**SOFTWARE REQUIREMENT SPECIFICATION FOR**

**HOSPITAL MANAGEMENT**

**SYSTEM.**

Prepared by

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Student ID** | **Class ID** | **Subject** |
| **Hammad**  **Abid** | **9134** | **103744** | **OOAD** |
| **Muhammad**  **Shahid** | **9492** | **103744** | **OOAD** |

Proposed to

**Sir Sohail Imran**

**27-01-2020**

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# 1. Introduction

**1.1 Purpose**

⎫ The Software is for the automation of Hospital Management.

⎫ It maintains two levels of users

(1) Administrator Level

(2) User Level

⎫ The Software includes Maintaining Patient details.

⎫ Providing Prescription, Precautions and Diet advice.

⎫ Providing and maintaining all kinds of tests for a patient. ⎫ Billing and Report generation

**1.2 Scope**

**Initial functional requirements will be: -**

⎫ The proposed software product is the Hospital Management System (HMS).The system will be used to get the information from the patients and then storing that data for future usagse.

⎫ The current system in use is a paper-based system. It is too slow and cannot provide updated lists of patients within a reasonable timeframe.

⎫ 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.

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

* Secure access of confidential data (user’s details).
* 24 X 7 availability
* Better component design to get better performance at peak time
* Advertisement space where it will effectively catch the customer’s attention and as a source of revenue.
* In addition to the above mentioned points, the following are planned to be delivered if deemed necessary:
* Warehousing within the very ambits of the project
* More payment gateways.
* Dynamic price model by which prices can be changed based on demand and supply
* Each customer can build a “scrapbook”, where they can have a collection of garments and accessories to create a specific look basing on inbuilt templates. The scrapbook created will be visible to other users who can like and/or comment on the style.
* This list is by no means, a final one. The final list will be dictated by implementation constraints, market forces and most importantly, by end user demands.

**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.

**1.6 Overview**

⎫ This Software Requirements Specification (SRS)is the requirements work product that formally specifies Hospital Management System (HMS).

⎫ It includes the results of both business analysis and systems analysis effortsVarious techniques were used to elicit the requirements and we have identified your needs, analyzed and refined them.

⎫ The objective of this document therefore is to formally describe the system’s high level requirements including functional requirements, non-functional requirements and business rules and constraints. The detail structure of this document is organized as follows:

⎫ Section 2 of this document provides an overview of the business domain that the proposed Hospital Management System (HMS) will support.

⎫ These include a general description of the product, user characteristics, general constraints, and any assumptions for this system.

⎫ This model demonstrates the development team's understanding of the business domain and serves to maximize the team's ability to build a system that truly does support the business. Section 3 presents the detail requirements, which comprise the domain model.

Urine Test

X-ray

Stool Test

Sonography Test

Gastroscopy Test

Colonoscopy Test

Blood Test

Biochemistry Test

Maintaining patient’s injection entry records

**2. Overall Description**

**2.1 Product Perspective**

This Hospital Management System is a self-contained system that manages activities of the hospital as Patient Info.Various stakeholders are involved in the hospital patient info 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. 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. Generation: The system generates reportson the following information: List of detailed information regarding the patient who had admitted in the hospital

## 2.3User characteristics

* The user should be familiar with the Shopping Mall related terminology like Shopping cart/Checking out/Transaction etc.
* The user should be familiar with the Internet.

## 2.4Constraints

* There is no maintainability of back up so availability will get affected.
* Limited to HTTP/HTTPS.
* Real-life credit card validation and Banking system is not implemented.
* No multilingual support

**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**

3.1 **Description Registration Add patients:-**

⎫ The HMS shall allow front-desk staff to add new patients to the system. Assign ID:-

⎫ The HMS shall allow front-desk staff to give each patient a ID and add it to the patient’s record. This ID shall be used by the patient throughout his/her stay in hospital. Delete **Patient ID:-**

⎫ The administrative staff in the ward shall be allowed to delete the ID of the patient from the system when the patient checks out .

**Add to beds-available list:-**

The administrative staff in the ward shall be allowed to put the beds just evacuated in bedsavailable list. Report **Generation Patient information:-**

⎫ The HPIMS shall generate reports on patients about the following information: patient’s PHN, patient’s name, ward name, bed number and the doctor’s name which was assigned.

**Bed Availability:-**

⎫ The HPIMS shall generate reports on bed availability about the following information: ward name, bed number, occupied/unoccupied. Database

⎫ **Patient Mandatory Information:-**

Each patient shall have the following mandatory information: first name, last name, phone number, personal health number, address, postal code, city, country, patient identification number.

⎫ **Update Patient Information:-**

The HPIMS shall allow the user to update any of the patient’s information.

**3.2 Non-functional Requirements**

3.2**Performance**

⎫ **Response Time :-**

The system shall give responses in 1 second after checking the patients information.

⎫ **Capacity :-**

The System must support 1000 people at a time.

⎫ **User-interface :-**

The user-interface screen shall respond within 5 seconds.

⎫ **Conformity:-**

The systems must conform to the Microsoft Accessibility

3.3**Security**

⎫ **Patient Identification:-**

The system requires the patient to identify himself /herself using PHN

⎫ **Logon ID :-**

Any user who uses the system shall have a Logon ID and Password.

⎫ **Modification**

Any modification (inert, delete, update) for the Database shall be synchronized and only by the administrator in the ward.

⎫ **Front Desk staff Rights:-**

Front Desk staff shall be able to view all information in HPIMS, add new patients to HPIMS but shall not be able to modify any information in it.

⎫ **Administrators' Rights:-**

Administrators shall be able to view and modify all information in HPIMS.

3.3**Reliability**

⎫ How general the form generation language is Simplicity vs. functionality of the form language= Speeds up form development but does not limit functional.

3.4**Availability**

⎫ The system shall be available all the time.

3.5**Safety**

⎫ Humans are error-prone, but the negative effects of common errors should be limited. E.g., users should realize that a given command will delete data, and be asked to confirm their intent or have the option to undo.

3.6**Software Quality**

⎫ Good quality of the framework= produces robust, bug free software which contains all necessary requirements Customer satisfaction.

3.7**Reusability**

⎫ Is part of the code going to be used elsewhere produces simple and independent code modules that can be reused

3.8**Maintainability**

⎫ Back Up The system shall provide the capability to back-up the Data.

⎫ Errors The system shall keep a log of all the errors

**4.1 Interfaces Possible Scenarios**

**4.1.1 Personal Data Editing:**

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 patients information such as date of birth, address and telephone number is also entered into computer system.

**4.1.2 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.

**4.1.3Patient 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.

**4.1.4 User Interface:-**

⎫ The software provides good graphical interface for the user any administrator can operate on the system, performing the required task such as create, update, viewing the details of the book.

⎫ Allows user to view quick reports like Book Issues/Returned etc in between particular time.

⎫ Stock verification and search facility based on different criteria.

**4.1.5 Hardware interface:-**

⎫ Operating system : window

⎫ Hard disk :40 GB

⎫ RAM : 256 MB

⎫ Processor : Pentium(R)Dual-core CPU 4.3

**4.1.6 Software interface :-**

⎫ Java language

⎫ Net beans IDE 7.0.1

⎫ MS SQL server 2005

**4.1.7 Communication interface:-**

⎫ Window

**4.1.8 Payment**

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.

**4.1.9 Support**

The user can contact with the customer care via phone call or via messages. User can ask for an assistance or can give feedback on a particular aspect.

**4.1.10 Interface for Administrator**

The administrator will have a different login id using which he can access his account that contains a control panel that allows him to contact each and every aspect of the system.

This control panel will allow the administrator to do the following things:

* Access and view the customer database.
* Access and view the database of vendors, go through their requests for shop creation and reply them back with acceptance /dismissal of their request.
* Access and view the employee database and manage them.
* Make the catalog (that is visible to the customers), taking the design of corresponding shop owners in consideration .
* Grant/ Reject purchase permit to purchase manager.
* Manage employee salary.
* Contact employees.