Sri Lanka Institute of Information Technology

HOSPITAL MANAGEMENT SYSTEM

Software Requirement Specification

Information Technology Project 2016

Project ID: **ITP-16-MLB-WE-13**

Submitted by:

1. IT15135230– (Amarathunga A. A. B. S)
2. IT15143082– (Abeywardhane J.S.D.M.D.S)
3. IT15143228– (Gunawardena D.C)
4. IT15130730– (De Silva E.M.W.N)
5. IT14069246– (Jayathilaka A.U)
6. IT15099846– (Palliyaguru S.T)
7. IT15096944– (Wanniarachchi T.N)
8. IT15025722– (Liyanage L.C)

Submitted to:

(Supervisor's signature)

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Ms. Yashodhya Wijesinghe

Date of submission

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

If the SRS is written well it will serve the following purposes. SRS is the agreement document between the client and the Software developer.

Feedback to the Customer-This software requirement specification assures the project management stakeholders and client that the development team has really understood the business requirements documentation properly. This also provides confidence that the team will develop the functionality which has been detailed.

Breaking the Requirements Down-This document is documented in such a way that it breaks the deliverables into smaller components which makes the participants in this project to understand what is to be done clearly.

The information is organized in such a way that all the developers within the team will not only understand the boundaries within which we need to work, but also what functionality needs to be developed and in what order.

Understanding what order the functionality will be developed in means that we, the developers will have the "big picture" view of the development. This gives us an opportunity to plan ahead which saves both project time and cost.

Facilitating other Documentation-The SRS forms the basis for a load of other important documents such as the Software Design Specification.

Product Validation-It basically helps in validating with the client that the product which is being delivered, meets what they asked for.

Which means that the product we have output is Equal to the standards of the documentation in the SRS which the client satisfied and agreed on.

Characteristics of a Software Requirement Specification

1.1.1 Accuracy

We will ensure the accuracy of the software and the data entered to the database

1.1.2 Clarity

This SRS will be clearly stating what the user wants in the software.

1.1.3 Completeness

The software requirement specification contains all the the requirements stated in the business requirements documentation that the user specified.

1.1.4 Consistency

The document is consistent from beginning till the end. It helps the readers understand the requirements well.

1.1.5 Prioritizations of Requirements

The requirements will be full filled according to the order of priority and preference.

1.1.6 Verifiability

At the end of the project, the user/client will be able to verify that all that all the agreed deliverables have in fact been produced and meet the project management requirements specified.

1.1.7 Modifiability

The SRS can be modified when the development team and user feel the need.

1.1.8 Traceability

Each requirement stated in the SRS is uniquely associated to a source such as a use case or interaction document etc.

1.2 Document Conventions

The document is prepared using Microsoft Word 2010 and has used the font type 'Times New Roman'. The fixed font size that has been used to type this document is 12pt with 1.5 line spacing. It has used the bold property to set the headings of the document. All pages except the cover page are numbered, the numbers appear on the lower right hand corner of the page. Every image and data table are numbered and referred to the in the main text

Use case scenario is written according to Alistair Cockburn's template. Standard IEEE template is the template used to organize the appearance of the document and its flow.

1.3 Intended Audience and Reading Suggestions

The intended audience of this document would be the client and specific employees like Manager and Receptionist, consultants and System Operators of the St Joseph Hospital, and project team, supervisor with the objective to refer and analyze the information. The SRS document can be used in any case regarding the requirements of the project and the solutions that have been taken. The document would final provide a clear idea about the system that is building.

1.4 Product Scope

Currently Wennapuwa St Joseph hospital is using a manual system to handle the hospital process. When patients arrive they make an appointment at the reception to consult a Doctor. These are being recorded in a file. Then again the patients diagnosed symptoms related disease details, ward details and other necessary details are being recorded and those files are being stored in special locations. Calculation of bills and inventory are done manually.

As the current system is a file based one, management of the hospital has to put much effort on securing the files. They can be easily damaged by fire, insects and natural disasters. Also could be misplaced by losing data and information.

Limited storage space of the files is another issue that they currently face when the management is manually done.

There occurs an issue with the organization of data information and schedules and running the process methodically which leads to the manual system malfunctioning.

If we want to check a previous record of a patient or other detail. Management will be in a great problem. It's a tough and time taking process to search for a record in a file.

Keeping files takes much time and waste much precious man hours.

The tendency of making mistakes is high when functioning manually. It is hard to relay on the accuracy of calculations done manually too. It is more obvious for problems to arise.

We plan to overcome the above mentioned problems through a standalone application, to manage the major functions of the Hospital System.

The hospital management system we are going to implement will be covering all basic processes done in the hospital. It would handle Employee and Salary management, Patient and "Zumba exercise" management, Theatre and ward Management, Laboratory management, Transport Management, Pharmacy Management, OPD management and emergency management.

In OPD unit, with the OPD and Consultation Management system, the manual doctors channeling details entering process has automated. So the staff does not need to spend time on writing appointment records and updating them in files. And the number issuing process becomes easier and efficient. And keeping the track of patients and medical prescription details allow them to review the details whenever needed.

Implementing the Employee & Salary Management system we record Attendance, shifting of employees, their holidays and consulting doctors' schedules. And the system performs calculations of EPF/ETP and OT hours, Shares of consulting doctors and do the payroll part. This is more efficient and more reliable and accurate as the system avoids incorrect data inputs whenever they are occurred.

The proposed system for Mini-theatre & Ward Management records details of surgeons, in- patients who are assigned for Wards, different ward details and surgery details. The pharmaceuticals used within the theatre are managed as well. Food menus for the patients according to their diseases based on wards is systemized too. All are digitalized in a systematic way. So the details of surgeons, patients and surgeries are well organized and can be easily accessed whenever needed. Surgery reports, Ward progress reports, In-ward patient progress details are generated and history can be tracked too.

The Vehicle & Transport Management system handles all the data on ambulance transport. It manages the time slots of ambulances, driver's and employee details of transport section and provides bill generating facility. And reliable time slot management provides the

facility of checking the availability of the ambulances whenever required, and decide about a possible time they can fulfill a request.

The current process of "Zumba" exercise details managing does not support for any individual progress analyzing. The Exercise "Zumba" Management provides a detailed progress report of each individual and allows the management or their customer to take decisions on exercise plans.

The system developing for Emergency Treatment & Equipment Management automate the current processes of patient registering and propose a better way to keep records of equipment and medicines related to the emergency treatment unit in a computer based file system. The proposed system provides a simple interface to gather quick information of the patient and record them. So that in a case of special request by an external party, details of the patient history can be accessed and viewed.

The Pharmacy Stock Management system is responsible for proper management of drug stocks, pop ups the notifications of expiry dates of stock items. This system allow the client to keep track of medicine stocks , notify the personals when the stock is running out of items and help the manager to reduce stock levels and eliminate stock waste.

The Lab Management System records sample collection details, keep track of lab resources and participate in lab reports conclusion generating. This increases the accuracy of report generating process and save a lot of time in manual handling of report details and improve the efficiency and the productivity of the organization.

Our goal is to make a client satisfied system by full filling the client requirements and improving the current manual system with client needs which are not even particularly mentioned but what we have suggested by analyzing and got approved by the client to improve the standard of the system and of the management of the hospital to its utmost.

The scope of the SRS is basically for everyone involved to understand and have an idea about how and what is going to happen in the system. Using ER, User Case diagrams and GUI's which are in a form where everyone can understand. How the interfaces finally appear. To have an idea about the new employees that the client might have to get employed when the system is implemented.

1.5 References

[2]Lauesen, S, (2003), *Task Descriptions as Functional Requirements*, IEEE Computer Society, Available:http://www.itu.dk/~slauesen/Papers/IEEEtasks.pdf

2. Overall Description

2.1 Product Perspective

St. Joseph's Medical Centre follows manual procedures to keep track of its day to day activities. When scenarios such as patient information handling, employee handling, stock handling, financial analysis and report generation is taken into consideration there exists many issues with regard to efficiency, security, accuracy and reliability. Due to improperly managed details medical center faces quite a lot of difficulties in accessing past data as well as managing present data. The manual file systems which are being used at present require storage facilities which is also another overhead.

The fully functional automated hospital management system which will be developed through this project will eliminate the disadvantages caused by the manual system by improving the reliability, efficiency and performance. The usage of a database to store patient, employee, stock details etc. will accommodate easy access, retrieval, search and manipulation of data. The access limitations provided through access privilege levels will enhance the security of the system. The system will facilitate concurrent access and convenient management of activities of the medical center.

2.2 Product Functions

OPD and Consultation Management

- Recording patient details
- Issuing numbers according to doctor channeled
- Updating the record with medical prescription
- Printing bill of doctor charges

Employee and Salary Management System

- Attendance and schedule of employees

- Holiday approvals
- Schedule of consulting doctors
- EPF/ETP and OT calculation
- Shares of consulting doctors
- Shares of doctors who has sent patient for lab test and ECG

Mini Theatre and Ward Management

- Details of surgeon
- Surgery success/failure details
- Complications of the patient, patient history and other details
- Bill calculation and reports

Vehicle and Transport Management

- Ambulances management
- Vehicle deployment handling
- Time management
- Drivers and employee details
- Billing calculations

Exercise ‘Zumba’ and Patient Management

- Patient management
- Weight loss and height increase
- Abdominal circumference
- Progress report
- Package details

Emergency Treatment and Equipment Management

- Emergency patient Details
- Issue ECG reports
- Billing calculations
- Lab equipment stock management

Pharmacy Stock Management

- Drug stock management

- Expiry notification
- Billing calculation
- Searching

Lab Management

- Record sample collection details
- Lab resources management
- Lab report conclusion generation
- Bill calculation
- Lab equipment stock management

2.3

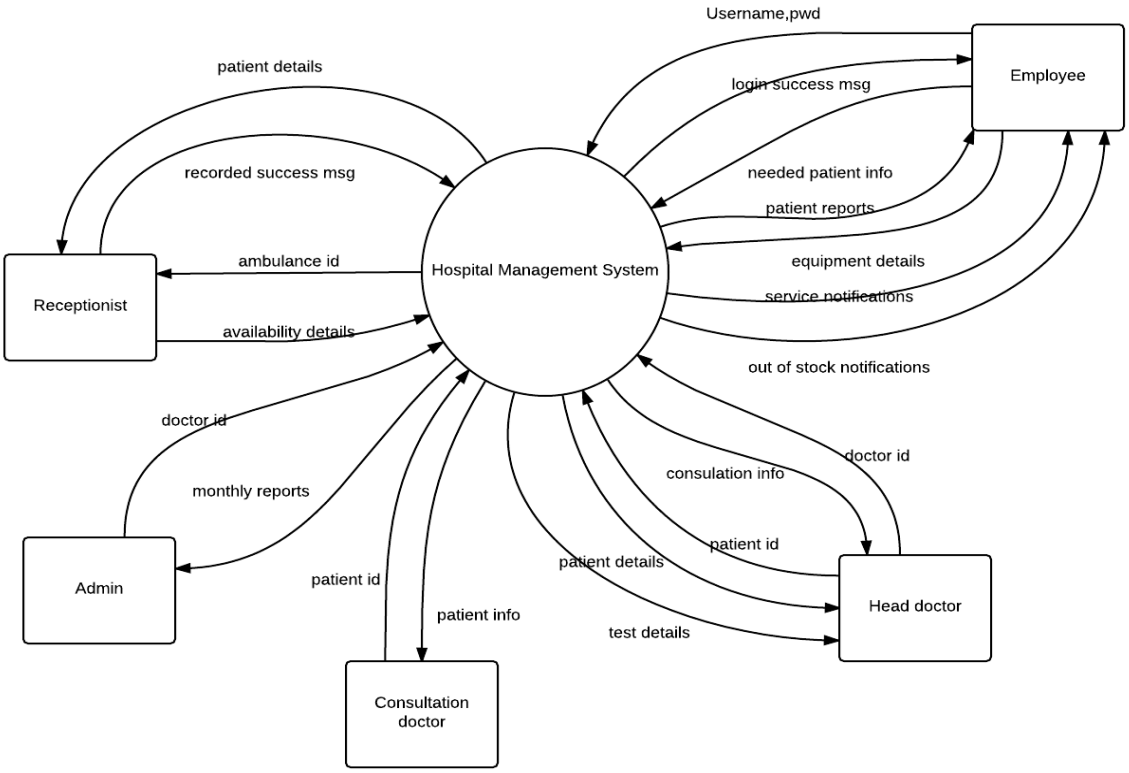


Figure 2.2 1

2.3 User Classes and Characteristics

- **Admin**

  Admin has the full access to the system which means he is able to manage any activity with regard to the system. He is the highest privileged user who can access to the system.

  Key functions

  - ✓ Manage employees, patients and equipment
  - ✓ Allocate resources
  - ✓ Administer the charges
  - ✓ Generate reports
  - ✓ Manage ambulances
  - ✓ Manage doctors
  - ✓ Manage salaries

- **Employee**

  Interacts with the systems most often to supply service to customers

  Key functions

  - ✓ Keep track of patient details
  - ✓ Keep tract of test details
  - ✓ Make ambulance reservations
  - ✓ Keep track of progress of patients
  - ✓ Maintain bill details
  - ✓ Manage inventory

2.4 Operating Environment

Software requirements

- Windows 7 or above operating system
- JRE 1.8
- MySQL server

Hardware Requirements

- Core i5 processor
- 4GB Ram
- 20GB of hard disk space in terminal machines
- 1TB hard disk space in Server Machine

2.5 Design and Implementation Constraints

- System is wirelessly networked with an encryption
- System is only accessible within the hospital premises only.
- Database is password protected.
- Should use less RAM and processing power.
- Each user should have individual ID and password.
- Only administrator can access the whole system.

2.6 Project Documentation

Software Life Cycle Phase	Documentation	Intended Activities
Requirement Gathering, Analysis and Specification	● Project charter ● Project proposal ● Software Requirement and Specification (SRS) which includes ✓ Entity relational diagram ✓ Data flow diagrams ✓ Use case diagrams ✓ Use case scenarios	Includes the customer expected software features, constraints, interfaces and other attributes. Moreover the objectives and the benefits gained through the system are clearly specified
Software Design	● Software Design Description(SDD)	Describes the logical basis of design decisions taken and how it will pave way in acquiring the requirements of the customer through the software
Implementation	● Technical Documentation	Contains information regarding the implementations of the system using the programming concepts
Software Testing	● Software Test Documentation(STD)	Includes information degrading testing procedures to validate and verify the software results. Main types of testing techniques are unit testing, integration testing, system testing and acceptance testing
Maintenance	● User Documentation	Includes manuals for the end users according to their position of access levels

2.7 User Documentation

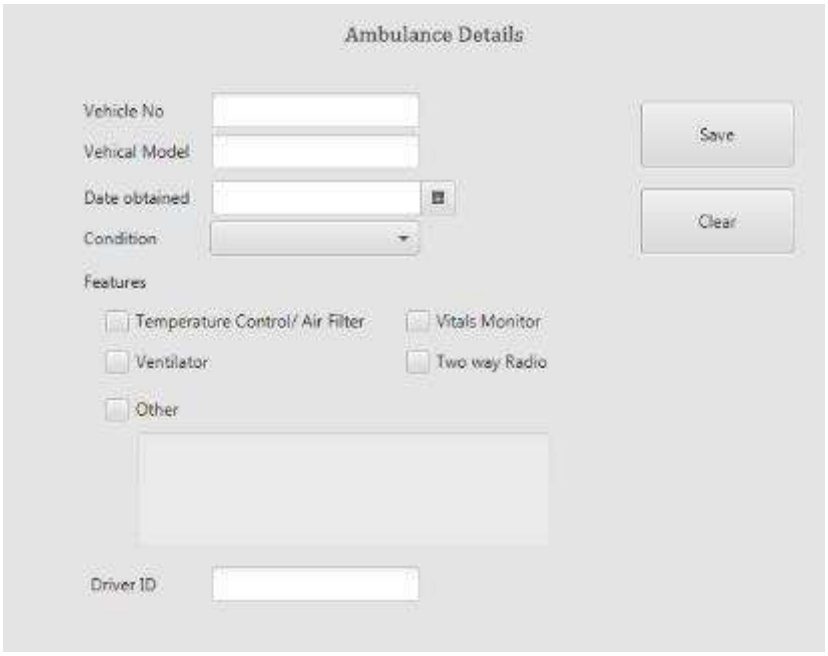
As a part of the system itself a user documentation is provided to the customers which gives an overview of the system. It will include the full description about the product and complete orderly followed steps to install the software. The users will get the opportunity to use the system without having any trouble. The user manual will include the email addresses to contact us in need. Tasks are listed alphabetically or logically grouped often using cross referenced indexes which helps the users to know exactly what sort of information they are looking for.

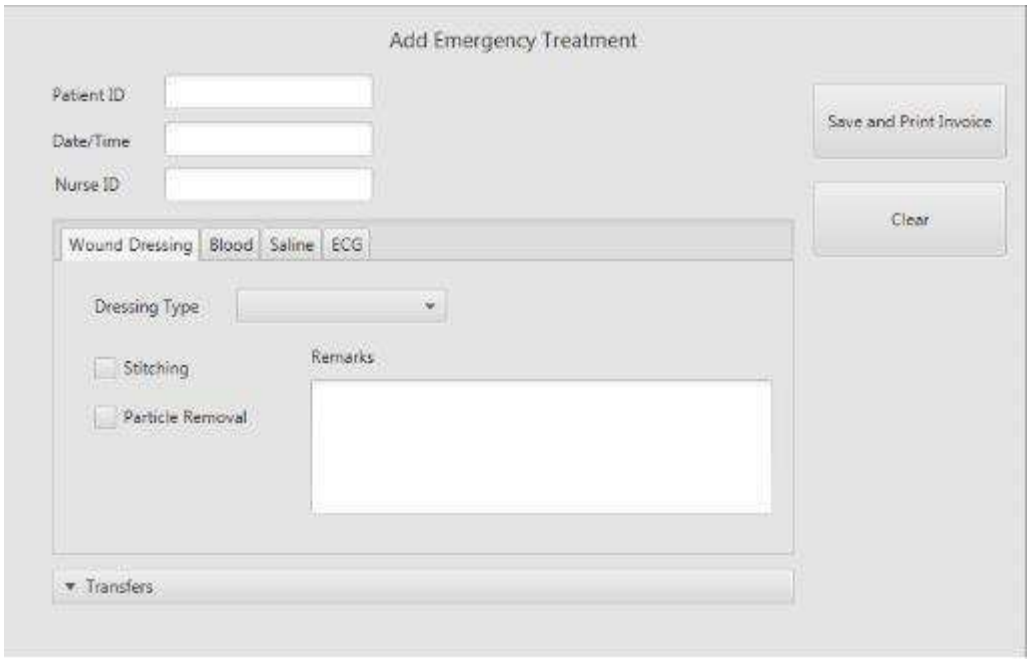
2.8 Assumptions and Dependencies

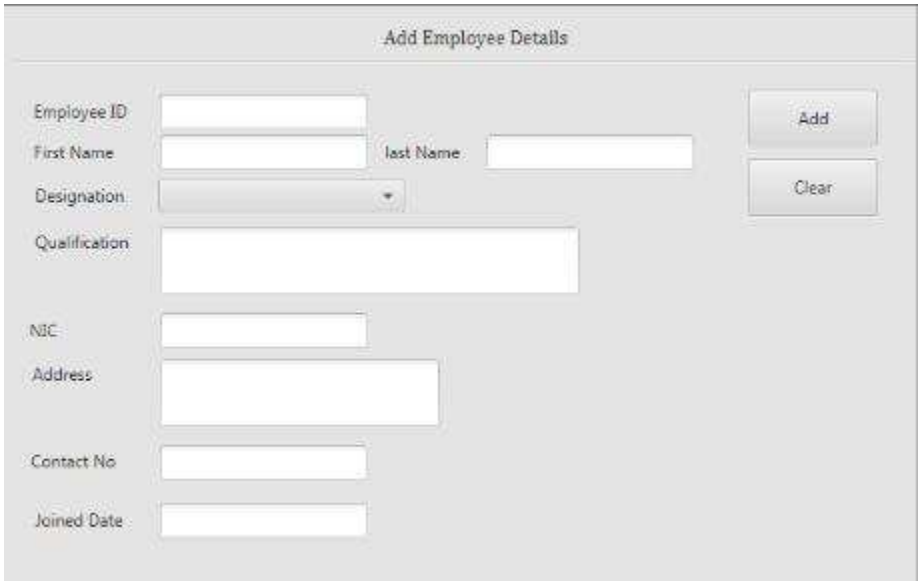
- Each user must have a valid user id and password
- Server must be running for the system to function
- Users must log in to the system to access any record.
- Only the Administrator can delete records.

3. External Interface Requirements

3.1 User Interfaces





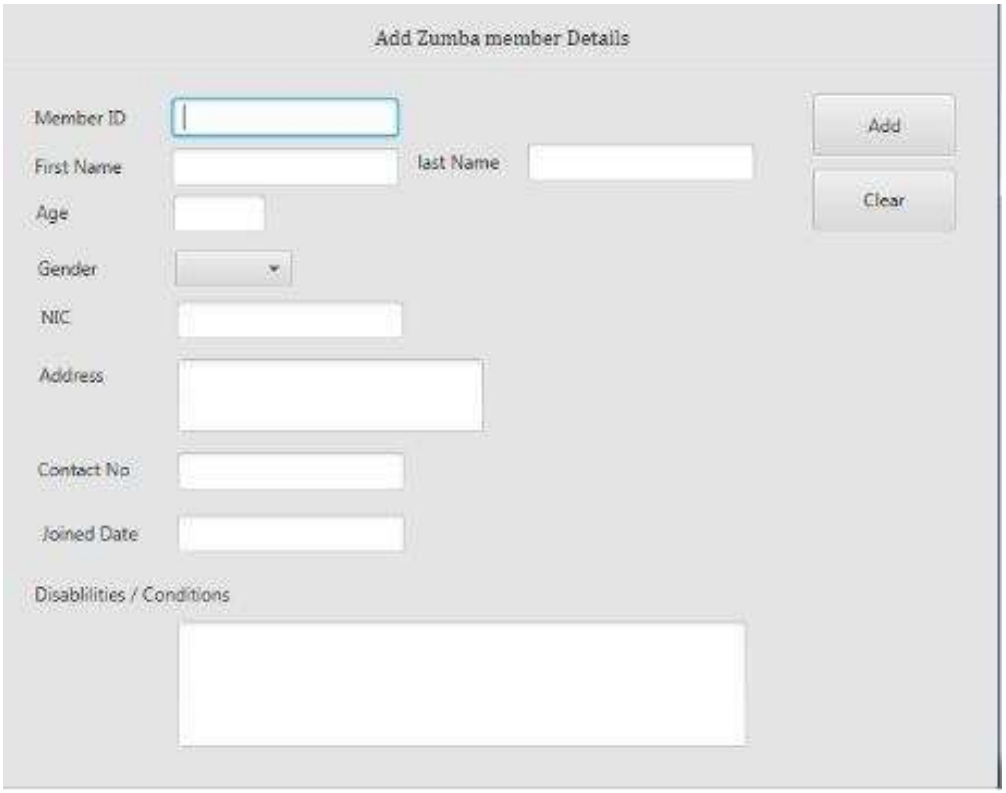

Add Employee Details
Employee ID
First Name
last Name
Designation
Qualification
NIC
Address
Contact No
Joined Date
Add
Clear

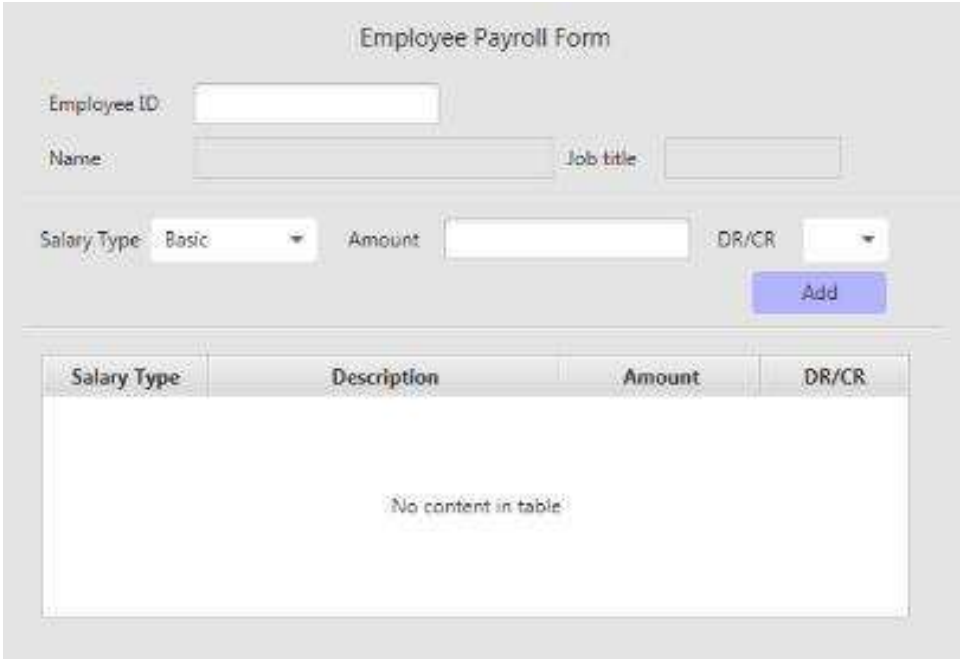

Add medicine details
Medicine ID
Medicine Desc
unit
price per unit
Add
Clear


Add OPD patient
Patient ID
First Name
Last Name
Age
Gender
Contact Number
Add
Clear


Success
New Employee Record Added Successfully
Ok


Add OPD patient
Patient ID
First Name
Last Name
Age
Gender
Contact Number
Add
Clear


Add Zumba member Details
Member ID
First Name
last Name
Age
Gender
NIC
Address
Contact No
Joined Date
Disabilities / Conditions
Add
Clear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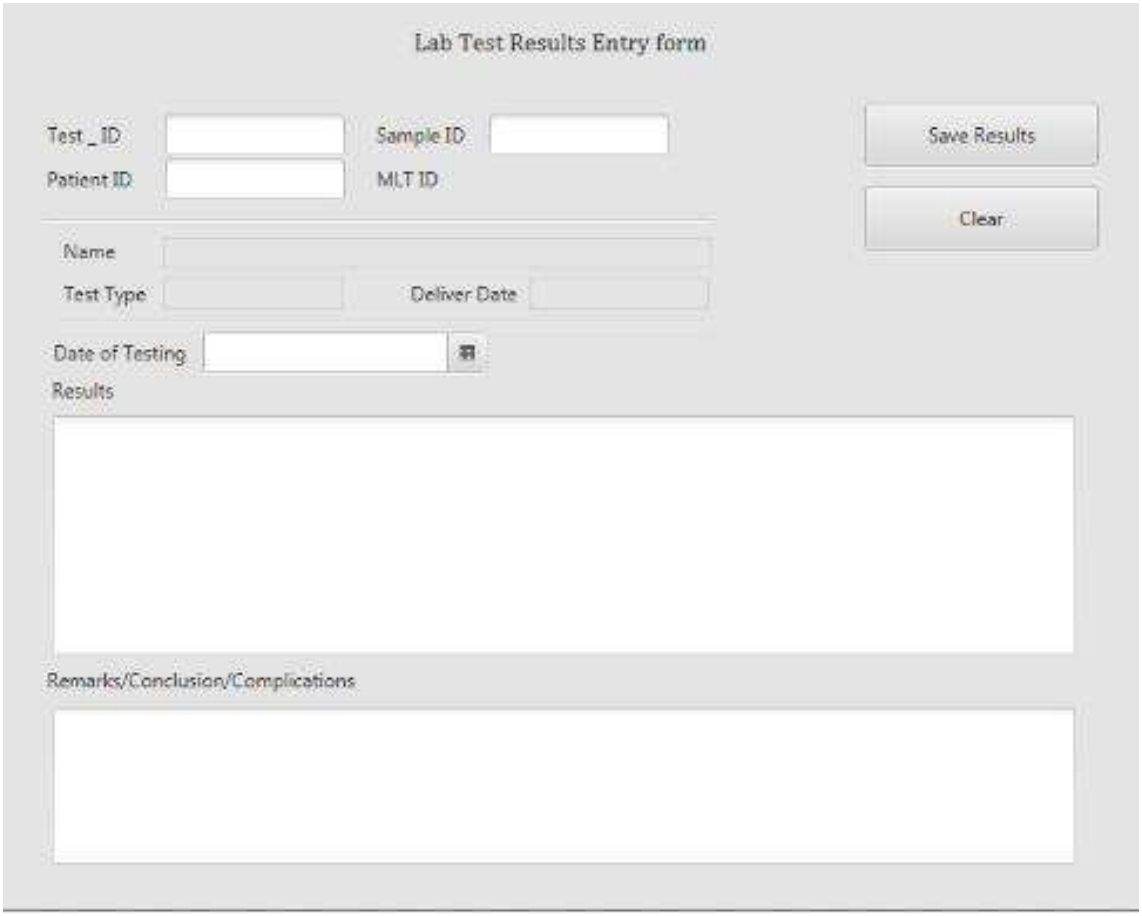
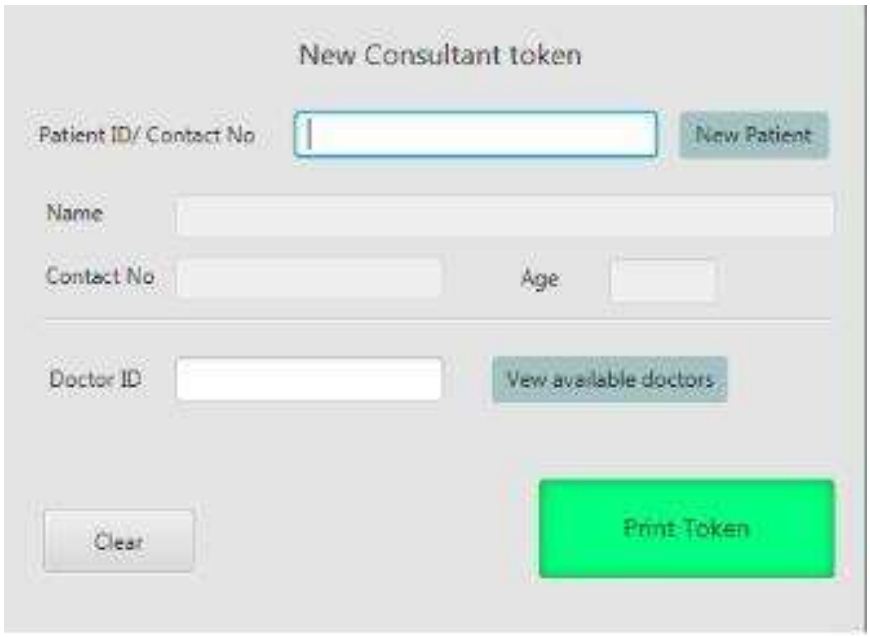
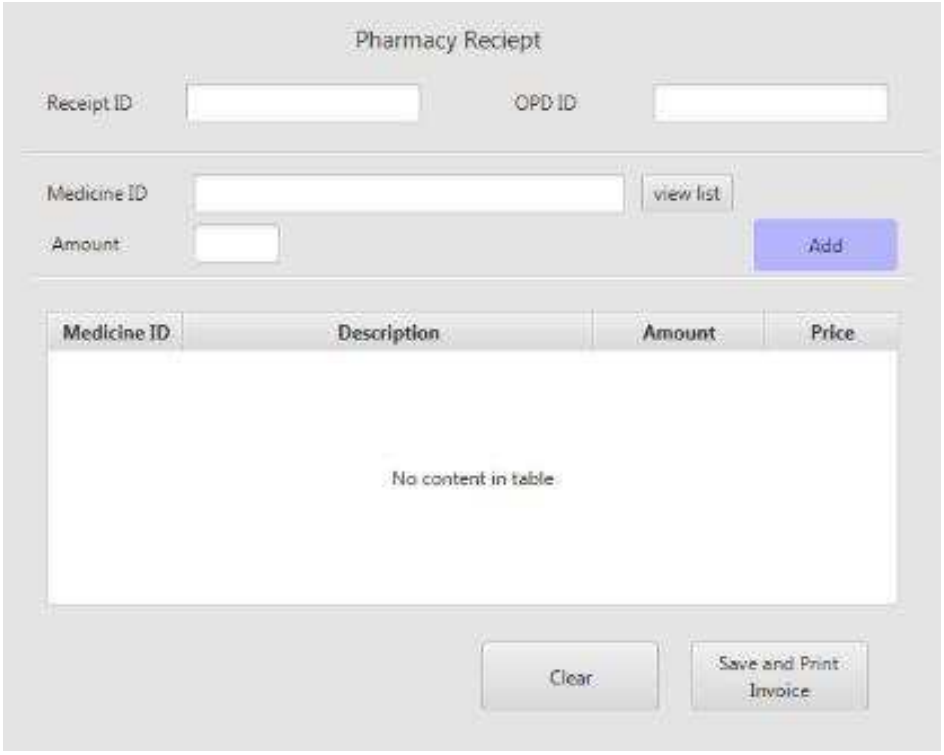
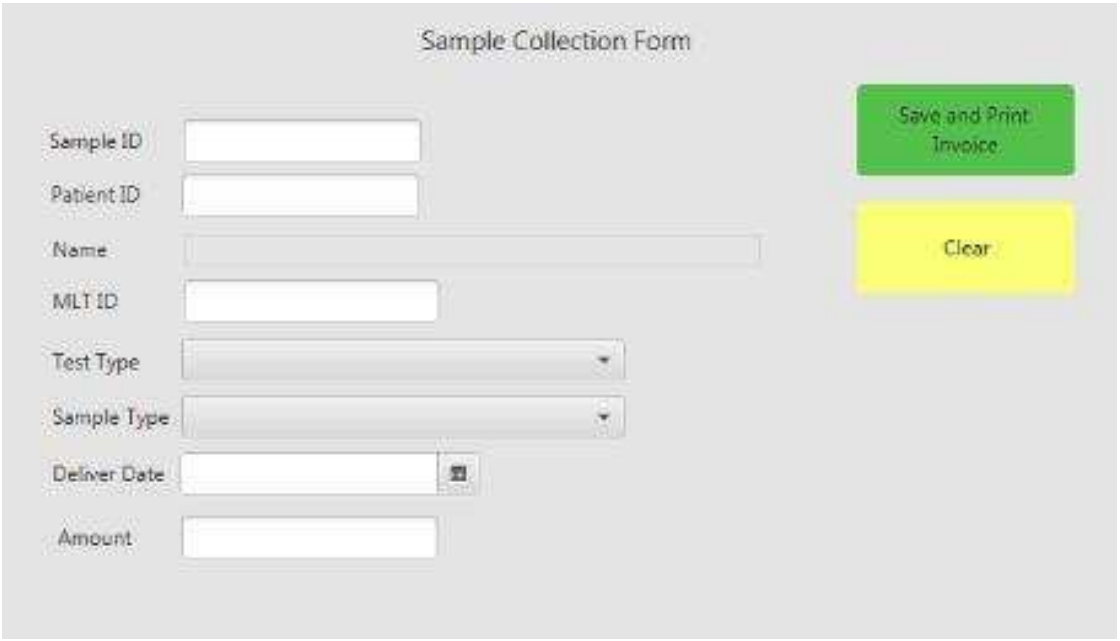
Name
Job title
Salary Type
Basic
Amount
DR/CR
Add
Salary Type
Description
Amount
DR/CR
No content in table

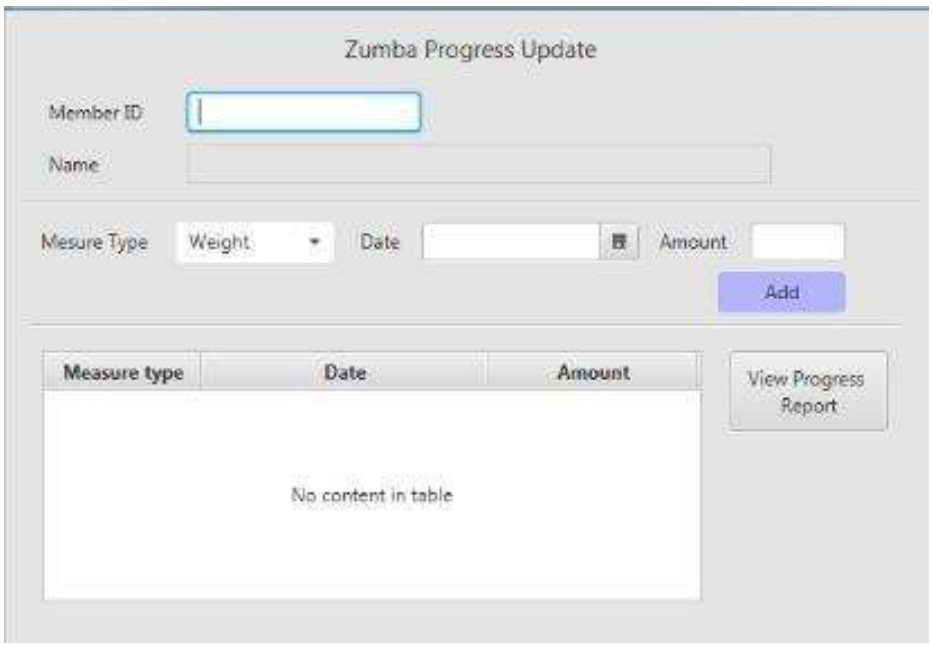

Lab Test Results Entry form
Test _ ID
Sample ID
Patient ID
MLT ID
Save Results
Clear
Name
Test Type
Deliver Date
Date of Testing
Results
Remarks/Conclusion/Complications


New Consultant token
Patient ID/ Contact No
New Patient
Name
Contact No
Age
Doctor ID
View available doctors
Clear
Print Token


New OPD token
Patient ID/ Contact No
New Patient
Name
Contact No
Age
Clear
Print Token


Pharmacy Reciept
Receipt ID
OPD ID
Medicine ID
view list
Amount
Add
Medicine ID
Description
Amount
Price
No content in table
Clear
Save and Print Invoice


Sample Collection Form
Save and Print Invoice
Sample ID
Patient ID
Name
Clear
MLT ID
Test Type
Sample Type
Deliver Date
Amount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Mesure Type
Weight
Date
Amount
Add
Measure type
Date
Amount
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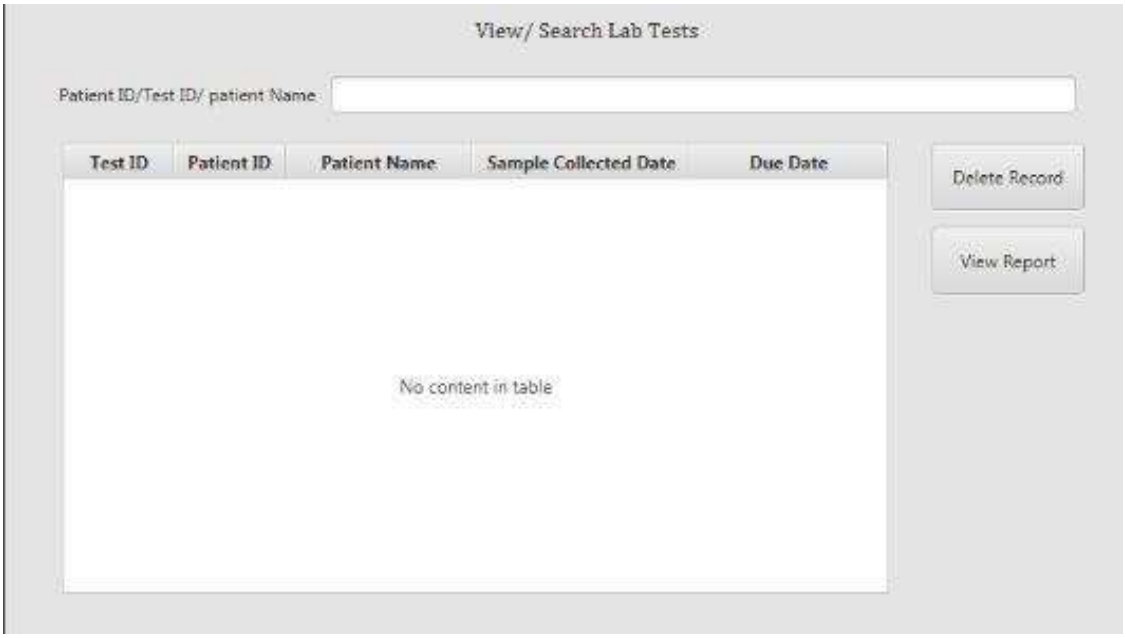
View Progress Report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Patient ID/Test ID/ patient Name
Test ID
Patient ID
Patient Name
Sample Collected Date
Due Date
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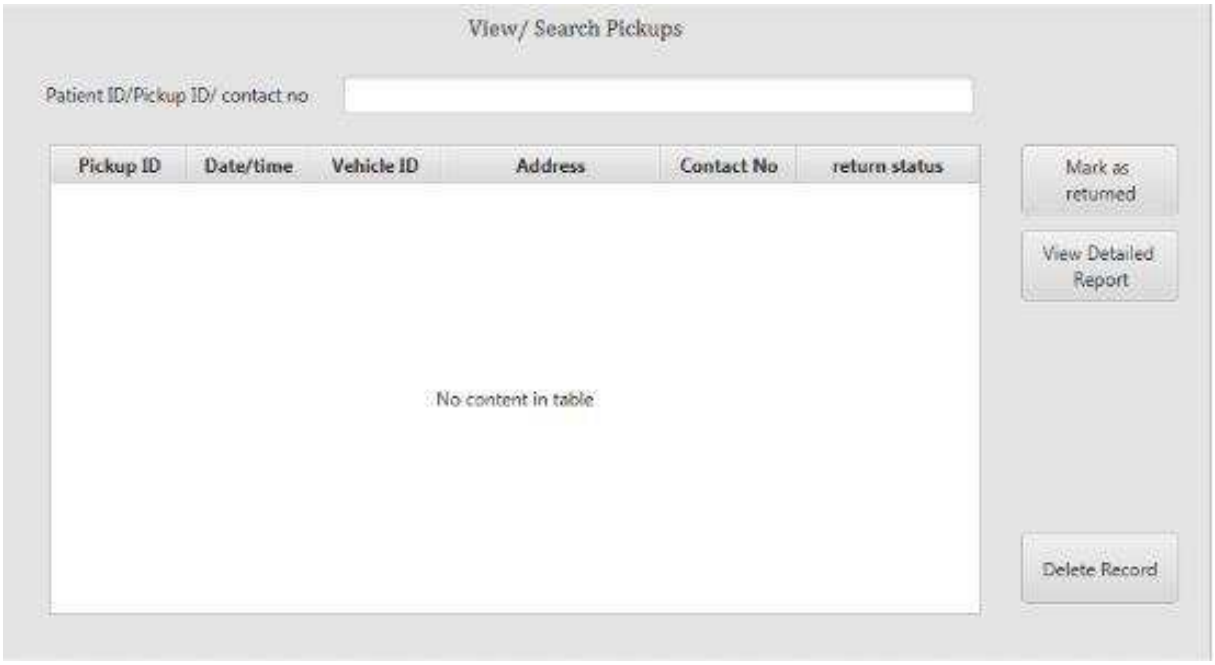
Delete Record
View Report


View Medicine Inventory
Medicine ID
Description
unit
no of units
No content in table
View Inventory Report


View/ Search Pickups
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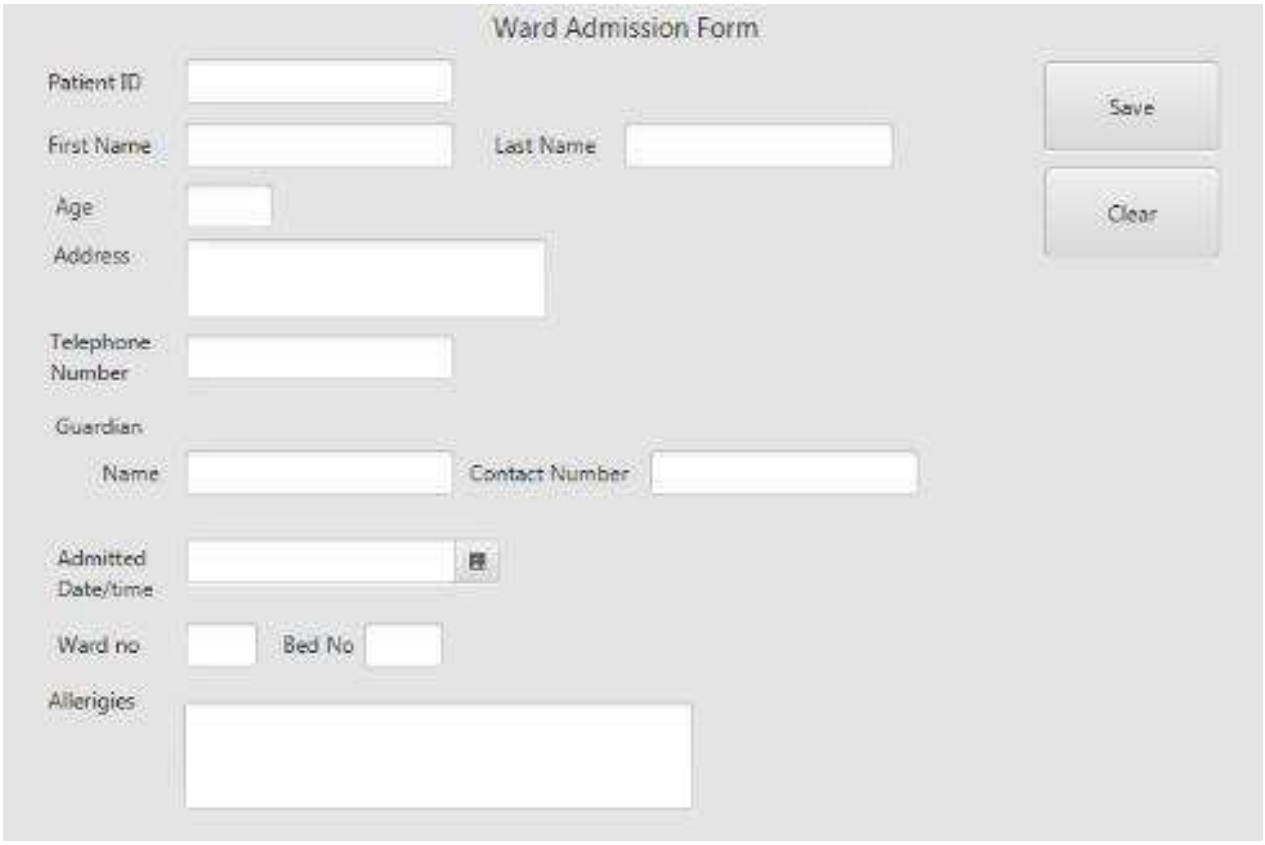
Pickup ID
Date/time
Vehicle ID
Address
Contact No
return status
No content in table
Mark as returned
View Detailed Report
Delete Record


View/ Search Emergency Treatments
Patient ID/Treatment ID/ patient Name
Treatment ID
Patient ID
Patient Name
Treatment Type
Date/Time
No content in table
Delete Record
View Detailed Report


View/ discharge ward patients
Patient ID/Admission ID/ ward, bed no
Admission ID
Patient ID
Date/time
ward no
bed no
admission status
No content in table
Discharge
View Detailed Report
Delete Record


Ward Admission Form
Patient ID
First Name
Last Name
Age
Address
Telephone Number
Guardian
Name
Contact Number
Admitted Date/time
Ward no
Bed No
Allerigies
Save
Clear

3.2 Hardware Interfaces

- **Laptop/Desktop PC**
    - core i5 processor
    - 4GB RAM
    - 500GB HDD

Figure 3.2 1

Purpose of this pc is to give information when Patients ask information about doctors, medicine available lab tests etc. To perform such Action it need very efficient computer otherwise due to that reason patients have to wait for a long time to get what they ask for.

- **Display Unit (LED/LCD Monitor/TV)**

This unit is for display the channel number when the patients come to see their consultants. It will avoid chaos. And also display Hospital welcome screen, video, information etc.

Figure 3.2 2

- **Laser Printer (B/W)**

Simply this device is for printing bills and view reports.

Figure 3.2 3

- **Wi-Fi router**

Wi-Fi router is used to for internetwork operations inside of a hospital and simply data transmission from pc's to sever.

Figure 3.2 4

3.3 Software Interfaces

Developing end

- JDK 1.8 - Java is fast, secure, and reliable. From laptops to datacenters, game consoles to scientific supercomputers, cell phones to the Internet,
- Netbeans 8.1 - IDE for Java developing.
- MySQL server - Database connectivity and management
- Adobe Photoshop cs4 - Logo and other designing such as User interfaces

Client End

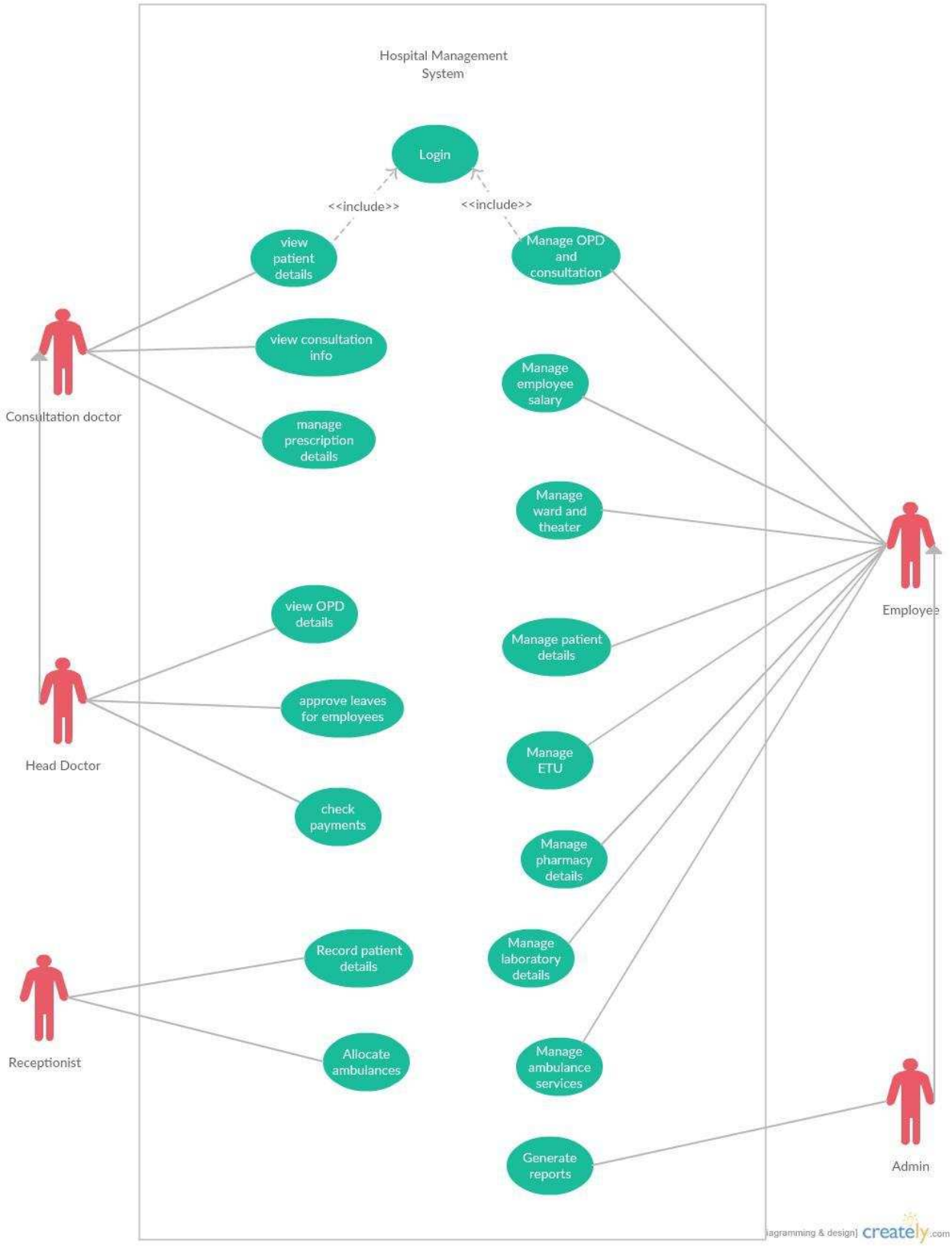
- OS – Windows 7/8/8.1- Very user friendly and common OS
- JRE 1.8 - JAVA Runtime Environment for run Java Application and System
- MySQL server - Database connectivity

3.4 Communications Interfaces

- NIC (Network Interface Card) - It is a computer hardware component that allows a computer to connect to a network. NICs may be used for both wired and wireless connections.
- CAT 5 network cable- for high signal integrity
- TCP/IP protocol- Internet service provider to access and share information over the Internet
- Ethernet Communications Interface- Ethernet is a frame-based computer network technology for local area networks (LANs)
- Ubiquitous, easy to set up and easy to use. Low cost and high data transmission rates.

4. System Features

USE CASE Diagram



USE CASE Scenarios

Name	Add patient Entry
Description	This function get details of a patient and add record to the patient file and generate a patient registration number
Actors	Data entry operator, receptionist
Pre-conditions	The operator should login with user account
Main flow of events	1. User selects “add patient entry “ at home page 2. Patient entry form displayed 3. User enter data to required fields 4. User selects “Add entry” button 5. “Successfully record added” message displayed. 6. System generates a patient Id and display.
extensions	3) A) if necessary fields left by user prompt user to enter all required fields.
Post conditions	Patient record added to patient file.

Name	Issue clinic numbers
Description	This function assign a number to a patient for the relevant channeling.
Actors	Receptionist
Pre-conditions	Patient must register to the system
Main flow of events	1. User selects “generate a number” at OPD module. 2. System prompts to select the clinic type. 3. If OPD, generates next available number to available doctor and display number 4. User confirm number and print card.
extensions	3) a) if channeling a counselor, system prompts the counselling field and doctor 3) b) user enter counselling field and doctor 3) C system generates next available number for required counsellor.
Post conditions	Patient channeling record should updated with patient details.

Name	Add prescription entry
Description	This function records patients prescription details
Actors	Data entry operator
Pre-conditions	Doctor's prescription chit must be issued.
Main flow of events	1. User selects "Prescription form " from patient module 2. System prompts to enter patient's registration number 3. User enter system registration number 4. Prescription form displayed with relevant patient details. 5. User navigates to 'tests' field and selects prescribed test details 6. User navigates to 'vaccine' field and select prescribed vaccine details 7. User navigates to 'medicine' field and enter medicine details. 8. User enter re-consolation date. 9. User selects Add button and add prescription details. 10. User selects 'print' and print the prescription details.

Name	Calculate bill
Description	This function calculate total charge for the patient
Actors	Receptionist, cashier
Pre-conditions	THz patient must register to the system
Main flow of events	1. User selects patient receipt card 2. System prompts patient registration number 3. User enter registration number 4. System prompts date and time , which the total charge required for 5. User enter the date and time 6. Receipt form displayed with patient details, lab tests details, X-ray details, ECG details etc. and total fee in number and in word. 7. User select print receipt. 8. The patient receipt is printed
Post conditions	The payment details should updated in payments file.

Name	Mark attendance
Description	this function records employees attendance details
Actors	Data entry operator
Pre-conditions	User should login with the user account. Manually recorded attendance details records should be available
Main flow of events	1. 'Employee attendance form' selected by user in employee management module 2. User enter date 3. User enter the employee ID that did not attend particular date. 4. User selects update. 5. System prompts to add another record 6. User answers 'no' 7. The form will be closed
extensions	6) a) if user answered ' yes' , repeated 3) 4) until user selects ' no'

Name	Add Patient diagnosis history
Description	This function add patient's diagnosis details to the system.
Actors	Data entry operator
Pre-conditions	Patient must register to the system
Main flow of events	1. User selects patient diagnosis card 2. System prompt patient Id 3. User enter patient Id 4. System display patient details in the form 5. User enter diagnosis details and date 6. User selects Add diagnosis record.
Post conditions	The diagnosis record should added to the diagnosis file.

Name	Manage ambulance
Description	This function manage all ambulance details
Actors	Data entry operator
Pre-conditions	User should login to the system
Main flow of events	1) user selects "Ambulance " in vehicle 2) system prompts to enter vehicle details 3) user enters vehicle details 4) user select add entry 5) system display "successfully record added" message and generates vehicle ID

Name	Generate salary
Description	This function generates employee salary for given period of time
Actors	Accountant
Pre-conditions	User should login with user account
Main flow of events	1. User selects "Generate salary form" in employee management module 2. System prompts employee Id and time period 3. User enter required data 4. User selects generates salary. 5. The total salary calculated by the system and displayed 6. User select print pay slip 7. System print the salary pay slip
extensions	3) a) User enters allowance details if any.
Post conditions	The payments file should updated with salary payment record

Name	Schedule counselling doctors
Description	This function mange's counsellors charging details
Actors	Accountant
Pre-conditions	User sound login to the system
Main flow of events	1) user selects cancelling doctor form in employee module 2) system prompts doctor's Id 3) user enters id 4) system display councilor doctor details 5) user selects get visit hours and generated sari details 6) user select generate counsellor charge 7) system calculates total counselor change to be paired and display
extensions	5) a) system generates total visit hours 5) b) 1) system prompts time period and field (lab tests, ECG, all) to generate shares 5) B) 2) user select period and field. 5)b) 3) system generates total share amount

Name	Search ambulance
Description	This function displays the availability of a vehicle
Actors	Receptionist
Pre-conditions	User log in to the system The ambulance management form should available
Main flow of events	1) user selects search button in ambulance management form 2) system proms to select search type(search by vehicle, search available list) 3) user selects type(search by vehicle) 4) user enters vehicle id 5) system displays the availability and vehicle details
extensions	3) a) if search type is available lists display available vehicle list

Name	Deploy vehicle
Description	This function handles the vehicle deployment process
Actors	Receptionist
Pre-conditions	User should login to the system
Main flow of events	1) user selects ambulance in vehicle module 2) user selects" deploy vehicle" 3) system prompts vehicle id 4) user enters vehicle id 5) system checks for availability of the vehicle and display details 6) system prompts hiring clients details 7) user enters client details 8) user selects calculates cost 9) system generates cost and display 10) user selects "Deploy vehicle"
extensions	5) a) 1) if vehicle is not available system prompts distance to the vehicle 5) a) 2) a) user enters distance or selects "generate distance" 5) A) 2) b) if user selects generate distance system prompts the available location, user enters the location, system generates the distends t the location. 5) a) 3) system generates assumed time period for the vehicle to be available at hospital and display 10) a) if required print the pay slip
Post conditions	Vehicle file should updated to deploy details

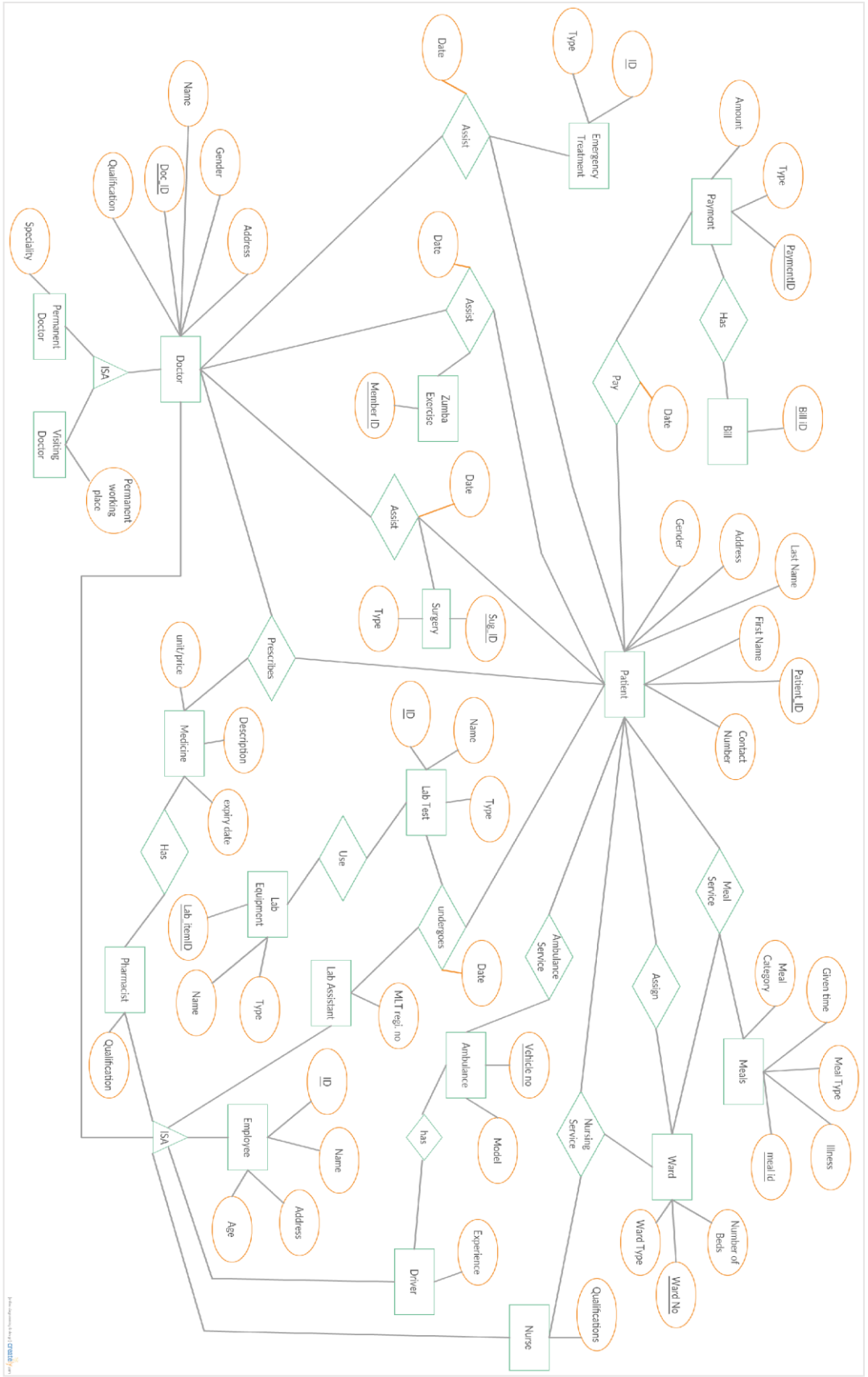
Name	Register client –Sumba exercise
Description	This function registers the clients for rumba exercise classes
Actors	Receptionist
Pre-conditions	User should login to the system
Main flow of events	1) user selects rumba exercise management form 2) system prompts to add client details 3) user add client details 4) system prompts to select package 5) user selected package 6) user selects generates costs system prompts to select period(daily, monthly) 7) user selected period 8) system generates and display fee 9) user confirm details and selects Add client 10) system view successfully record added message and generate Id

Name	View Progress- rumba exercise
Description	This function generates progress reports for rumba exercise courses of individual clients
Actors	Manager
Pre-conditions	User should login o the system The rumba exercise module should available
Main flow of events	1) user selects view progress 2) system prompts client id 3) user enters id 4) system prompts time period 5) user enters time period 6) System prompts to select report type (chart, detailed info...) 7) user enters report type 8) system generates reports and view
extensions	8) a) if required print the reports

Name	Generate lab report
Description	This function generates the report of a particular test and print the report
Actors	Lab assistance
Pre-conditions	User should login Relevant lab test results should be available
Main flow of events	1) user selects lab report form from lab tests module 2) system prompts patient id 3) user enter patient id 4) system display patient details 5) system prompts to selects lab test category 6) user selects category by navigating to relevant tab and enter test results 7) user selects add lab test record 8) system display successfully added message 9) user selects print report 10) system prints the report
extensions	

ER Diagram

5.


Date
Type
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Emergency Treatment
Amount
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Payment
PaymentID
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Pay
Date
Bill
Bill ID
Name
Gender
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Qualification
Address
Speciality
Permanent Doctor
ISA
Doctor
Visiting Doctor
Permanent working place
Date
Assist
Member ID
Zumba Exercise
Date
Assist
Surgery
Type
Sug_ID
Gender
Address
Last Name
First Name
Patient_ID
Contact Number
Patient
Prescribes
unit/price
Medicine
Description
expiry date
Has
Pharmacist
Qualification
Lab Equipment
Lab_itemID
Name
Type
Use
ID
Name
Lab Test
Type
undergoes
Date
Lab Assistant
MLT regi. no
Ambulance Service
Ambulance
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has
Driver
Experience
Meal Service
Meals
Meal Category
Given time
Meal Type
Illness
meal id
Assign
Ward
Ward Type
Number of Beds
Ward No
Nursing Service
Nurse
Qualifications
ISA
Employee
ID
Name
Address
Age

Other Nonfunctional 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 1000 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

All the administrative and data entry operators have unique logins so system can understand who is login in to system right now no intruders allowed except system administrative nobody cannot change record and valuable data.

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.

5.5 Business Rules

- Want take the responsibility of failures due to hardware malfunctioning.
- Warranty period of maintaining the software would be one year.
- Additional payments will be analysed and charged for further maintenance
- If any error occur due to a user's improper use. Warranty will not be allocated to it.
- No money back returns for the software.
- Trust bond placement should be done before designing and coding. An advance or an Agreement.