in Technology and Management (ICIPTM) | 978-1-6654-6643-1/22/$31.00 ©2022 IEEE | DOI: 10.1109/ICIPTM54933.2022.9753977

***Abstract* - Life has become too hard in order to get appointment in case of any medical issue or normal routine checkup .the main aim of this site is to make easy and comfortable for the patient who are taking appointment of a doctor in nearby location and to resolve various problem that a patient had to face while taking an appointment .The website act as a database containing doctor details, patients detail, and appointment details are maintained by server and this website also has future of finding doctor near you using GPS and location sensing.**

Keywords: Online Website, Scheduling, track, GPS, Django

I. INTRODUCTION

If someone is not feeling good and want to go for the doctor for his checkup then he must visit hospital and where he has to wait for long hours until the doctor is free. The patient even need to wait for appointment in a queue if due to some or the other reason doctor cancels the appointment then the patient becomes unable to know the cancellation of the appointment as he becomes unable to reach the hospital and know the appointment of his/her appointment .As Web development technology is advancing and anyone can use the web development techniques in order to overcome those problem which are being faced by the patient before the confirmation of their appointment with the respective doctor. An intelligent and advanced appointment system has been developed for slot rescheduling and has been given for the patient. The junior health staffs use to schedule the appointment based on a priority level as per their recognition by the doctor. Proposal of web application which will remind the patient about their medicine dosage timing through an alarm system so that may be always healthy and fit. searching of doctor and various hospital in locality has also been introduced along with the navigation details so that may manage to get proper treatment within the time period. [1] This web uses Django framework and can be used in other Appointment based system .the appointments are accepted on the website by saving the record which marks on calendar and is synchronized by Google calendar, So that it must not mismatch with the date and scheduling of the appointment would be easy with this. Same entire system that are already functional still have some drawbacks To overcome these drawbacks an online appointment system is proposed using website development Technique. This website also includes the work which is Disease self-inspection and hospital registration recommendation. In this the history the history of the user is retrieved from the personal health record and passed as an input to the reasoning section. The input of it contains disease history, user information and the base knowledge and output of the services, describes an website that can be accessed freely and it also includes various functionalities that it also access personal record of the user in medical so that the location of the user can be easily accessed various sort of algorithm are used such as routing protocol in order to search the minimum distance of user from nearest building. [2]There is a monitor in database from where the history of the earlier patient can be accessed easily and based on that further proceeding may be done. There have been other studies also which include the fees as per doctor demand and regarding health care few of the studies have been done certain algorithm have been used in order to schedule appointment and inspection to the self.

The work which is being proposed in this paper is an online doctor finder and appointment booking website using Django that uses the web application to develop a website which make appointment from a doctor for an user easy and reliable. An website based doctor appointment system is generally based on two module. One module is the application made for patient that consist of login screen where user need to input all his login credentials for the further proceeding of the website. [4]After logging in patient can check hospitals available nearby to his society than based on disease he can check for availability of the doctor and the fees what a doctor is charging for the appointment then on the basis of his ease he can easily go for the booking the appointment by entering the suitable time slots and can make the payment then he will be allotted the appointment along with that the details of the appointment will be sent on users registered contact details with an message showing

notification that successfully added appointment. The patient can easily get to know the hospital location with the help of map. [2]In addition patients can easily contacts the doctor or the hospitals via sending email or simply by making a call.

The other module is admin which is designed for website work. The admin can easily access all doctor details and all the appointment detail which has been made using the website. Doctor has to register to site via admin as they can't add via them.

II. DESIGN INTERFACE

The frontend design is very user friendly and easy to use, after running the application, the registration window pop up and user has to register himself for the first time and he can login in to the application, after successful login the user can make appointment according to its need and preference, all these booked appointment are managed by admin and also his work is to register the doctor. Admins have access to view patients records, there feedback and also to resolve any issue. [3] The back end design part has a server acting as a database to store all the data and these data includes registration data, doctor's data and patient's record all these data are placed in database and all these data can be shared using API'S between website and the server.

III. DEVELOPMENT TOOLS

These tools are used for development process.

- Python
- Django
- HTML
- Java script
- CSS

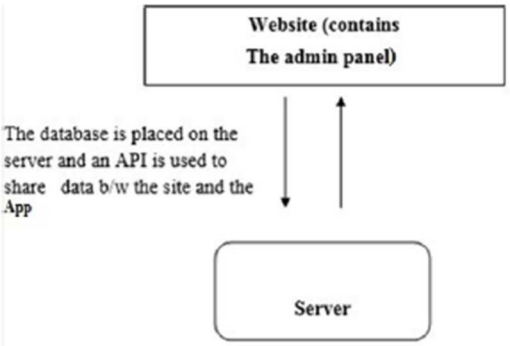

Figure 1: appointment application

IV. IMPLEMENTATIONS

The user has to go to the website using the URL, above Figure describes the block diagram the user need to reach the website and he has to click on the website and after clicking he will see this webpage.

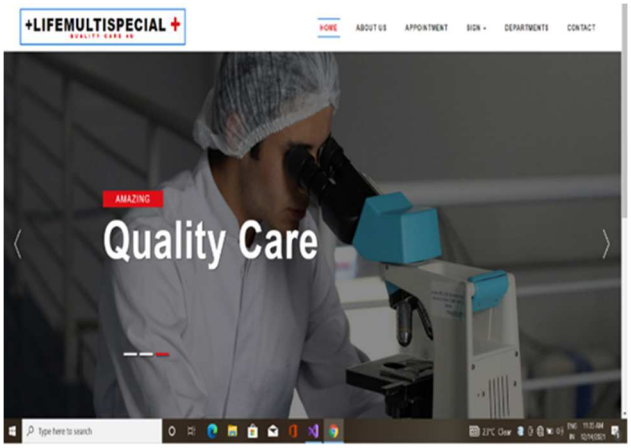

Figure 1: Webpage

For the first time after visiting the website the user has to register himself. After successfully doing that user will get a password and username, for signing into the website, the user have to fill mandatory fields which are asked there like username, mail id, password and after that user has to click on submit button and all the provided data will be saved in database, the signup window can be seen in below figure.

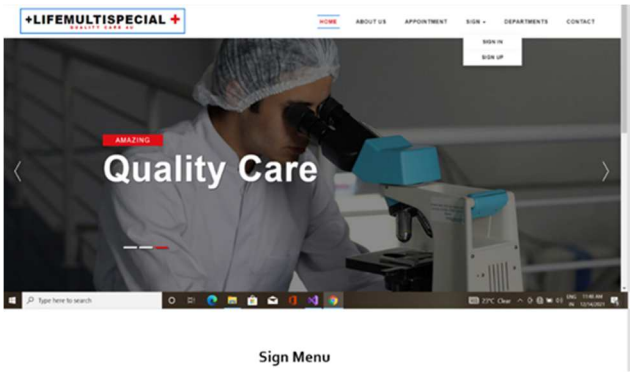

Figure 2: Signup window

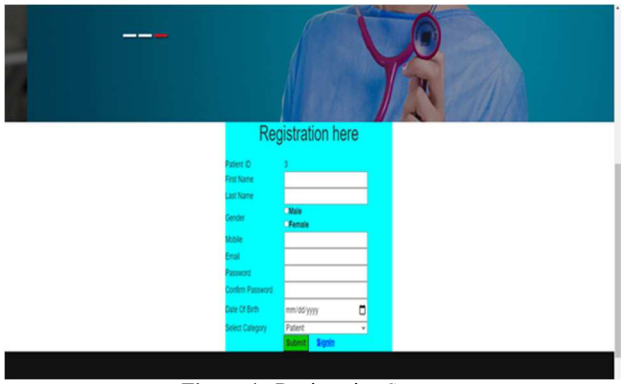

Figure 4: Registration Screen

After successful Registration, if the user needs to make an appointment he has to visit the below screen and he has to fill all the details mentioned there, For example: Patient's Name, His Mobile No. and other details like the symptoms

or issues he is facing the department which he has to visit and the date of the appointment. [5] After all this he has to click on the confirm button on the webpage to make an appointment.

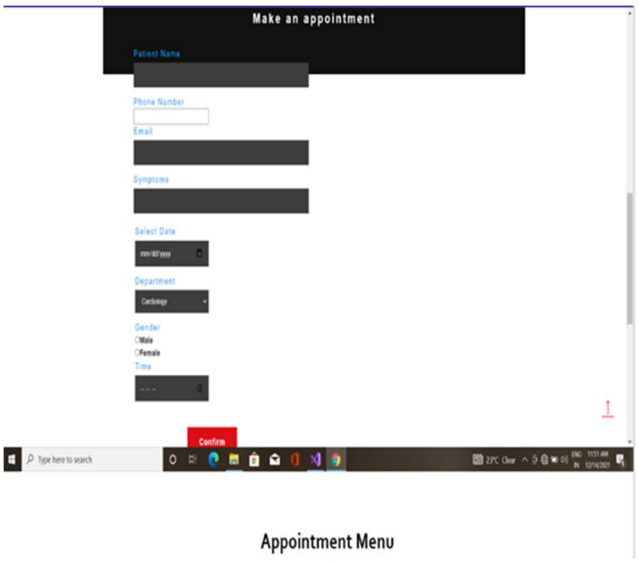

Figure 5: Appointment Menu

After having successful appointment of a desired doctor and date the user can locate the address of the hospital or the doctor using GPS navigation system.

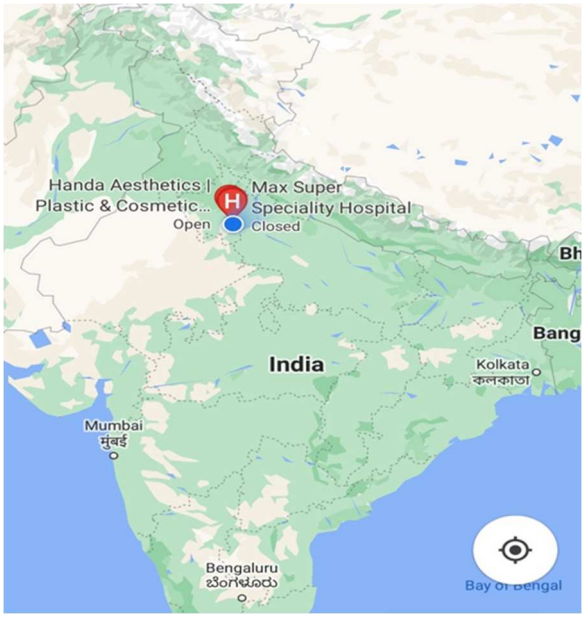

Figure 6: Locating Hospitals

In the below figure you can see that the user can easily locate to the hospital via finding the route to the hospital through GPS Navigation system.

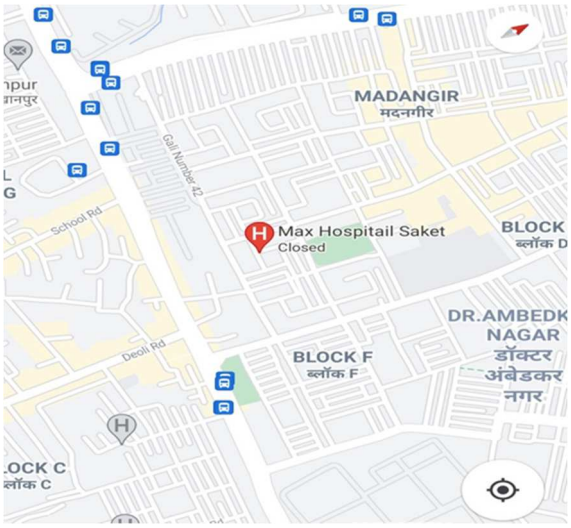

Figure 7: GPS route to the hospital

After all this the user can easily get his appointment booked and can easily reach to his hospital as per his need and after that he can easily logout from his account as shown in below figure.

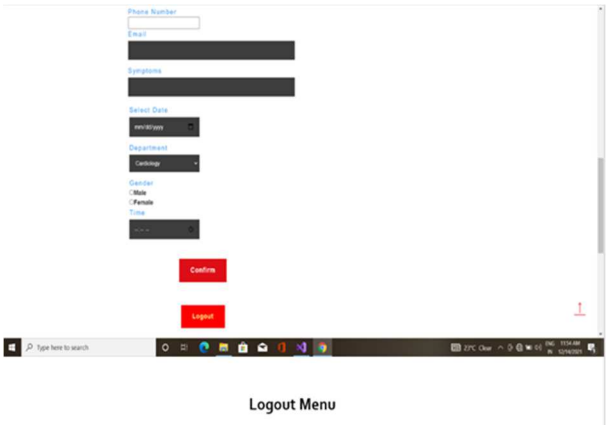

Figure 8: logout menu

V. FUTURE SCOPE

A payment or small amount has to be changed to user / patient during an appointment in order to avoid fake users. There are several user who registered themselves for fun sake and have no concern regarding appointment part. [9] There are several directions of improvement in patient module which include setting reminder for appointment and saving it to the calendar.

VI. CONCLUSION

This online appointment system has been implemented using HTML, CSS and Django framework .The task in this site has been divided in to various parts. The sharing of the information is done by using API's. The site is highly performing and is easy for any user to use it. It is a web site that manages the issue occurring while booking of an

appointment as per the demand of the user .The user itself can select the doctor as per his need just by going through his profile and work. [10]This website is used to provide efficient solution where one user can view various slots available and on basis of that he can go for selecting date and time as per his convenience, the slots which has been already booked will be available in yellow color and it won't be there for other person at that very time slot.it also helps in management of records in the hospitals and can easily get to know the flow of patient and save their time.

REFERENCES

[1] Arthur Hylton III and Suresh Sankaran arayanan "Application of Intelligent Agents in Hospital Appointment Scheduling System", International Journal of Computer Theory and Engineering, Vol. 4, August 2012, pp. 625-630.

[2] Deepti Ameta, Kalpana Mudaliar and Palak Patel "Medication Reminder And Healthcare – An Android Application", International Journal of Managing Public Sector Information and Communication Technologies (IJMPICT) Vol. 6, June 2015, pp. 39- 48.

[3] Yeo Symey, Suresh Sankaran arayanan, Siti Nurafifah binti Sait "Application of Smart Technologies for Mobile Patient Appointment System", International Journal of Advanced Trends in Computer Science and Engineering, august 2013.

[4] Jagannath Aghav, Smita Sonawane, and Himanshu Bhambhlani "Health Track: Health Monitoring and Prognosis System using Wearable Sensors", IEEE International Conference on Advances in Engineering & Technology Research 2014, pp. 1-5.

[5] YoeSyMey and Suresh Sankaranarayanan "Near Field Communication based Patient Appointment", International Conference on Cloud and Ubiquitous Computing and Emerging Technologies, 2013, pp.98-103.

[6] RashmiA.Nimbalkar and R.A. Fadnavis "Domain Specific Search of Nearest Hospital and Healthcare Management System", Recent Advances in Engineering and Computational Sciences (RAECS), 2014, pp.1-5.

[7] A. Luschi, A. Belardinelli, L. Marzi, F. Frosini, R. Miniati and E. Iadanza "Careggi Smart Hospital: a mobile app for patients, citizens and healthcare staff", IEEE-EMBS International Conference on Biomedical and Health informatics (BHI), 2014, pp.125-128.

[8] Choi, J. ; Biomed lab Co., Seoul, South Korea ; Kang, W.Y. ; Chung, J. ; Park, J.W. "Development Of An Online Database System For Remote Monitoring Of Artificial Heart Patient",Information Technology Applications in Biomedicine, 2003. 4th International IEEE EMBS Special Topic Conference, 24- 26 April 2003

[9] Prof. S. B. Choudhari, ChaitanyaKusurkar, RuchaSonje, ParagMahajan, Joanna Vaz "Android Application for Doctor"s Appointment", International Journal of Innovative Research in Computer and Communication Engineering, January 2014

[10] S.Gavaskar, A. Sumithra, A.Saranya "Health Portal-An Android Smarter Healthcare Application", International Journal of Research in Engineering and Technology, Sep-2013.

[11] Frank Sposaro and Gary Tyson, "iFall: An android application for fall monitoring and response", 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 1:6119–22, 2009.

[12] Pei-Fang Tsai, I-sheng Chen, and Keven Pothoven "Development of Handheld Healthcare Information System in an Outpatient Physical Therapy Clinic", proceedings of the 2014 IEEE 18th International Conference on Computer Supported Cooperative Work in Design, pp. 559-602.

[13] Jin Wang, Richard Y.K. Fung "adaptive dynamic programming algorithms for sequential appointment scheduling with patient preferences", Science Direct, Artificial Intelligence in MedicineJanuary 2015, Pages 33–40

[14] Bin Mu, Feng Xiao, Shijin Yuan "A Rule-based Disease Self-inspection and Hospital Registration Recommendation System", Software Engineering and Service Science (ICSESS), 2012 IEEE 3rd International Conference, 22-24 June 2012.

[15] R. G. Tiwari, A. Pratap Srivastava, G. Bhardwaj and V. Kumar, "Exploiting UML Diagrams for Test Case Generation: A Review," *2021 2nd International Conference on Intelligent Engineering and Management (ICIEM)*, 2021, pp. 457-460, doi: 10.1109/ICIEM51511.2021.9445383.