

**PROJECT SYNOPSIS  
ON**

**“Hospital Management System”**



University of Pune

**SUBMITTED TO SAVITRIBAI PHULE PUNE UNIVERSITY**

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**UNDER THE GUIDANCE OF**

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## **Synopsis**

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**Project Topic:**

**Hospital Management System**

## **Introduction:**

The project Hospital Management system includes registration of patients, storing their details into the system, and also computerized billing in the pharmacy, and labs. The software has the facility to give a unique id for every patient and stores the details of every patient and the staff automatically. It includes a search facility to know the current status of each room. User can search availability of a doctor and the details of a patient using the id. 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 interface is very user-friendly. 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. Hospital Management System is designed for multispeciality hospitals, to cover a wide range of hospital administration and management processes. It is an integrated end-to-end Hospital Management System that provides relevant information across the hospital to support effective decision making for patient care, hospital administration and critical financial accounting, in a seamless flow. Hospital Management System is a software product suite designed to improve the quality and management of hospital management in the areas of clinical process analysis and activity-based costing. Hospital Management System enables you to develop your organization and improve its effectiveness and quality of work. Managing the key processes efficiently is critical to the success of the hospital helps you manage your processes

**Purpose of System:**

Our Hospital Management System is designed for SMBT Hospital to replace their existing manual paper based system To the Digital System. The new system is to control the information of patients With their Medical History. 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. Also Patient can take appointment from home and access their information worldwide .Various Patients reports like blood test's , MRI , CT scan ,X-ray directly added into Patients Records it reduces Time for pick up reports and take them to doctor . Medicine allergie are highlighted Before prescribing any drugs

## Objectives:

Main objectives of a Hospital Management System are:

- Design a system for better patient care.
- Reduce hospital operating costs.
- Provide MIS (Management Information System) report on demand to management for better decision making.
- Better co-ordination among the different departments.
- Provide top management a single point of control.

Hospital management System handles activities of major departments in a hospital like:

1. Front Office/OPD Management

2. Patient management (scheduling, registration and long-term care)

3. Patient care management and departmental modules (radiology, pharmacy and pathology labs)

4. Investigative Labs

5. Billing

6. Medical Stores

7. Financial Accounting (billing, insurance processing, materials management, accounts payable/receivable, payroll and general ledger)

8. Payroll

Hospital management system can be developed by using waterfall model which is a popular version of development life cycle model for software engineering. It describes a development method that is linear and sequential. It has distinct goals for each phase of development. In this model once, a phase of development is completed, there is no turning back, the development proceeds to the next phase. The advantage of this model is that it allows for departmentalization and managerial control.

## Requirements:

Item	Web server (minimal)	Web server (recommended)	Combined Web & Database Server (minimal)	Combined Web & Database Server (recommended)
Processor	1.6 GHz CPU	2 x 1.6 GHz CPU	2 x 1.6 GHz CPU	4 x 1.6 GHz CPU
RAM	1-1.75 GB	3-5 GB	3-5 GB	7 GB
HDD	1x 100 GB of free space or more is recommended for data (non-system drive is preferred) 1x 20 GB of free space is recommended for the software's (system drive)			
Operating System	Windows* Server, Linux*, or any operating system that can run as a webserver, capable of delivering HTML5 , JavaScript content, including JSON and MP4.			
.NET Framework	Microsoft .NET Framework 4.5			
Software Requirements for Web Servers	Internet Information Services (IIS) 6, 7.0, 7.5 or 8 , Windows PowerShell 2.0, 3.0 or 4.0, Apache ,MySQL			
Software Requirements For Users	Any latest Browser or preceding 2 versions of that Browser.			

## Scope of the System:

*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.*

- 1) Patient can book appointments with doctors from home So They don't have to wait for checkups .
- 2) Doctor Can Instantly Access Patients Medical History To avoid situations like medicine allergy .
- 3) Patient can check Doctors Availability in case of Specialist Visit in Hospital .
- 4) Patients can easily Book his/her Appointment by entering name, contact number ,age and gender. Whenever the Patient comes up his information is stored freshly.
- 5) Bills are generated by recording price for each facility provided to Patient on a separate sheet and at last they all are summed up.
- 6) Diagnosis information of patients is Stored In System So Whenever patient comes for checkup Doctors Can Easily access that information .
- 7) Immunization records of children are maintained in pre-formatted sheets, which are kept in a file.
- 8) Information about various diseases is not kept as any document. Doctors themselves do this job by remembering various medicines.
- 9) 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.
- 10) 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 system.
- 11) 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.
- 12) Blood Reports from Laboratory can quickly uploaded in a system so Doctors can Directly Access it While Treating patients .
- 13) Availability of blood according to blood-group of the patients can easily Verify as per requirement.
- 14) Emergency Staff Will Inform Before patient reaches the hospital in case of accidental or other emergency for the Medication.

15) Other Medical Services From hospital like MRI,X-Ray,CT Scan can attach their reports directly to patients Record .

16) Covid vaccine availability can be checked from home.

All this work is done manually by the receptionist and other operational staff and lot of papers are needed to be handled and taken care of. Doctors have to remember various medicines available for diagnosis and sometimes miss better alternatives as they can't remember them at that time.



## **Existing System:**

- 1) The current manual system has a lot of paper work. To maintain the records of sale and service manually, is a Time-consuming task.
- 2) With the increase in database, it will become a massive task to maintain the database.
- 3) Requires large quantities of file cabinets, which are huge and require quite a bit of space in the office, which can be used for storing records of previous details.
- 4) The retrieval of records of previously registered patients will be a tedious task.
- 5) Lack of security for the records, anyone disarrange the records of your system.
- 6) If someone want to check the details of the available doctors the previous system does not provide any necessary detail of this type.
- 7) To find out about the patient's history, the user has to go through various registers.
- 8) The information generated by various transactions takes time and efforts to be stored at right place.
- 9) Various changes to information like patient details or immunization details of child are difficult to make as paper work is involved.
- 10) 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.

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