**Hospital management system:**

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Proposed to

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# 1. Introduction

**1.1 Purpose**

# A hospital management system is a software designed to manage all the areas of a hospital such as medical, financial, administrative and the corresponding processing of services. HL-7(Health Level-7) interfaces across all modules that facilitate standards conformance.

**There is always the wide choice of features that can be included in the system. Moreover, the most important thing they are created to streamline various procedures that meet the needs of all the users. The hospital management system feature list is concentrated on providing the smooth experience of patients, staff and hospital authorities. It might seem that their expectations differ, they still are covered by components of the hospital information system. Quality and security still remain the main criteria of the medical industry. It is also known for the constant and rapid changes to improve the efficiency of medical services and satisfaction of the patients.**

**1.2 Scope**

**Initial functional requirements will be: -**

* 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](http://www.hospitalerpsoftware.in/).
* 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](http://www.hospitalerpsoftware.in/) 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.

**Initial non functional requirements will be: -**

* Patient Identification: The system needs the patient to recognize herself or himself using the phone.
* Logon ID: Any users who make use of the system need to hold a Logon ID and password.
* Modifications: Any modifications like insert, delete, update, etc. for the database can be synchronized quickly and executed only by the ward administrator.
* Front Desk Staff Rights: The staff in the front desk can view any data in the Hospital Management system, add new patients record to the HMS but they don't have any rights alter any data in it.
* Administrator rights: The administrator can view as well as alter any information in the Hospital Management System.

**1.3 Audience Definitions, Acronyms and Abbreviations**

**1.3.1 Audience Definitions**

The intended readers of this document are the developers of the site, testers, website owners, managers and coordinators.

**1.3.2 Acronyms and Abbreviations**

|  |  |
| --- | --- |
| **Acronym** | **Meaning** |
| OSP | Hospital Management System |
| C# | C#.Net MVC 5 |
| SQL | SQL Server |
| HTTP | Hypertext Transfer Protocol |

**1.4 References**

* IEEE 830-1998 standard for writing SRS document.
* *Fundamentals of Software Engineering*

## 1.5 Technologies to be used

* Programming languages:
* C#: C#.Net is a programming platform— part of the MVC 5 frameworkfor developing and running distributed multi-tier architecture web application
* HTML, XML: Hyper Text Markup Language and Extensible markup Language are the predominant markup languages for web pages. It provides a means to describe the structure of text-based information in a document and to supplement that text with interactive forms, embedded images, and other objects.

SQL Server: Sql server is used to create Database **Tools & Development Environment**

Microsoft Visual Studio: Microsoft Visual Studio is a toolkit which is designed for the creation of complex projects, providing fully dynamic web application.

* 1. **Overview**

A **Hospital Management System** is an integrated information **system** for managing all aspects of a **hospital's** operations such as medical, financial, administrative, legal, and compliance. It includes electronic health records, business intelligence, and revenue cycle **management**

**2. Overall Description**

**2.1 Product Perspective**

This **Hospital** Patient **Management System** is a self- contained **system** that manages activities of the **hospital** as bed assignment, operations scheduling, personnel **management** and administrative issues. Various stakeholders are involved in the **hospital system**.

**2.2 Product Functions**

The system functions can be described as follows:

**Registration:**

When a patient is admitted, the front-desk staff checks to see if the patient is already registered with the hospital. If he is, his/her Personal Health Number (PHN) is entered into the computer. Otherwise a new Personal Health Number is given to this patient. The patient’s information such as date of birth, address and telephone number is also entered into computer system.

**Consultation:**

The patient goes to consultation-desk to explain his/her condition so that the consulting nurse can determine what kind of ward and bed should be assigned to him/her. There are two possible circumstances: a) If there is a bed then the patient will be sent to the bed to wait for the doctor to come.

b) If there is no bed, the patient is put on a waiting list until a bed becomes available.

**Patient check out:**

If a patient checks out, the administrative staff shall delete his PHN from the system and the just evacuated bed is included in available-beds list.

**Report Generation:**

The system generates reports on the following information: patients, bed availability and staff schedules after every six hours. It prints out all the information on who has used which bed, when and the doctor that is taking care of a given patient as well as expected medical expenses.

2.3User characteristics

The system will be used in the hospital. The administrators, doctors, nurses and front-desk staff will be the main users. Given the condition that not all the users are computer-literate. Some users may have to be trained on using the system. The system is also designed to be user-friendly. It uses a Graphical User Interface (GUI).

2.4Constraints

Any update regarding the patient’s information from the hospital is to be recorded to have updated and correct values.

2.5 Operating Environment

The OPS is a website that shall operate in all famous browsers, for a model we are taking Microsoft Internet Explorer versions 7.0, 8.0 and 9.0 .And Google Chrome

**3. Specific Requirements**

3.1 Functional Requirements:

🡺 Administration module:-

This module enables the user to insert, update, view and delete the patient information

🡺 Patient module:-

PatientId,Name,Age,Sex,Address,Phone Number,Weight

This module has following 2 sub modules:-

🡺Inpatient module:-

This sub module is used to store information about patients who were admitted in the hospital on doctors advice.

* + PatientId, Dept depending on disease, Doctor, Room no, Date of admitted, Advance, Date of discharge.
  + Updation like deletion and modification is done.

🡺Outpatient module:-

* + PatientId,New\_Case,Old\_Case,Date,Deptdependingon disease,Doctor .
  + Updation like deletion and modification is done

🡺 Lab module:-

* This module used to store or produce the laboratory reports.
  + PatientId, Weight, Category, Doctor, Inpatient/Outpatient, Date.
  + Updation like deletion and modification is done.

🡺. Billing module:-

🡺Inpatient module:-

PatientId, doctors charge, health card amount, room bill, medicine bill, total amount, No of days, Service charge, Operation theatre,Nursing care, Lab bill .

3.2 Non-functional Requirements:

3.2.1 Performance Requirements :

The capability of the computer depends on the performance of the software. The software can take any number of input provided the database size is large enough. This would depend on the available memory space.

3.2.2 Safety Requirements:

System use shall not cause any harm to human users.

3.2.3 Security Requirements:

* System will use secured database.
* Normal users can just read information but they cannot edit or modify anything except their personal and some other information.
* System will have different types of users and every user has access constraints.

3.2.4 Error handling

OPS shall handle expected and non expected errors in ways that prevent loss in information and long downtime period.

4. Interfaces Possible Scenarios:

**4.1.1 Login:**

This interface will consist of two compulsory fields namely, “User Name” and “Password”. There will also be options for “New User’s Registration” which will redirect to “Registration” If the password entered is correct the Main User Interface opens up else an error message is displayed.

**4.1.2 Registration Interface**

The user will enter his personal details like Name, User Name, Password, Date Of Birth, Address, Registration Type, etc.

Users will be warned about any mistakes on data format or any other constrains by validation notes and error messages.

When the button "save" button is clicked, the server will check if the username or email is already taken and alert the user.

If everything is entered correctly and saved a new user will be created.

The user given options with various modes of payment (online payment through credit/debit cards, via net or mobile banking or cash on delivery) out of which he chooses one. The chose mode of transaction is carried therefore by proper verification and authentication of bank details.