

THE LNM
INSTITUTE OF INFORMATION TECHNOLOGY



OOP MINI PROJECT
USING JAVA, MySQL, JSP

TEAM 38

Central Medic Center (CMC)
HOSPITAL MANAGEMENT SYSTEM

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1 Preface

1.1 Introduction

Central Medic Center (CMC), a Hospital Management System, is a central modular concept to provide all medical management tools related to Doctor, Patient, Staff etc.

CMC is more of an audit trail of doctors encounters with patients. CMC can be a modern way of a hospital treating the patients. CMC covers past history, prescription suggested by doctors, laboratory reports. This means all vital information is residing in the system, which can be readily retrieved to help in making a timely decision.

1.2 Objective

The objective of this project is to develop hospital management system based on web application with Java as general programming language, Java Server Pages (JSP) as server side programming language to dynamically generate web pages based on HTML and structured Query language (MySQL) as the back-end database.

2 Modules

2.1 Authentication Management

Every user who wants to use this system is authenticated by means of user id and password which is already created by the administrator or at the time of registration is stored in the database.

All entered parameter of the password are matched with information stored in the database, therefore, only authenticated users can log on to the system with limited access. The administrator is the only one who has access to the entire module of the system and can create a new user to access the system.

2.1.1 Classes

- Login
- SignUp
- User

2.1.2 Interfaces

- PatientUser
- DoctorUser
- AdminUser

2.2 Staff Management

All the staffs including Doctors, Nurses, Compounder, Pharmacist that work in the hospital have their information stored in this module. When a new staff is employed in the hospital, all information regarding him/her which include name, date of birth, home address, telephone number, next of kin, marital status are store and could be updated when the information changes.

The salary earned by each member staff is also computed in this part of the database, therefore, only the administrator or any person with the financial authority can access this module. It must be noted that this module is where staff identification number or user id is allotted to every person that works in the hospital.

2.2.1 Classes

- User
- Staff
- Doctor
- Nurse
- Compounder
- Pharmacist
- Physician
- Receptionist

2.2.2 Interfaces

- SpecializedDoctor
- GeneralDoctor

2.3 Patient Management

Any person who visits the hospital for the very first time either for consultancy, treatment, diagnoses or emergency is required to register as a patient of the hospital. As at the time of registration, a patient identification number or user id is automatically generated by the system for the patient and this remain the same for the patient as long as he/she is a client at the hospital. The salient feature of this module is divided further into :

- **Patient Personal Information**

Patient Information to be included in this application are all defined by the client and are as follows: First name, Last name, Date of birth, Marital status, Religion, Occupation, Telephone and telephone number.

- **Guardian Personal Information**

Guardian Information includes: Guardian Name, Address, Occupation and Telephone number.

- **Doctor In charge Information**

Doctor in charge information includes: First name, Last name, doctor ID, patient ID, cabin number, mobile telephone number and office telephone number.

2.3.1 Classes

- User
- Patient
- Doctor
- Guardian

2.3.2 Interfaces

- SpecializedDoctor
- GeneralDoctor

2.4 Prescription Management

This module entails the Diagnosis of Disease, Laboratory Tests and Treatment for Disease. When a patient consult with the Doctor, a record is maintained with a consulting identification number. Disease details, laboratory test results and treatment prescribed to the patient is stored in the system. The salient feature of this module is:

- **Diagnosis & Laboratory Information**

This information will consist of details about the disease, laboratory results of the tests done on patient. Lab Report of different tests will contain different information such as blood test will contain blood type, cell count etc.

- **Treatment & Medicine Information**

On diagnosing the patient, medicine and treatment prescribed to patient will contain medicine name, schedule etc.

- **Patient Invoice**

This invoice will contain the overall required details with the billings.

2.4.1 Classes

- Disease
- Laboratory
- Prescription
- Medicine
- Invoice

2.4.2 Interfaces

- Consultancy
- Treatment
- Diagnosis
- Bill

3 Inheritance Structure

Inheritance Structure For Different Classes In The CMC System

