Hospital Management System

Project Report

On

"Hospital Management System"

Submitted for partial fulfillment of requirement for the award of degree

Of

Bachelor OF Engineering
In

GUJARAT TECHNOLOGICAL UNIVERSTY

Session 2013

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Acknowledgement

I take this opportunity to express my deepest gratitude and appreciation to all those people who made this project work easier with words of encouragement, motivation and helped me towards the successful completion of this project work.

First I would like to express my sincere gratitude to my Project Guide and Professor, Department of Computer Engineering, **Prof. ketanS.chavada**Darshan Institute of Engineering & Technology, At Hadala Rajkot-363 650 for his insightful advice, motivating suggestions, invaluable guidance, help and lots of moral support in successful completion of this Project and also for his constant encouragement and advice throughout my B.E. (Computer Engineering) programme.

I would like to thank all other teaching staff for their valuable teaching and constant advice which made me to finish this program successfully.

Finally my deepest gratitude goes to my parents who have given me much needed comfort, support, encouragement and inspiration for completing this project.

Abstract

This hospital has required a system that maintains its hospital Management System as well as keeps the record of the Hospital in database. This software manage all information about patient name,patient address,doctore information,staff information etc. it also store daily imformation of patient Which is done by doctore. Also store information about billing , finaly it calcluate total bill of patient .

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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

- ✓ 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.

1.3 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. General 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 features

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 ha admitted in the hospital

2.3 Design and Implementation Constraints

- ✓ **Database:**
  The system shall use the MySQL Database, which is open source and free.

- ✓ **Operating System**
  The Development environment shall be Windows 2000.

- ✓ **Web-Based**
  The system shall be a Web-based application.

  .

2.4 Assumptions and Dependencies

- ✓ itis assumed that one hundred IBM compatible computers will be available before the system is installed and tested.
- ✓ It is assumed that the Hospital will have enough trained staff to take care of the system

3. 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 beds-available 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 as described in SRS007.

3.2 Technical issues

- ✓ **Database**
  The system shall use the MySQL Database, which is open source and free.

- ✓ **Operating System**
  The Development environment shall be Windows 2000.

- ✓ **Web-Based**
  The system shall be a Web-based application.

4.Interface Requirements

4.1 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.

4.2 Hardware interface:-

- ✓ Operating system : window
- ✓ Hard disk :40 GB
- ✓ RAM : 256 MB
- ✓ Processor : Pentium(R)Dual-core CPU

4.3 Softwareinterface :-

- ✓ Java language
- ✓ Net beans IDE 7.0.1
- ✓ MS SQL server 2005

4.4 Communication interface:-

- ✓ Window

5.Software requirement Analysis

5.1 Define Problem

- ✓ We develop the hospital management system for the hospital staff and other department that for record for all the user .

5.2 Define module & Functionality

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

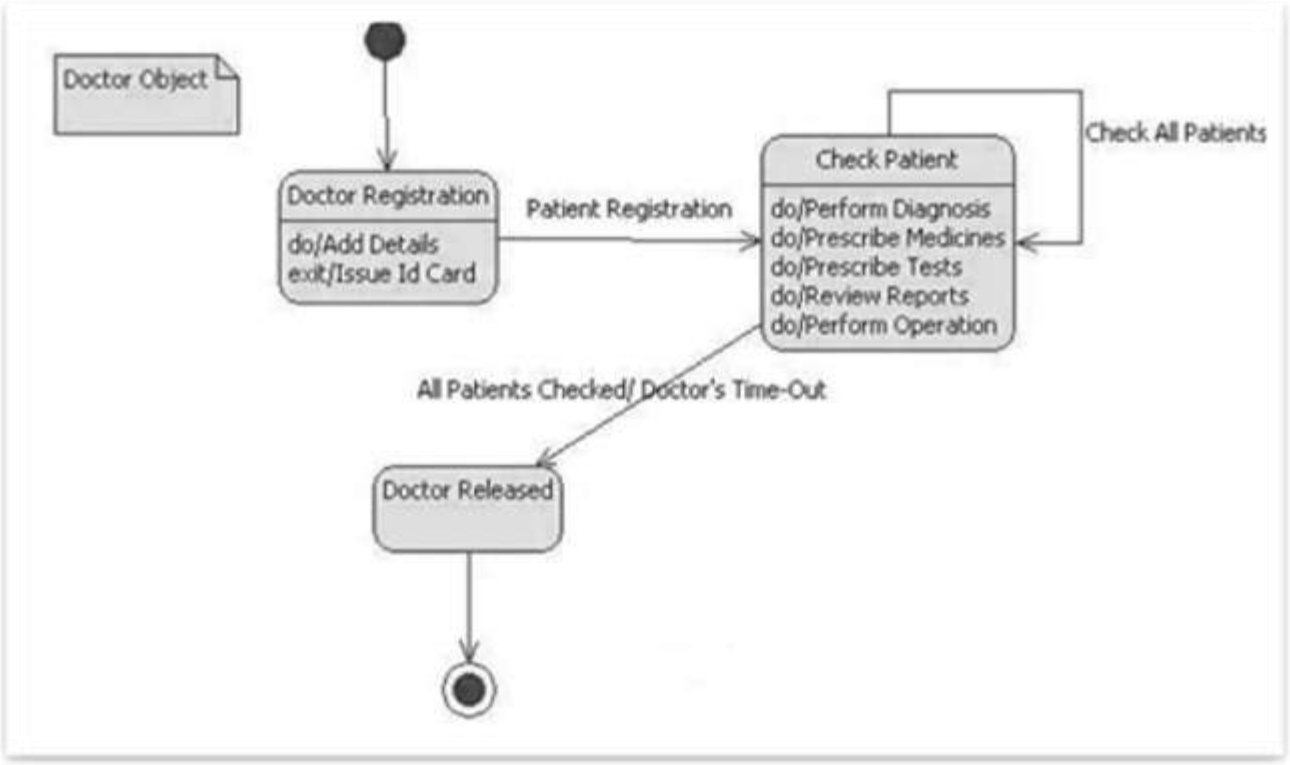
Patient check out: If a patient checks out, the administrative staff shall delete his PHN from the system and the just evacuated bed is included in available-beds list.

6.Software Design

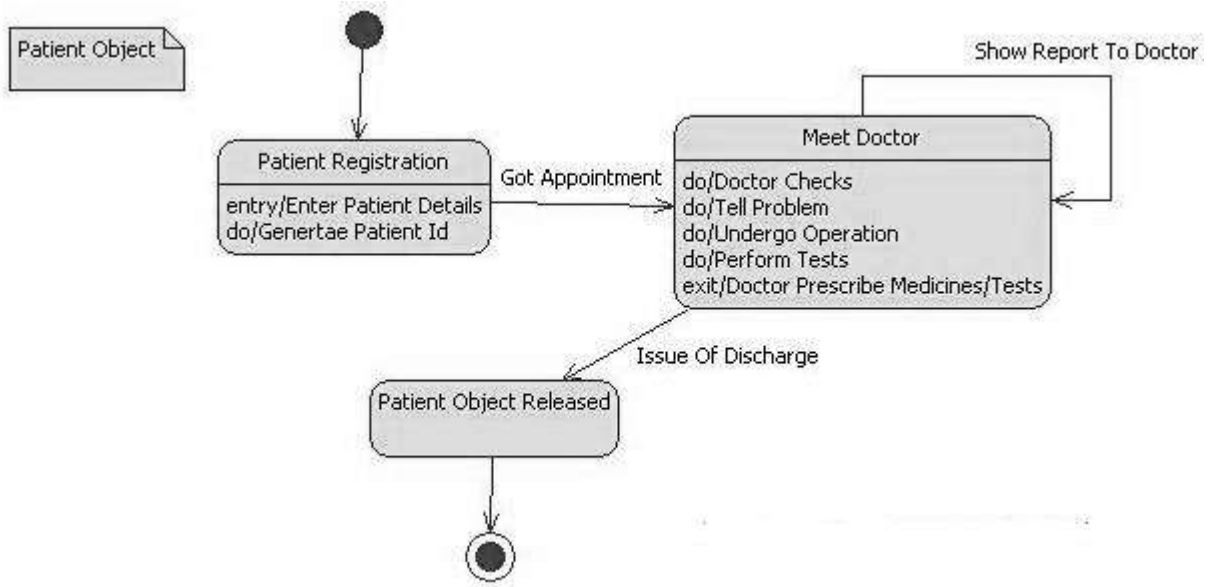
6.1 UML Diagram

6.1.1 State Diagram

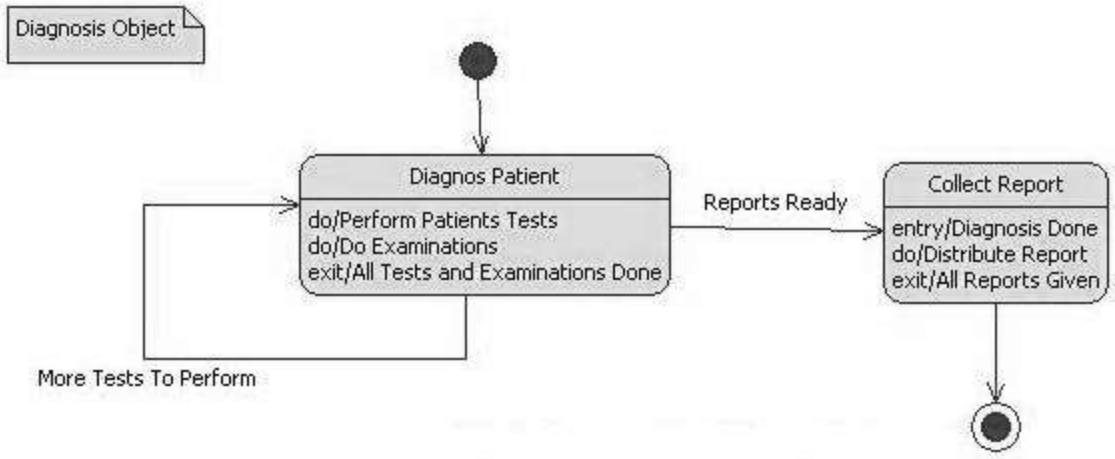
State Diagram for Doctor Object:



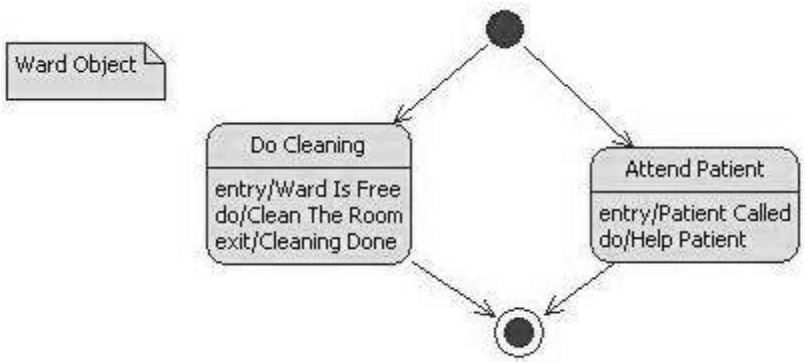
State Diagram For Patient Object:



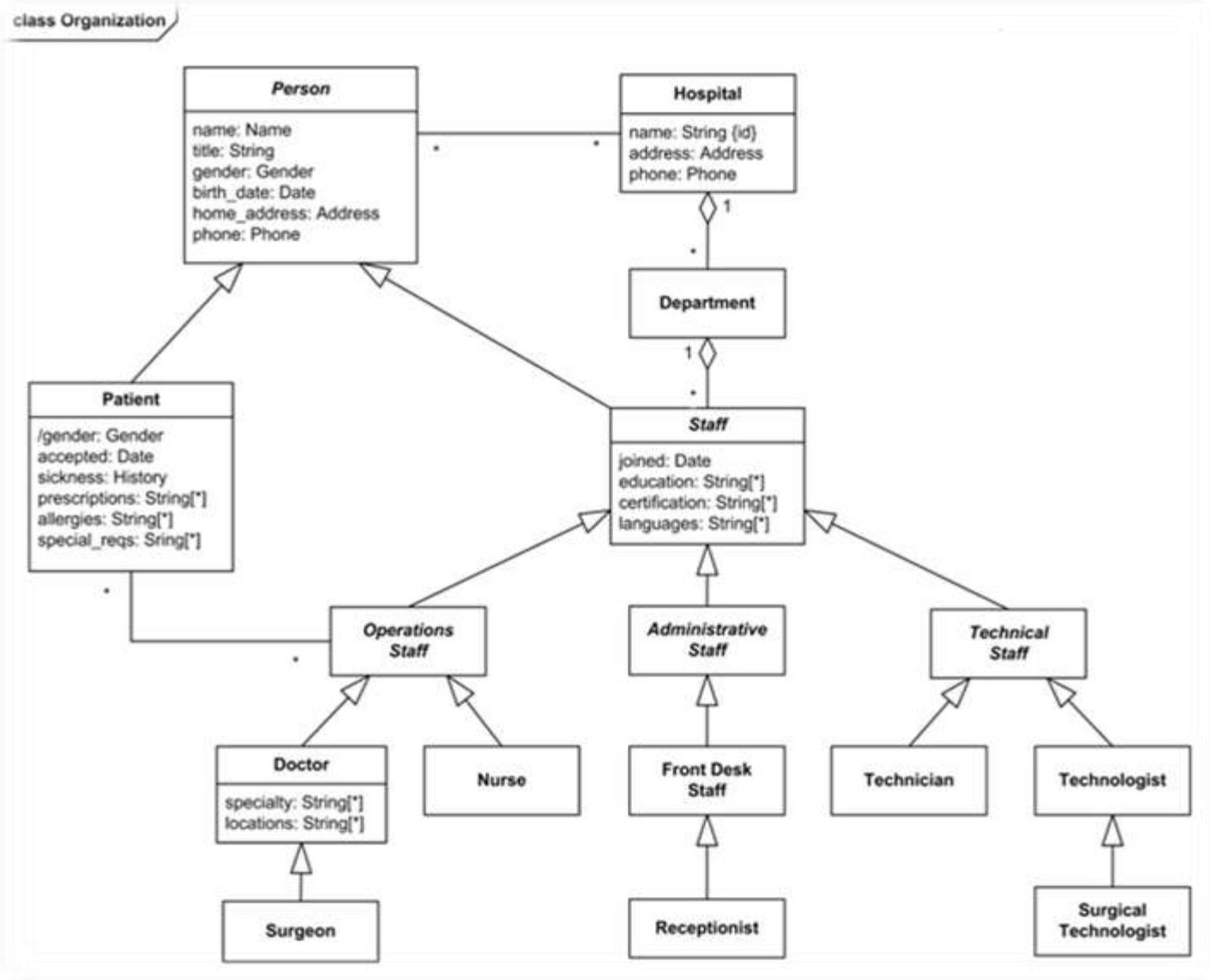
State Diagram For Diagnosis Object:



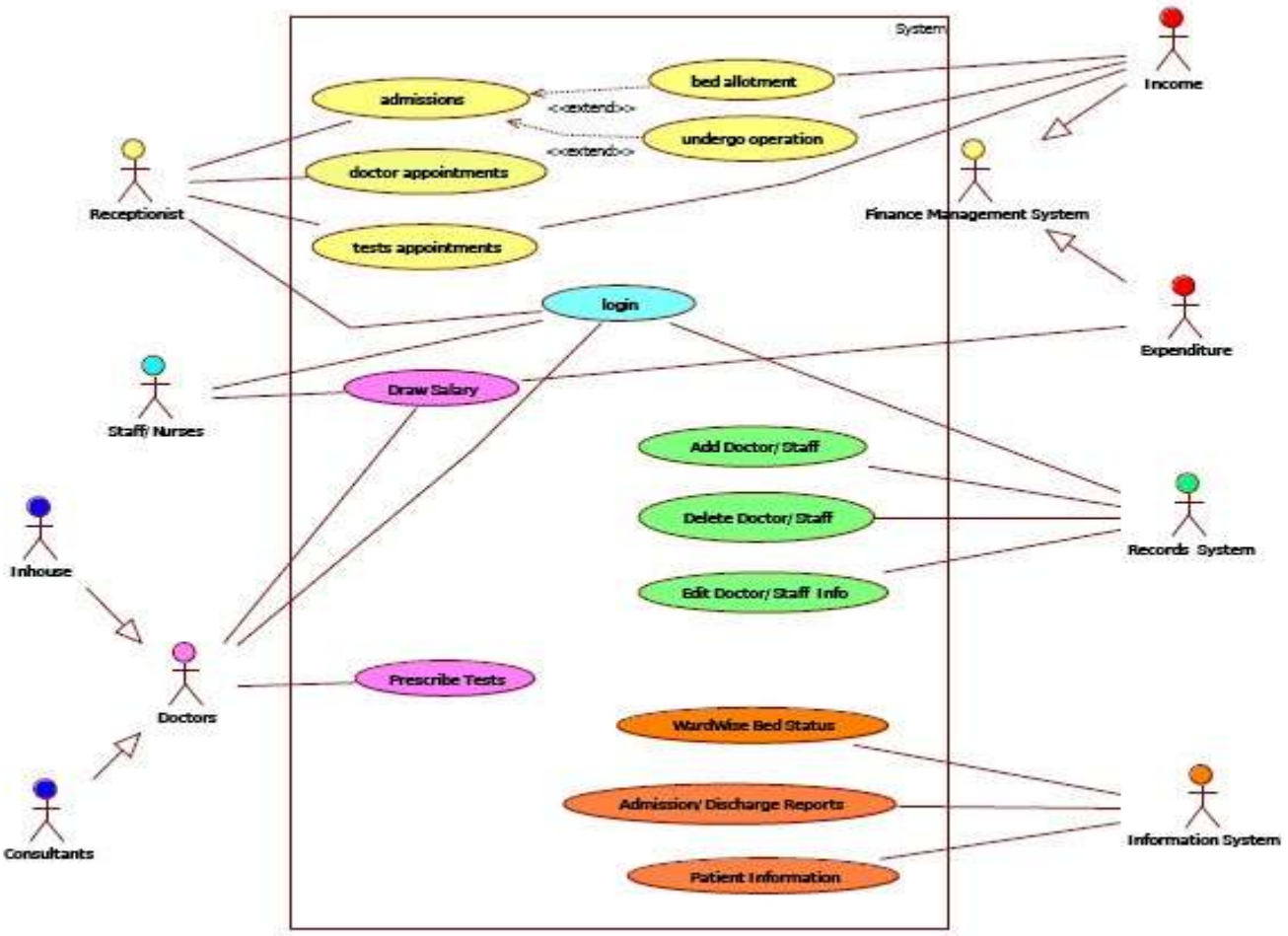
State Diagram For Ward Object:


Ward Object
Do Cleaning
entry/Ward Is Free
do/Clean The Room
exit/Cleaning Done
Attend Patient
entry/Patient Called
do/Help Patient

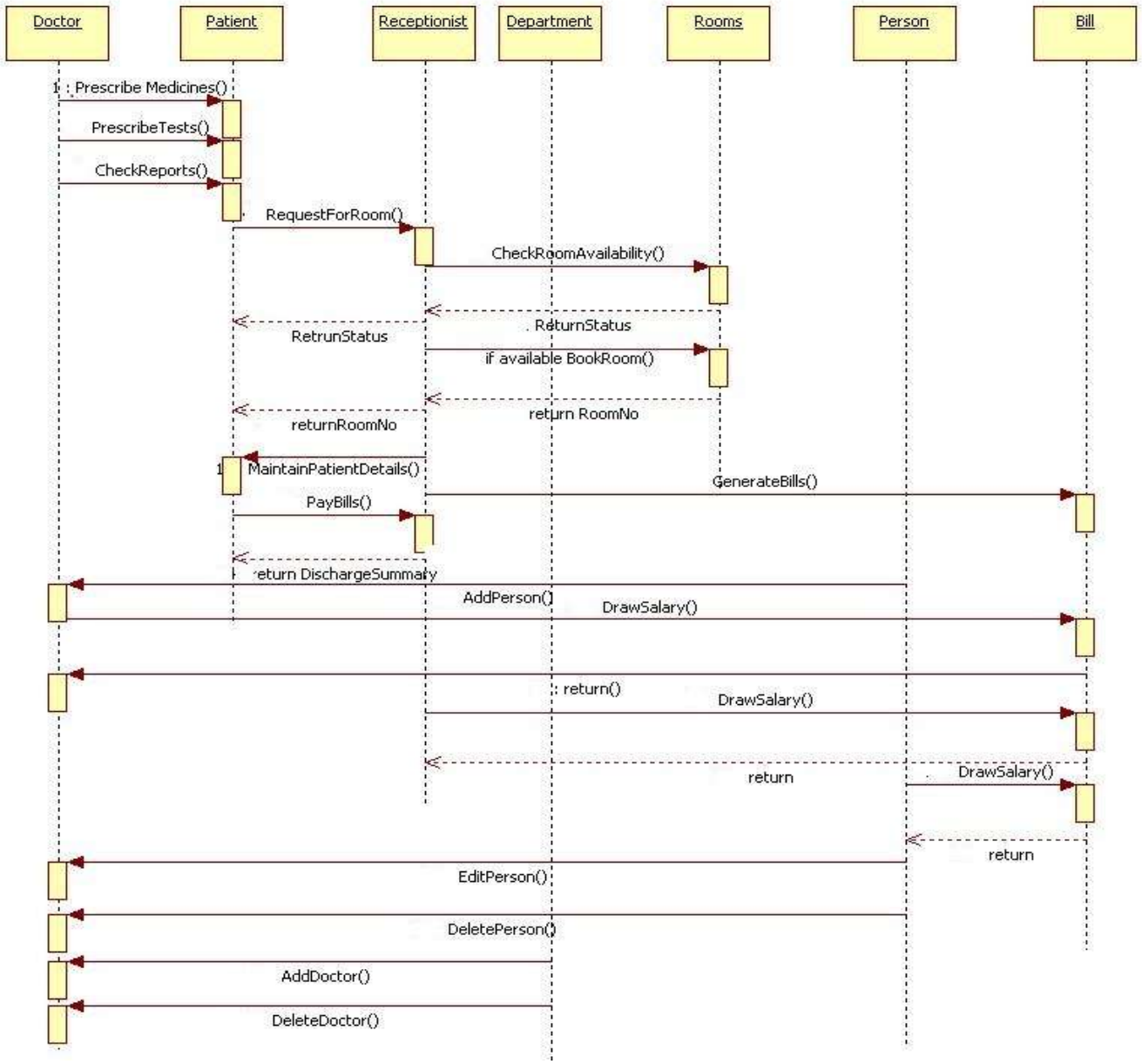
6.1.2.Class Diagram



6.1.3 Use case Diagram

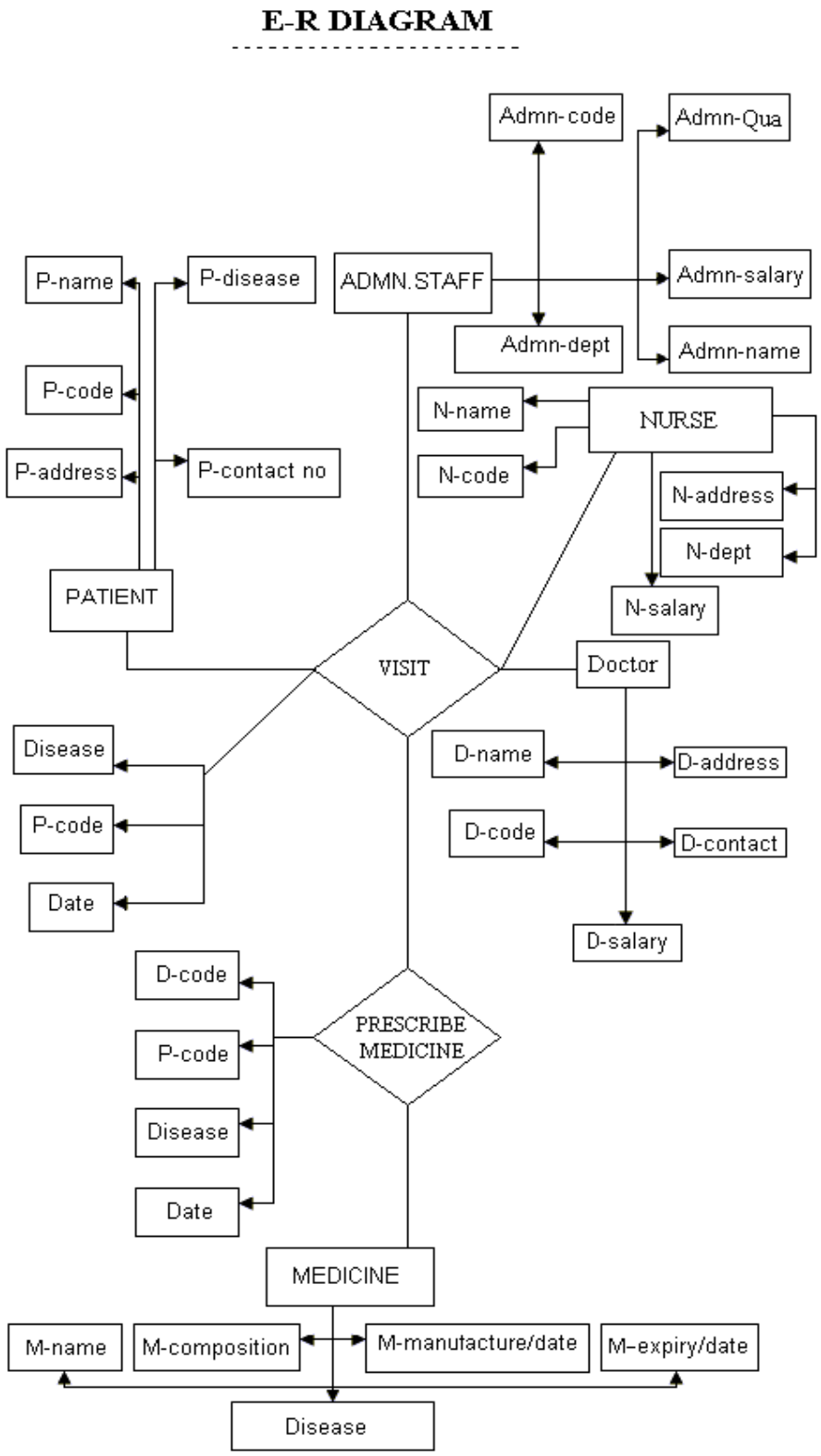


6.1.4 Sequence Diagram



6.2Database design

6.2.1 E-R Diagram



7.Non- functional Requirement

7.1Performance

- ✓ **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

7.2Security

- ✓ **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.

7.3 Reliability

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

7.4 Availability

- ✓ The system shall be available all the time.

7.5 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.

7.6 Software Quality

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

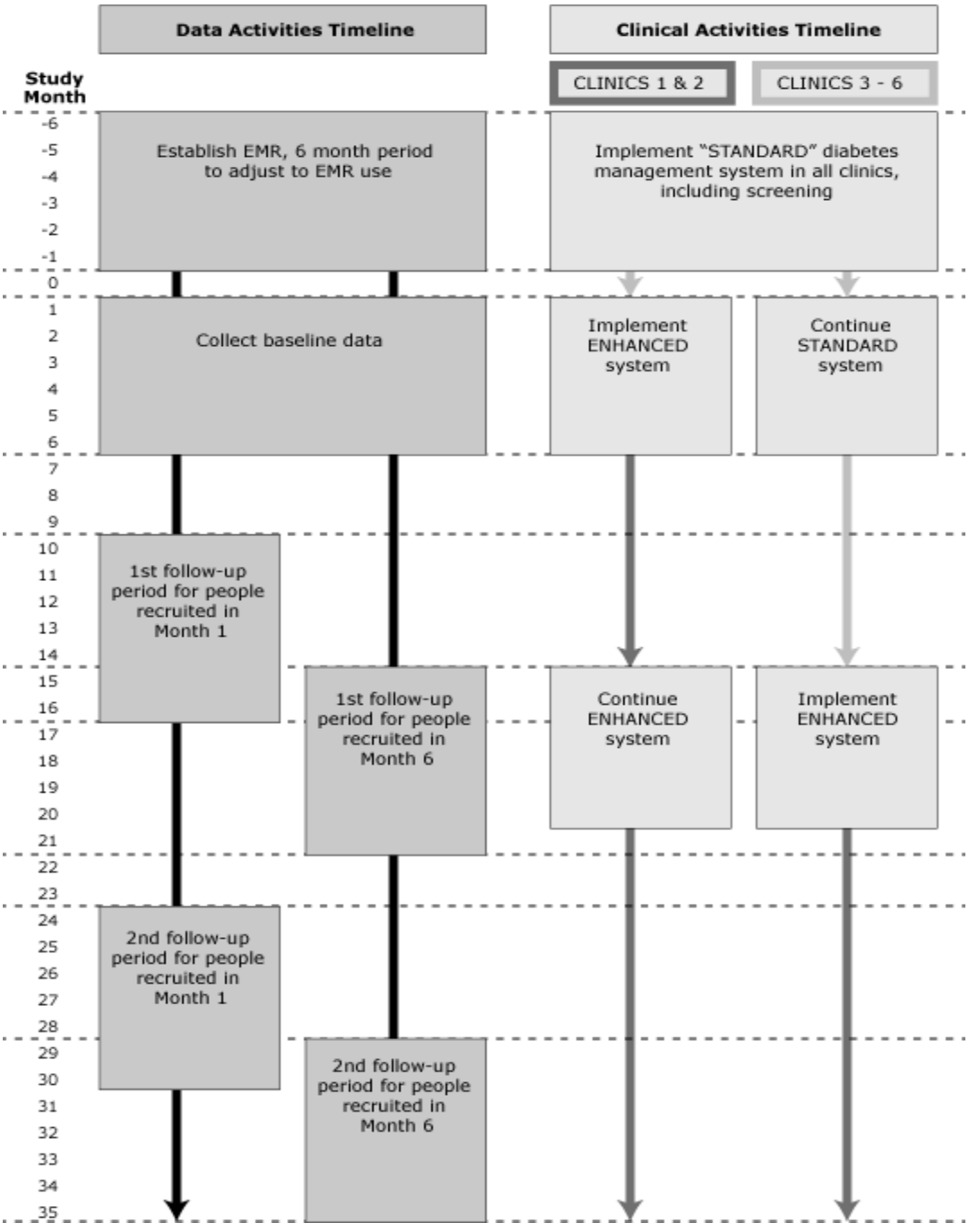
7.7 Reusability

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

7.8 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.

8. Timeline chart



9. CONCLUSION

This SRS document is used to give details regarding Hospital Patient Info Management System. In this all the functional and non-functional requirements are specified in order to get a clear cut idea to develop a project.

10. Reference

www.google.com

www.diagram.ly

www.umldiagram.org