Software Requirements Specification

For

Health care management system

Version 1.0

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Revision History

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| **Name** | **Date** | **Reason For Changes** | **Version** |
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# Introduction

## Purpose

The Software is for the automation of health Care Management System. The Software includes :- Maintaining Patient details Providing Prescription, Precautions and Diet advice, Report generation. Billing for the inpatients and consultants. It maintains appointment handling. 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 health care management system. This document serves as the unambiguous guide for the developers of this software system.

## Document Conventions

when writing this document it was inherited that all requirements have the different priority levels. The levels of authentication are provided in four different aspects I.e. The Admin, the Receptionist, The Doctors and The Patients.

## Intended Audience and Reading Suggestions

This document is intended for, such as doctors, patients, receptionists, users, testers, and documentation writers. The intended audience includes all stakeholders in the potential system. These include, but are not necessarily limited to, the following: Administrative Staff,   patients and developers.

## Product Scope

The proposed software product is the Hospital Care Management System (HCMS). The system will be used to get the information from the patients and then storing that data for future  usage. The current system in use is a paper-based system. The intentions of the system are to reduce over-time pay and increase the number of patients that can be treated accurately. Requirements statements in this document are both functional and non-functional.

## References

Book: An integrated Approach Software Engineering 3rd Edition by pankajjalote.

Web site: <http://in.php.net/>

# Overall Description

## Product Perspective

This Hospital care Management System(HCMS) is a self-contained system that manages activities of the hospital as Patient Info. Various stakeholders are involved in the hospital patient info system. And the system used to get information from the paitients and storing that data for future usage.

## Product Functions

The system Hospital care Management System(HCMS) functions can be described as follows:

**1)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.

**2)Patient check out history:** 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.

**3)Receptionist check out:** Receptionist will send information of Patients to the doctor as required

**4)Doctor approval:** Doctor check out patients list, if the doctor is available he or she will approve the request came from receptionist about the patients for checkups

**5)Report Generation**:  The system generates reportson the following information: List of detailed information regarding the patient who has admitted in the hospital for their checkups or treatments.

## User Classes and Characteristics

The system Health Care Management System (HCMS) will be used in the hospital.

The main user classes for this are as follow:

1)Administrators

2)Front-desk staff including or Receptionist

3)Patients

4)Doctors

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), which is user-friendly.

The users characteristics are as follow:

**1)Administrators:**  
They all have post-secondary education relating to general business administration practices. Every administrator has basic computer training. They are responsible for all of the scheduling and updating day/night employee shifts.

**2)Front-desk staff or Receptionist:**  
They all have general reception and secretarial duties. Every staff has some basic computer training. They are responsible for patient’s check-in or notification of appropriate people.

**3)Patients:**

Patients can view their own records and doctors details and timings. And also can take appointment online.

**4)Doctors:**

Doctor should fairly know about the usage of the system. Doctors are able to see the respective appointments taken. And also can view patient’s details and records.

## Operating Environment

This proposed software will be used in Windows platform in the version of Windows 7 or 8. MySQL will be used for the database to hold the patients, doctors and other employees’ details.

* + Operating system: Windows platform, linux, Mac OS
  + Processor: Pentium 4
  + Processor speed: 2.5 GHz
  + RAM: 512MB
  + Hard disk drive: 40GB

## Design and Implementation Constraints

The Health Care Management System (HCMS) shall be a web based application system running in a windows environment. The system shall be developed using PHP and MySQL server.A person who has no knowledge of computers will find it difficult to understand the system. But with a little knowledge it will be very easy to handle the project.

Standard compliances. This document follows **IEEE** standard for software requirement specification.

## User Documentation

1)A HTML Help file with a tutorial and full help on all features provided.

2)Help pages will be providing document with screen shots.

**3)**If the user has more queries regarding this website then he/she can contact with the administrator through contact us page.

## Assumptions and Dependencies

The assumed factors are follow:

1. The code should be free with compilation errors/syntax errors.
2. The product must have an interface which is simple enough to understand.
3. The website should be responsive and interactive enough .

# External Interface Requirements

## User Interfaces

The software provides good graphical interface for the user any administrator can operate on system performing required tasks such as delete, edit, and update patient data. It allows admin to register patient and doctor who can then change their password.

## Hardware Interfaces

These are the minimum hardware interfaces

* Processor – Pentium III or Higher
* Ram – 512 MB or Higher.
* Disk Space – 10 GB or Higher

## Software Interfaces

These are the minimum software interfaces-

* Technologies: C# .Net 2.0, PHP
* Database: SQL server (standard edition).
* Operating system: Windows XP or above
* Web-Based : Web-based application

## Communications Interfaces

Communication interfaces will use TCP/IP for data transmission and SMTP/HTTP. FTP can also be used in pushing generated document reports to a hospitals FTP server.

# System Features

## Registration

4.1.1 Description and Priority

The system shall allow admin to add new patients to the system. It shall collect all of the patient’s information and previous health records.

4.1.2 Stimulus/Response Sequences

This feature shall be a screen with various inputs pertaining to the patient. There shall be text fields for the patient’s name, phone number, email, address, history. The user will also have the option to import past health records if the patient has come from a different hospital.

4.1.3 Functional Requirements

R-REG-1: The system shall have a user interface to collect, edit and delete patient data.

R-REG-2: The user interface shall have data fields for the following patient information: SSN, First Name, Last Name, Age, Sex, Date of Birth, Phone, and Address

R-REG-3: The user interface shall have a search feature which shall allow patient search by last name + first name and by SSN. The search results shall permit the import of patient records from network hospital.

R-REG-4: The user interface shall have an Edit option to change patient information

## Appointment

4.2.1 Description and Priority

This module takes care of outpatients and discharge patients appointment to the hospital either for checkups or consultation with the doctors. The visiting patient either calls in or come in person to visit the available doctor as long as the situation is not critical or an emergency.

4.2.2 Stimulus/Response Sequences

There shall be time when doctor is available and patient can select its suitable time.

4.2.3 Functional Requirements

R-REG-1: The system shall have a user interface to keep track of visiting patient

R-REG-2: The user interface shall informs the doctor of patient appointment schedule.

## Change Password

4.3.1 Description and Priority

The system shall allow doctor & patient to change their password.

4.2.2 Stimulus/Response Sequences

There shall be text for new password, email, old password. User can enter their new password and submit it.

4.2.3 Functional Requirements

R-REG-1: The system shall have interface to change password.

R-REG-2: The user interface shall informs the user about change password.

# Other Nonfunctional Requirements

## Performance Requirements

The performance of the system will be depend on the following thing

More than 100 peoples can logged in at the same time to view their profiles

The system will give response within 1 second after checking patient and other information.

The system must support 100 people at a time

User interface screen will respond within 5 second

Fingerprint scanning shall result in 1 second

The app will be operational 99.9% of the time expect error in the network connection

## Safety Requirements

To cover the safety of the system we should create the backup file of the data.In case of any damage we can recover our personal data from that backup file.By storing our data we can easily access the data if we encounter any error or mishap.

Data from the database shall never transmitted to another sources.

The patient information should kept safe and do not show to any unauthorized person

## Security Requirements

All the authorized persons has their unique login.So that they can only access their personal accounts

Except system administrator no one change and update the data

The database must only be accessible by the devices on the same network

## Software Quality Attributes

Usability:

software should be very useful at the time of usage and there should be no errors occur while the software is in use

Correctness:

:it perform the actions for which it is intended to do.

Availability:

the system should be available all the time of usage

Maintainability

:the ability to modify the system and maintain the system if there any errors occurs.

Stability:

The output of the same input will remain same for every time.

Accessibility:

The admininstrator can access only the personal data and level of access is controlled for every user

## Business Rules

1.software maintining period will be one year after the delivery of the software.

2.The any error occurs due to malfunctioning in hardware will not be cater further.

3.No money return for the software

4.Additional payment will be charged for the any other maintenance.

5.If any error occurs due to personal use.warranty will not be allocated to it.

# Other requirement:

## Legal requirements:

* Employers manage and conduct their work activities in such a manner as to ensure the safety, health and welfare of employees.

Appendix A: Glossary

the term HCMS is abbreviated as health care management system and is used in various places in the document.