Software Requirements Specification

For

Hospital Management System

Version 4.0

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Revision History

Name	Date	Reason for revision	version
Hospital management System	9 January 2018	Created basic SRS	1.0
Hospital management System	20 February 2018	Added functionalities, hardware and communication interface	2.0
Hospital Management System	27 February 2018	Added Design Diagrams	3.0
Hospital Management System	6 March 2018	Added User Interface Screenshots	4.0

1.Introduction

1.1 Purpose

The purpose of this documentation is to present a detailed description of the Hospital Management System website. It will explain the purpose and features and functionalities of the website and how

it operates. This document is intended for users of the software and also potential developers and also for those who want to extend their reach to the public.

1.2 Document Conventions

This document was created based on the IEEE template for System Requirement Specification Documents.

1.3 Intended Audience and Reading Suggestion

- Typical users such as Doctors, Nurses, Receptionist who want to use the website for organising and managing data and schedules.
- Developers who wish to improve the responsiveness of the website making it more robust.
- Programmers who are interested in working on the project by further developing it or fix existing bugs.

1.4 Product Scope

Hospital Management System is a website which allows the receptionist, doctors to manage and organise the patient. Room allotment for the patients can be done for the ones who need it. The website contains information of all the employees of the hospital.The Doctors can also see the list of patients which are visiting then for operation/check-up. The medical report will be generated along with the bill amount at the time of discharge. This provides an easy and convenient way for managing hospital data and is hassle free.

2. Overall Description

2.1 Product Perspective

This website was designed by keeping the lateral development in the field of Web Technologies and the vast application of the same. It is an easy to understand and user-friendly website which can be further developed to its optimal state to benefit for the collective good of the common people who are in need of a hassle free interface.

The website should be easy to operate and at the same time should house the industry leading cutting edge technologies.

2.2 Product Functions

- Medical Report
- Patient Information
- Employee Information

2.3 User Classes and Characteristics

- Typical users such as Receptionist who want to use the website for organising and managing data and schedules.
- Developers who wish to improve the responsiveness of the website making it more robust.
- Programmers who are interested in working on the project by further developing it or fix existing bugs.

2.4 Operating Environment

- Windows 2000
- Windows XP
- Windows Vista
- Windows 7
- Windows 8
- Windows 10
- Mac OS X
- Linux

2.5 Design and Implementation Constraints

The website is built using the tried and tested Web Tech tools such as HTML, CSS, JavaScript, Bootstrap, PHP and MySQL for the database management built on top of Netbeans 8.2 platform.

2.6 Assumption and Dependencies

This website is developed by using modern Web Technology tools such as Java, PHP, HTML, CSS, Bootstrap and therefore it requires Java and PHP to be installed on the user's system. The user will have to update the Bootstrap to the latest version in order to experience the responsiveness of the website. It's compatible with all kind of platforms and is Desktop as well as a mobile friendly application.

3. External Interface Requirement

3.1 User Interface

Development has not reached this stage yet due to which details have not been mentioned.

3.2 Hardware Interface

The minimum hardware requirements for this website are a 500 MegaHertz CPU and 2 GigaBytes of RAM. Intel Graphics card, ADM Radeon or a NVIDIA GEFORCE graphics card would suffice for optimum user interface experience.

3.3 Software Interface

Our website requires xampp to be installed on the system. The website uses MySql for database connection, modification, updation and retrieval of database information. The javascript should be installed on the browser of the client computer and should be updated regularly to keep up with the updates of the website.

3.4 Communication Interfaces

1. The website requires an internet connection to receive the data from all the clients.
2. The communication network must have
    a. Fast and reliable network medium
    b. Secure protocols
3. The user computer must be connected through either a wifi or ethernet connection with good and reliable connection for lossless transmission of data.

4. System Features

HOME

- My account: To view the account details of the user who has logged in.
- Logout: To logout from the current user.

PATIENTS

- View Details: To search patient details using Name or Patient ID and an advanced search option can also be used to search via Age,Blood Group, Gender or Accompanies' Name.
- Accompanies: To search Accompanying person of a patient using Patient Name or Patient ID.
- Modify Details: To modify Patient Details using Patient ID.
- Delete Details: To delete Patient Details using Patient ID.
- Add new Details: To Add Details of a new Patient. Patient ID will be automatically generated starting from "P".
- Add Accompanies: To Add Details of Accompanying Person of a Patient.

- Allot Doctor to a Patient: To Assign Doctor to a Patient entering Patient ID, Doctor ID and Date.

EMPLOYEE

- Doctors: To view details of all the Doctors in the Hospital.
- Medical Staff: To view details of entire Medical Staff of the Hospital.
- Administration: To view details of Administrative Staff of the Hospital.
- Modify Details: To modify Employee Details using Employee ID.
- Delete Details: To modify Employee Details using Employee ID.
- Add New Details: To Add Details of new Employee.Department-wise new Employee IDs will be generated.

MEDICAL REPORT (Billing)

- Create Report: Create a new Medical Report of Patient of a particular Department. New Report ID will be generated starting from “R”.
- View Report: To search Report using Report ID.
- Modify Report: To Modify existing Report using Report ID.
- Add Closing Date: To Add Closing date of a Report using Report ID.
- Delete Report: To delete an existing Report using Report ID or Patient Name.

DEPARTMENTS

- View departments: to view the details of the departments
- Modify, delete and add departments

VEHICLE DETAILS

- Search a vehicle: to search by registration number
- Allot a vehicle: allot a vehicle to a patient
- Un-allot a vehicle: discard a vehicle allocated to a patient

ROOM DETAILS

- Search a room: search using room ID
- Allocate a room: allocate a room to a patient
- Un-allocate a room

5. Other Non functional Requirements

5.1 Performance Requirements

- Response time-The system will give responses within 1 second after checking the patient information and other information.
- Capacity-The system must support 100 people at a time.
- User interface- User interface screen will response within 5 seconds.
- Conformity-The system must conform to the Microsoft accessibility

5.2 Safety Requirements

If there is extensive damage to a wide portion of the database due to catastrophic failure,such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.

5.3 Security Requirements

- Data must be stored and protected in the database.
- Suitable protocols will be used to secure the network.
- Only authentic users must be allowed in the website
- No confidential information must be leaked.

5.4 Software Quality Attributes

- **Availability**: The system shall be available all the time.
- **Correctness**: A bug free software which fulfill the correct need/requirements of the client.
- **Maintainability**: The ability to maintain ,modify information and update fix problems of the system.
- **Usability**: Software can be used again and again without distortion.
- **Accessibility**: Administrator and many other users can access the system but the access level is controlled for each user according to their work scope.
- **Accuracy**: The reliability on the information/output. Can depend/be sure of the outcome.
- **Stability**: The system outcome/output won't change time to time. Same output will be given always for a given input.

6.Functional Requirements

The Receptionist can

- Login to the website: the receptionist can login into the website with proper credentials
- Modify account details: account details can be modified

For Patients, Receptionist can

- Add new patients: user can add new patients
- Modify patient details: can modify patient details
- Allocate patients to doctor: allocate a patient to a particular doctor

For Doctors, Receptionist can

- Add doctors: The receptionist can add new doctors to the hospital
- Modify doctor details: Modify the details of the doctors credentials
- Delete doctor details: delete the records of the doctors

For Medical Report

- Make a medical report: create a medical report for a patient
- Modify it: modify the report as and when required

Organise the Room allotment

- Allocate a room to patient:
- Unallocate a room
- Allocate a vehicle
- View departments
- Add, modify and delete departments

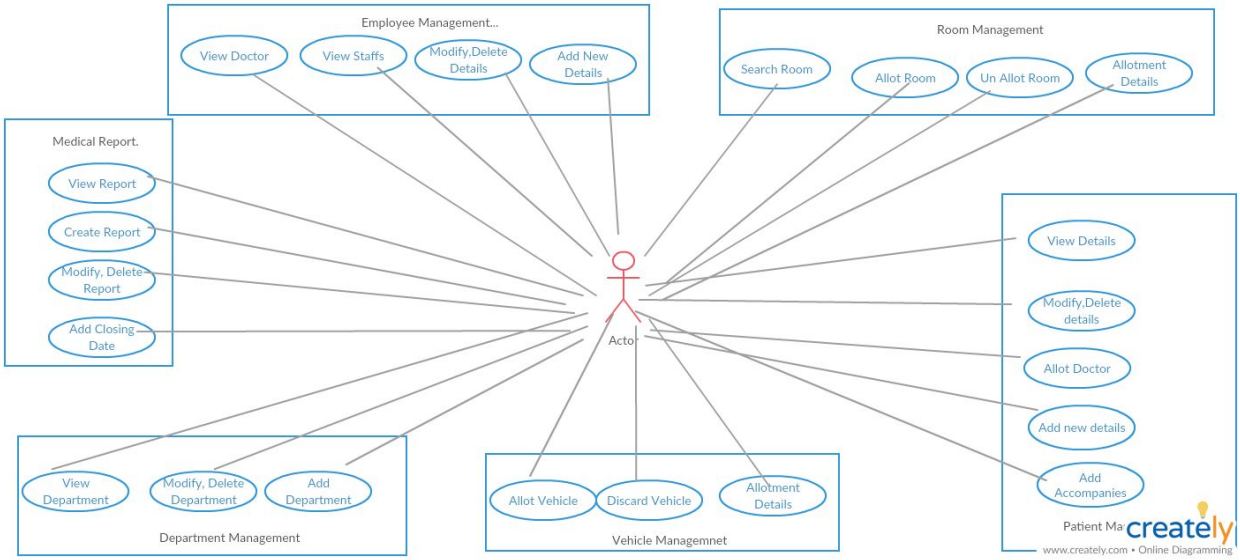
7. Other Requirements

Appendix A: Glossary

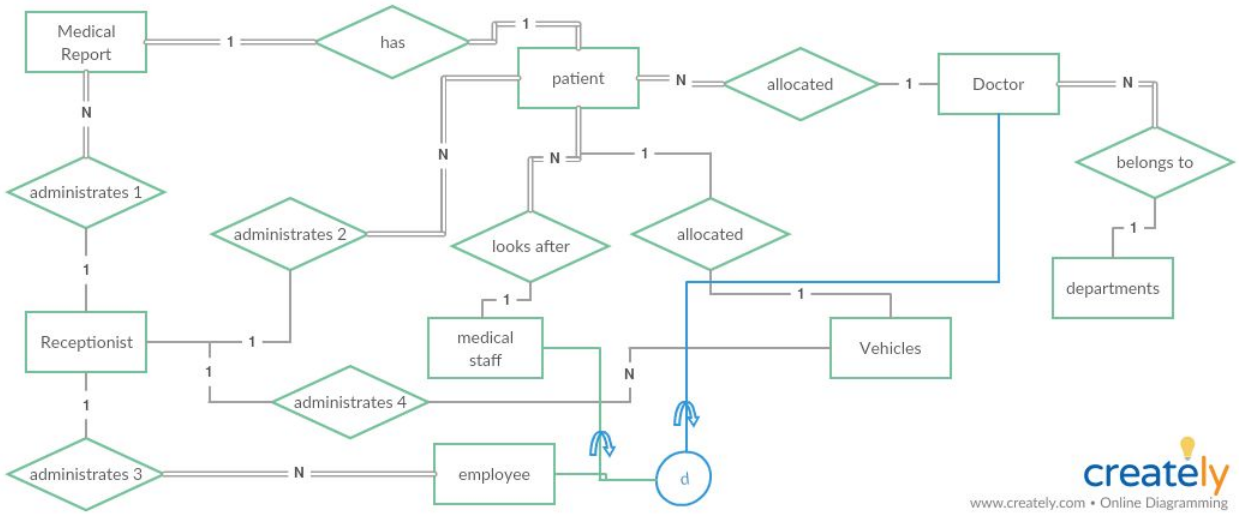
Term	Description
SRS	Software Requirement Specification
IEEE	Institute of electrical and electronics engineers
User/Client	End user using the website

Appendix B: Analysis Models

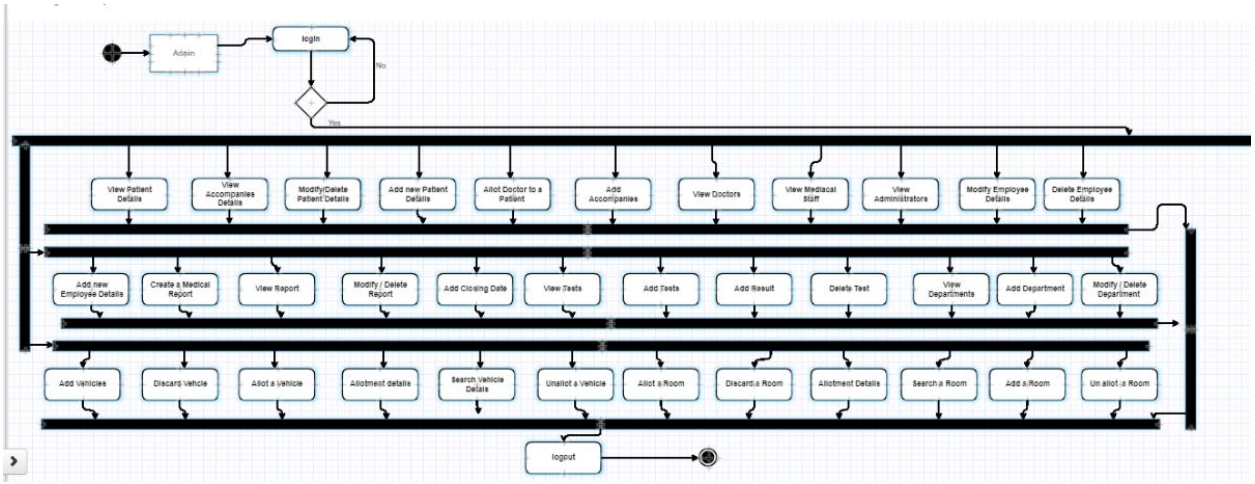
Use case diagram



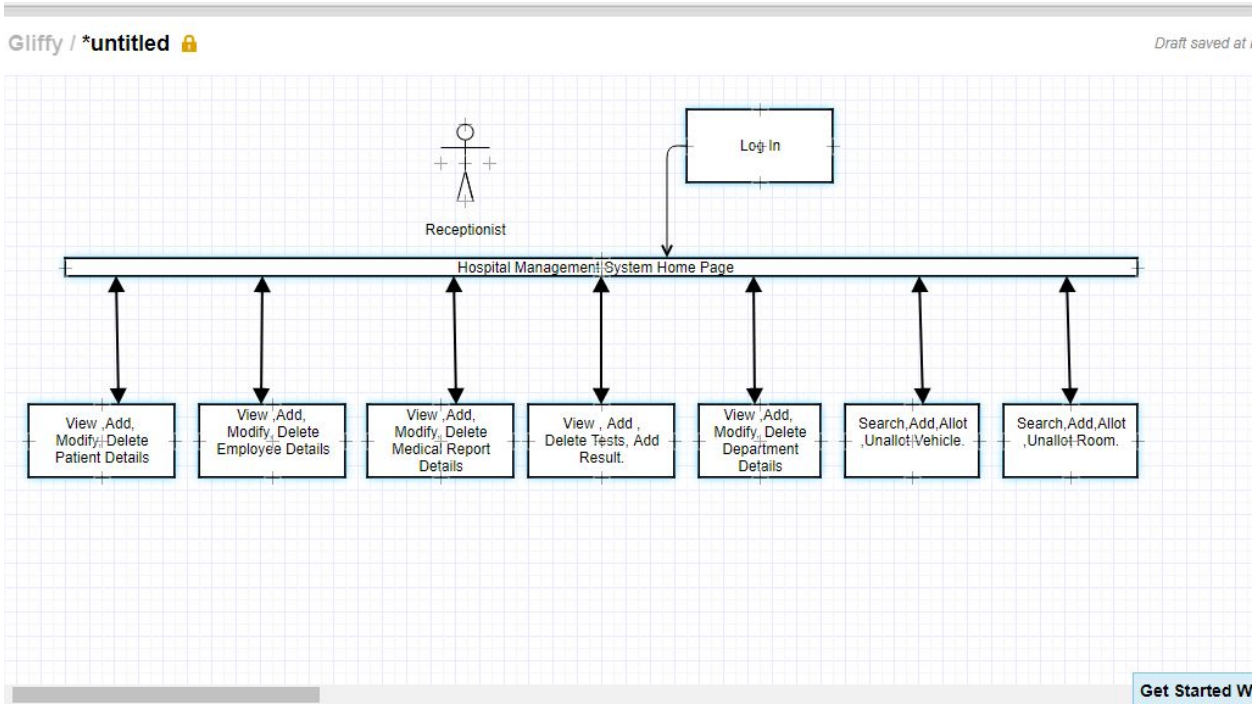
Entity relationship diagram



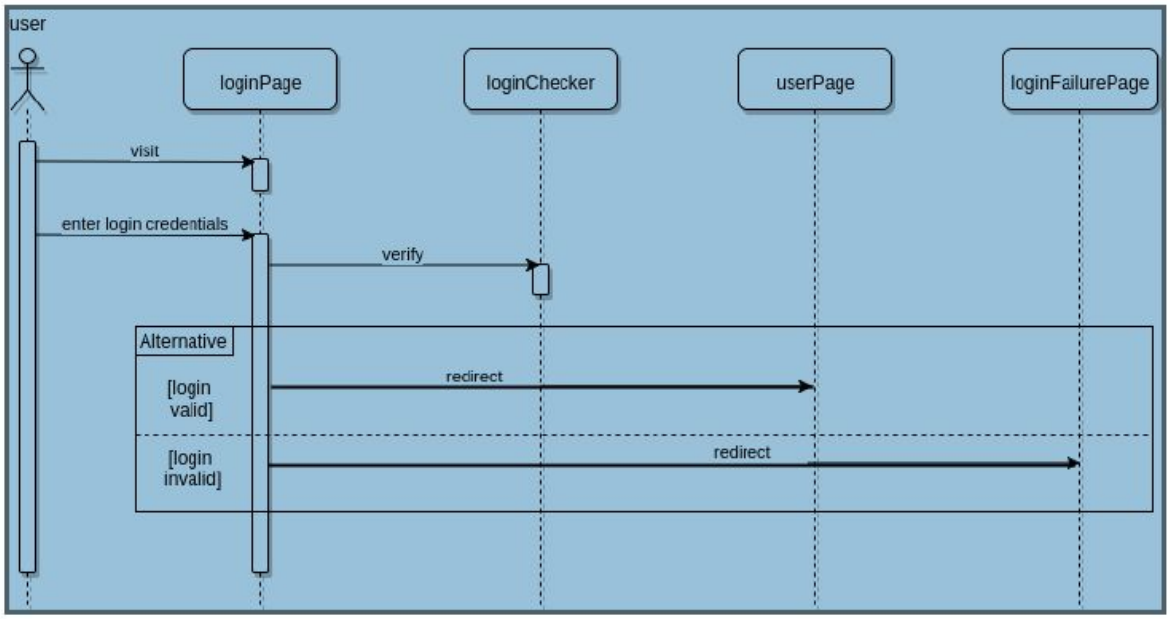
Activity Diagram



Navigation Diagram

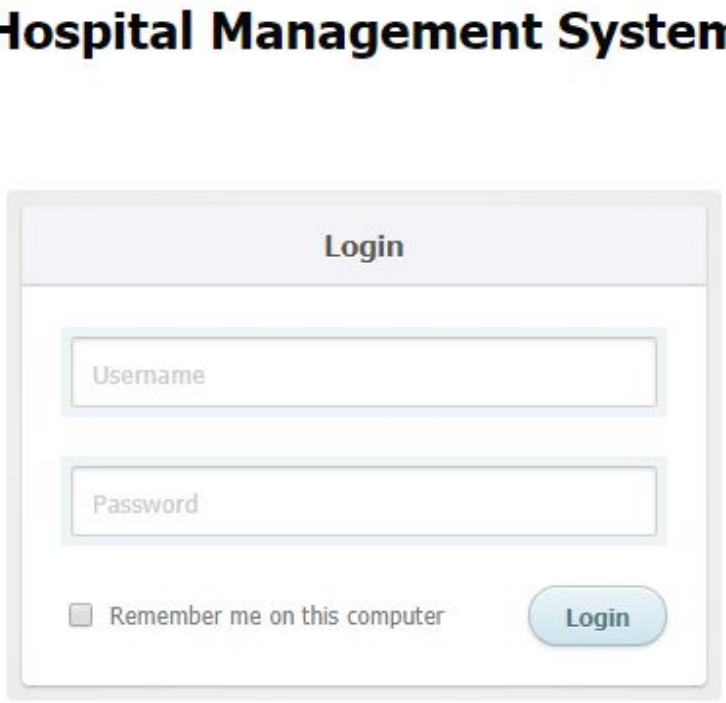


Sequence Diagram


user
loginPage
loginChecker
userPage
loginFailurePage
visit
enter login credentials
verify
Alternative
[login valid]
redirect
[login invalid]
redirect

Appendix C: User Interface

1.Login page



2.My account details

3.New patient details

4.Allot doctor to patient