



## ONLINE OPD ARRANGEMENT AND MEDICAL CLINIC DATA FRAMEWORK

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**Abstract:** OPD Arrangement and Medical clinic Framework gives the advantages of smoothed out activities, upgraded organization and control within clinics, prevalent patient consideration, appointment facilities and further developed benefits. HMS is a strong, adaptable, and simple to utilize framework and is created to convey genuinely possible advantages to clinics for data storage and organized flow. All the more significantly it is upheld by solid and trustworthy help.

**Keywords:** Administrator, Appointment, Medical clinic administration, Specialist, Patient

### I. INTRODUCTION

OPD Arrangement and Medical clinic Framework is a strong, adaptable, and simple to utilize web application which is planned and created to convey truly possible advantages to medical clinics. This framework is intended for multispecialty medical clinics, to cover a wide scope of emergency clinic organization and appointment processes. It helps in medical clinic organization and basic monetary bookkeeping, in a consistent stream. This is a product item suite which assists you in dealing with your cycles.

The proposed programming item will be utilized in any medical clinic, facility, dispensary or pathology labs to get the data from the patients, booking their appointment with the available doctor by the admin and afterwards putting away that information for future uses. The current framework being used is a paper based framework. It is excessively sluggish and can't give refreshed arrangements of patients within a sensible time span. The goal of the framework is to diminish over the long haul pay, solve the problem of patients who have to stand in long queues to get an appointment for treatment of ailments and illnesses and also increase the quantity of patients that can be dealt with

precisely. Necessity articulations in these reports are both useful and non-utilitarian.

### II. LITERATURE SURVEY

Several pieces of researches have been done to develop a Hospital Management System such as:

A. *A study of advanced hospital management system by 'Dr. Pushpagaran.*

Health care in India as in many other countries is confronted with growing demand for medical Treatment and services. The medical records must appropriately have all of the patients' medical history. Physicians must maintain flawless records, because this document serves a number of purposes. This study on Hospital management system is design to transform the manual way of searching, sorting, keeping and accessing Hospital information (files) into electronic medical record in order to solve the problem associate with manual Method.

#### IV. OBJECTIVE

##### B. Hospital Management system by <sup>1</sup>Prof.Parineeta Suman

This paper is to computerize the Front Office Management of Hospital to develop software which is user Friendly simple, fast, and cost – effective. It deals with the collection of patients information, diagnosis details, etc. Traditionally, it was done manually. The main function of the system is register and store patient details and doctor Details and retrieves these details as and when required, and also to manipulate these details meaningfully. System input Contains patient details, diagnosis details, while system output is to get these details on to the screen. The Hospital Management System can be entered using a username and password. It is accessible either by an administrator or Receptionist. Only they can add data into the database. The data can be retrieved easily. The data are well protected for Personal use and makes the data processing very fast.

#### III. PROBLEM STATEMENT

Since Clinic is related to the existences of commoners and their everyday schedules so we chose to chip away at this task. The manual treatment of the record is tedious and exceptionally inclined to blunder. The reason for undertaking this is to computerize everyday exercises like booking appointments, confirmation of New patients, conformation of doctors, Release of Patient, Allot a Specialist, lastly register the bill and so forth, we have made an honest effort to make the OPD Arrangement and Clinic Framework as conceivable. We have attempted to plan the product so that the client might not have any trouble in utilizing this bundle and further development is conceivable without a lot of exertion. Despite the fact that the principal reason for creating this is to play out every Clinic's flow in modernized manner rather than physically which is tedious.

We are sure that this product can be promptly utilized by non-programming individual.

#### VI. SOFTWARE DESIGN AND IMPLEMENTATION

##### A. Front End :-

1) **HTML-** (Hypertext Markup Language) is the code that is utilized to structure a website page and its elements. If we take an instance of a car, then the metallic body of the car could be the structure, so is html in web development.

2) **CSS-** Cascading Style Sheets is a template language used to depict the styling of a record written in HTML or XML. CSS depicts how components ought to be delivered on screen, on paper, in discourse, or on different media. It can be seen as the color and beauty of the web pages which makes them attractive.

3) **Bootstrap-** Bootstrap is a free and open-source CSS library coordinated and responsive, versatile first front-end

Clinics are the fundamental piece of our lives. The primary objective of this application is to give the platform for online OPD appointments to the patients with the goal that they don't need to remain in lines while enduring, they can take earlier appointments from the clinic staff .This venture is additionally useful for the clinic staff to oversee and keep up with everyday records and perform exchanges.

#### V. METHODOLOGY

##### A. Administrator controls

- 1) Can enroll/view/reject/erase Doctor
- 2) Can admit/view/accept/reject/discharge(when treatment has been done) a patient.
- 3) Can print/download Reciept pdf (As per medication cost, room charge, specialist charge and other charges).
- 4) Can view/book/accept appointments from patients.

##### B. Doctors

- 1) Go after position in clinic and after that Login (Approval expected by clinic administrator).
- 2) Can see their patient List (Symptoms, name, Date) allotted to that specialist by administrator.
- 3) Can View their released patient list also.
- 4) Can view their appointments booked by administrator
- 5) Can remove the appointments after the treatment has been completed.

##### C. Patient

- 1) Create a profile and login to the application for requesting appointments.
- 2) Can see the available doctors/specialist list.
- 3) Can view their appointment status.
- 4) Can view or download their reciepts after the treatment or discharge

web advancement. It contains HTML, CSS and JavaScript-based prewritten classes for typography, structures, buttons, route, and other elements

4) **JavaScript-** JavaScript is a model based scripting language that is dynamic, pitifully composed and has top notch capacities. It is a multi-worldview language, supporting item arranged, basic, and utilitarian programming styles. It basically gives the web site or web applications the ability to interact with the user.

##### B. Back End :-

1) **Python-** Python is one of the generally utilized scripting and programming language to construct web applications. You can utilize it to play out a few errands; you might in fact in all actuality do Web Advancement by utilizing Python. You can utilize Python to assemble web applications in more ways

than one, for example, for server-side web applications, Soothing web APIs, and so on.

2) **SQLite-** SQLite is an in-process library that carries out an independent, server less, zero-arrangement, conditional SQL information base server. The code for SQLite is in the public area and is hence free for use for any reason, business or private.

3) **Django-** Django is a Python-based free and open-source web framework that follows the model-format-view pattern of architecture. It is kept up with by the Django Programming Establishment, an autonomous association laid out in the US as a 501 non-benefit.

## VII. CONCLUSION

OPD arrangement and medical clinic data framework is all about the modernizing of hospitals through the use of technology. Computers take over the manual system for quick and easy functioning. This hospital management system is quite reliable and is proven on many stages. All the basic requirements of the hospital are provided in order to manage it perfectly and a large amount of data can also be stored. It gives many facilities like searching for the details of a patient, billing facilities as well as appointment facility. So it is an important system for modern days.

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## IX. REFERENCES

- [1] Saimanoj, kotapati & poojitha, grandhi & dixit, khushbu & jayannavar, laxmi. (2020). Hospital management system using web technology.
- [2] Nicholson, Caroline & Jackson, Claire & Wright, Bernadette & Mainwaring, Paul & Holliday, Dimity & Lankowski, Andrew & Kardash, Christine. (2006). Online referral and OPD booking from the GP desktop.
- [3] Sarab, Sura. (2019). Hospital Management System.
- [4] Fernando, Shevan & Amulyasree, Kallagunta & J, Swathi. (2016). Smart Hospital Management System. International Journal of Advanced Research Trends in Engineering and Technology (IJARTET).
- [5] M, Srinevasan. (2021). Android App for Online OPD Appointment and Hospital Information System. International Journal for Research in Applied Science and Engineering Technology. 9. 736-741. 10.22214/ijraset.2021.33353.
- [6] Demirel, Demokaan. (2018). Hospital Management Information Systems in Health Sector and Development in Turkey.
- [7] Lawal, olayinka & Afeni, Babajide & Mebawondu, Jacob. (2016). Development of Hospital Information Management Systems.
- [8] Malik, Shafaq & Bibi, Nargis & Khan, Sehrish & Sultana, Razia & Rauf, Sadaf. (2016). Mr. Doc: A Doctor Appointment Application System. International Journal of Computer Science and Information Security,. 14. 452-460.
- [9] John Lekan, Akinode. (2017). Design and Implementation of a Patient Appointment and Scheduling System. 4. 16-23. 10.17148/IARJSET.2017.41203.
- [10] Zhang, Xiaojun & Yu, Ping & Yan, Jun & Hu, Hongxiang & Gourea, Niraj. (2012). Developing an online patient appointment scheduling system based on web services architecture.
- [11] Junagade, Aishwarya & Diksha, Sanjay & Suryawanshi, Vaishnavi & Naphade, Pratiksha & Ubhale, Dattatray & Ospanova, A.. (2022). Mobile Based Medical Appointment and OPD Management Technology. International Journal of Innovative Research in Science Engineering and Technology. 11. 3777-3804. 10.15680/IJRSET.2022.1104071.
- [12] Liang, Yixin & Zhao, Lindu. (2019). Intelligent Hospital Appointment System Based on Health Data Bank. Procedia Computer Science. 159. 1880-1889. 10.1016/j.procs.2019.09.360.
- [13] Tenagyei, Edwin & Kusi, Kwadwo & Patamia, Rutherford. (2021). Design and Implementation of Hospital Reservation System on Android. International Journal of Computer Science and Information Security,. Vol. 17. PP. 31-37.
- [14] Varshney, Kyati & Gupta, Agnivesh. (2021). Quick Response Code Based Online Appointment Scheduling System: An Approach towards Health Management. Journal of Pharmaceutical Research International. 183-191. 10.9734/jpri/2021/v33i46A32856.
- [15] Selvaraj, Usharani & Prithivi, S. & Sharmila, S. & Bala, P. & Ananth Kumar, T. & Rajendirane, Rajmohan. (2021). Mobile Application for Doctor Appointment Scheduling. 1-6. 10.1109/ICSCAN53069.2021.9526398.