

Improved System for Appointment Scheduling In Hospitals

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Abstract: This system aims to develop a computer-based appointment system, which would integrate with the existing clinical information system and help improve the patient access to the services offered by both General Practitioners (GPs) and Allied Health Professional (AHPs) in the primary health care centres. To achieve this requires the development of an understanding of the features and processes of the patient booking in the primary health care environment. The aim of this system is to provide patient full access to manage their hospital appointment which facilitate with their online service for appointment reservation, updating and canceling the appointment and meeting all the customer requirements. This system will provide an efficient and effective communication between patient –doctor and providing the feasible solution to their problems. Compare to the usual queing method Web based appointment System could significantly increase patient satisfaction with registration and reduce total waiting time effectively.

Keywords: Hospital Management ,web Portal ,Appointment System ,Online scheduling ,Response system

I. Introduction

1.1. Background:-

Health care is a fast-growing industry in India as well as abroad. This system focuses on online appointment scheduling for all primary healthcare centres. Scheduling an appointment online is thus an effective and a lot less costly way for providers to communicate with their patients. Thus, Online Scheduling helps both the parties. This system majorly focuses on patient, Doctor and Hospitals who will use the system to make and manage the appointment online. This system is enabling to search for a doctor from user account. The motive of developing the application system is to design a feature rich application system which can search the doctors in the hospital. In the automated appointment system, the users (admin, patient, doctor) will be much benefited. Admin will be able to register doctor, view/delete patient listing, and finally insert, update and delete information.

1.2. Problem Definition:-

The problem studied in this thesis is related to the online appointment scheduling system in the Specialist/Primary healthcare Clinic is for both the emergent and non-emergent patient. Advanced scheduling is applied for the non-emergent patient while same day scheduling is applied for the emergent patient. Currently very hospital provide online scheduling Doctor-Patient session[1]. In this traditional appointment system patient are schedule for future appointment time and the number of patient granted an appointment has an upper limit each time period. In classical system patient have to go to the Hospital and wait in the queue to make a reservation and get a appointment this process is very much time consuming.

1.3. Objectives:-

The following are the core objectives of our system: -

- To provide convenient way of appointment reservation for patients.
- To automate appointment and report generation.
- To implement an efficient strategy for appointment scheduling in hospitals.
- To computerize the patient's information review and maintenance.
- To give admin an easy way in doing and improving the techniques used.

1.4. Application of project

The various applications for the project are as follows: -

- To automate the various scheduling tasks.
- To arrange meetings and appointments.
- Make appointment scheduling efficient through employin an efficient strategy.
- Helpful for a broad category of people to whom its not possible to approach hospital mainly in rural areas.

II. Theory

2.1. Technology and methodology

This phase tells the explanation of the methodology that will be used for the implementation of the project. The methodology that will be used achieve the objectives of the project and will accomplish the desired result. In order to evaluate the project, software development lifecycle (SDLC) is used which will majorly include three major steps i.e. planning, implementing and analysis.

1. Front-end technology: HTML, Bootstrap, CSS.
2. Back-end technology: PHP, MySQL, Adobe Dreamweaver.
3. Software: Xampp server, Oracle WebCenter portal
4. Editor: Sublime text.

III. Research/Technical/project Work

3.1 Literature Survey:-

We reviewed various existing system and found out various gaps in the previous systems and they are as follows: -

- Problem of on-time cancellation of appointments.[2]
- Problem of proper management of appointments.
- Problem of proper management of pending requests.[2]
- Problem of implementing better strategies in case of delay.[3]
- Problem of patient's demands not fulfilled (i.e. repetitive postponing of appointments).

3.2. Architecture:-

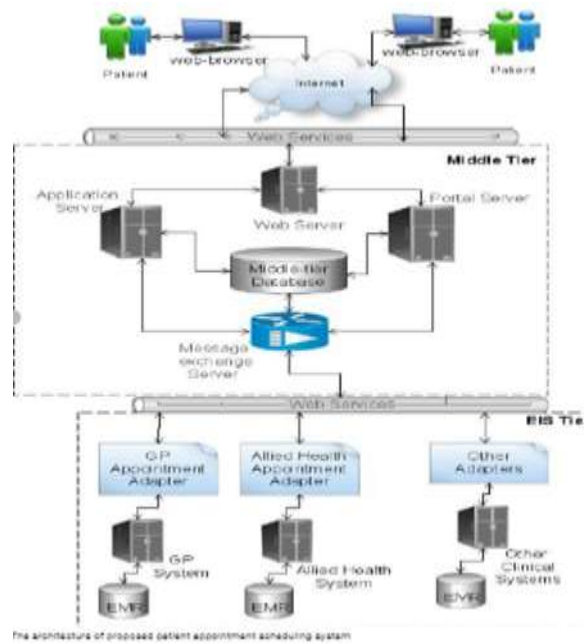


Fig -2

3.3 Modelling:-



Fig 9: - An overview of system architecture

Fig -3

IV. Result and Discussion

A total of 36 articles discussing 21 Web-based appointment systems were selected for this review. Most of the practices have positive changes in some metrics after adopting Web-based scheduling, such as reduced no-show rate, decreased staff labor, decreased waiting time, and improved satisfaction, and so on. Cost, flexibility, safety, and integrity are major reasons discouraging providers from switching to Web-based scheduling.[4] Patients' reluctance to adopt Web-based appointment scheduling is mainly influenced by their past experiences using computers and the Internet as well as their communication preferences.[1]

Usually developing any system comprises of three basic steps planning, design, and the testing phase. After finalizing the basic requirements that should be met by the system, it was also important to decide which technologies to use for the development of this system.

V. Conclusion

Overall, the literature suggests a growing trend for the adoption of Web-based appointment systems. The findings of this review suggest that there are benefits to a variety of patient outcomes from Web-based scheduling interventions with the need for further studies.

One of the prime reason that online patient scheduling is gaining popularity in recent days is that the system provide an easier for receiving healthcare facilities to the general user. The web service architecture will provide an appropriate paradigm for developing this integrated healthcare system. The system is design to achieve maximum user satisfaction and providing and efficient and effective appointment of patient in hospital by considering all critical solution and providing an feasible solution.[3] Compared with traditional appointment methods, Web-based appointment scheduling is more patient-centered and has many advantages due to improved access. After implementing Web-based appointment systems, many practices have shown positive changes such as reduced no-show rate, decreased staff labor, decreased waiting time, and improved patient satisfaction.

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