

DAYANANDA SAGAR UNIVERSITY



A Web Programming Synopsis

ON

“Hospital Management System”

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE & ENGINEERING

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1. INTRODUCTION:

The Hospital Management System can be entered using a username and password. It is accessible by an Admin, Doctor & 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. Hospital Management System is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals.

The project Hospital Management system includes registration of patients, storing their details into the system by using database. The software has the facility to give a unique id for every patient and stores the details of every patient and the staff manually. Admin can view availability of a doctor and the details of a patient using the name, id.

Hospital Management System is designed for multi specialist hospitals, to cover a wide range of hospital administration and management processes. It also aims at providing low-cost reliable automation of the existing systems. The system also provides excellent security of data at every level of user-system interaction and also provides robust & reliable storage facilities.

2. PROBLEM STATEMENT:

Lack of immediate retrievals:-

The information is very difficult to retrieve and to find particular information like- E.g. - To find out about the patient's history, the user has to go through various registers. This results in inconvenience and wastage of time.

Lack of immediate information storage:-

The information generated by various transactions takes time and efforts to be stored at right place.

Lack of prompt updating:-

Various changes to information like patient details or immunization details of child are difficult to make as paper work is involved.

Error prone manual calculation:-

Manual calculations are error prone and take a lot of time this may result in incorrect information. For example calculation of patient's bill based on various treatments.

Preparation of accurate and prompt reports:-

This becomes a difficult task as information is difficult to collect from various register.

3. OPERATIONAL DEFINITION:

This project Online Hospital Management System aims at to develop the software that covers all the aspects of management and operations of hospital. It enables healthcare providers to improve operational effectiveness, reduce costs, reduce medical errors, reduce time consumption and enhance delivery of quality of care. This project will implement all the activities of the hospital in a computerized automated way to fasten the performance.

The main purpose of our system is to make hospital task easy and is to develop software that replaces the manual hospital system into automated healthcare management system. This document serves as the unambiguous guide for the developers of this software system. This project is to maintain the patient details, appointment reports and to calculate the bill of the patient. You can also manually edit any patient details and issue bill receipt to patient within few seconds.

4. SCOPE OF THE PROJECT:

Hospitals and healthcare centers have undergone a change for its betterment. The administrations of healthcare sector are opting IT solutions for the better management and patient care in their hospital campus. Have a look at some salient features of hospital management software.

Daily functions like patient registration, monitoring blood bank, managing admission and overall management of various departments can be easily performed with higher accuracy after the installation of hospital software.

The modules of hospital management software are user-friendly and easy to access. It has a common user friendly interface having several modules. The officials can utilize these modules in their processes without any hassle and make the best possible use of hospital management system. Since, every hospital has some or the other points of worth those vary in comparison with to its competitors.

Hence, most of the IT companies give on-demand solutions or feature of customization. It further implicates that hospital information management software can be customized by specifying personal requirements of the campus.

The automated functions of online hospital software make productivity effective. This web based IT solution has automated operations and permit officials to continue with their work in a swift manner. It further implicates that complete automation of the hospital software makes productivity easily obtainable. All in all, this enhances the infrastructure of hospital administration.

This tool is a comprehensive solution that integrates all the departments by creating a common platform. In brief, hospital management system has all the modules that serve purpose of all the departments of healthcare institute. In fact, these modules have been competitively designed to make all the operations simplified.

5. EXISTING SYSTEM:

Hospitals currently use a manual system for the management and maintainance of critical information. The current system requires numerous paper forms, with data stores spread through out the hospital management infrastructure. Often information is incomplete or does not follow management standards. Forms are often lost in transit between departments requiring a comprehensive auditing process to ensure that no vital information is lost. Multiple copies of the same information exist in the hospital and may lead to inconsistencies in data in various data stores.

6. CURRENT ISSUES OR PROBLEMS IN EXISTING SYSTEM:

The existing systems provide the basic functionalities needed to be handled in a hospital management environment. There is no intelligence of the software in such cases. In the existing system all the patient details, doctor availability details and regarding the tests done to the patients prescribed by the doctor is maintained manually by the receptionist. If a patient has to be admitted we need to check the availability of the bed which consumes lots of time if done manually. Also there is no proper search technique to check the patient information.

It is very difficult task to maintain all the finance management system, and the records which maintain doctor details, of the hospital by using this existing system. There are also many loopholes when we look at the security of the system. These are the main disadvantages of the existing systems that are overcome in the proposed model.

7. PROPOSED SOLUTION:

The Hospital Management System is designed for any hospital to replace their existing manual paper based system. The new system is to control the information of patients. Room availability, staff and operating room schedules and patient invoices. These services are to be provided in an efficient, cost effective manner, with the goal of reducing the time and resources currently required for such tasks.

When the patient wants to have an appointment, he might choose among a few options. Firstly, you can find the data about visiting hours on the medical specialist's profiles and book a convenient time. Secondly, you simply dial the receptionist who will check the doctors' schedule for you and set your appointment. In both cases, the doctor gets the information about the next visit whereas the patient will get a reminder via SMS, email or even receive the automated calls.

As for the medical specialists, the healthcare record management system that contains the patient information in one place enables more efficient work of the staff. Automation speeds up the process of patient registration and filling out all the necessary records. The doctors have the ability to check the disease history, test results, as well as add new data to the patient file. The job of the doctor that previously involved too much paperwork can be completely computerized. Doctors spend more time on patient's treatment rather than documentation. If something is requested in a written form, they are able to print it.

Finally, the clinic authorities receive the automated control of all the interactions in their facility. The hospital system software can generate the analysis of staff work, financial expenses, revenue, set the general priorities of the institution, outline future directions.

8. SOFTWARE AND HARDWARE REQUIREMENTS:

HARDWARE:

i3 processor-based computing or higher
Memory: 4 GB RAM
Hard drive: 50 GB

SOFTWARE:

Code editor: Visual studio code
Operating System : Windows or Linux
Backend: sqlite, python
Frontend: Django, HTML, CSS, Java script

9. POSSIBLE OUTCOMES:

The hospital management system organizes the stable functioning of daily tasks and interactions. This is a special tool to support the smooth operating of the software components that are vital for the clinic administration. The hospital records management software keeps a track of all the operations, stores the user's data, performs its analysis and generates the reports. The medical institution is given the opportunity to collect its information in one place. It includes the patient and doctors' records as well as the data concerning financial affairs, supply management, etc. Furthermore, it is only processed, classified and accessible for authorized users. The hospital database management system provides users with data security due to all regulations. Implementation of different functions empowers smooth and clear functionality.

The hospital records management software tracks the number of available doctors and their working hours. This allows to have the accurate schedule of each employee, manage your facility abilities and the supply chain in order to meet all the needs of the patients. It helps to arrange the appointments for both the staff and patient's convenience.