**PROJECT PROPOSAL**

**CST291-2**

Uva Wellassa University Medical Center

Management System

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**CHAPTER ONE**

# **INTRODUCTION**

## Chapter Introduction

The intention of this project is to implement a software application for the Medical Center of Uva Wellassa University. Moreover, this chapter includes a brief description about the Medical Center, the project scope and the objectives.

## 1.2. Title of the project

Uva Wellassa University Medical Center Management System.

## 1.3. Brief Description

### 1.3.1. Medical Center of Uva Wellassa University

The Medical Center of Uva Wellassa University serves all the students of the university, academic staff and the non-academic staff with their medical needs. It is compromised with a doctor, a pharmacist, a nurse and an attendant. The medical center is opened from 8.00 a.m. to 4.00 p.m. on weekdays and until 12.30 p.m. on Saturdays. All the treatment processes and the stock management process related to the medical center are done manually.

**1.3.2. Currrent Procedure Using at the Medical Center**

* The medical center maintains a file for each student of the university. A student should take his/her file by proving the identity after presenting the University Identity card to the pharmacist, nurse or attendant.
* The student is next directed to the doctor for treatment, and all the prescriptions and treatments are recorded in the file by attaching a piece of paper with the new prescriptions.
* All the previous records are recorded in the file such that doctor can easily refer to the history of the patient’s treatments.
* The pharmacist prescribes the medicines according to the prescription in the file to the patient.
* Doctor issues a hand written medical certificate for students in case any student is absent for lectures due to a illness on request.
* Academic and non-academic staff has a separate process to be treated by the doctor.

**1.3.3. Drawbacks of the Current Procedure**

* Efficiency is less – Time taken to search the relevant file manually takes much time.
* Privacy and security concerning issues may arise.
* Formality in the stock management is less

**1.3.4 Benefits of the Proposed System**

* All the medical records of a student can be easily maintained.
* Privacy, security and trustworthiness of the patients’ medical records are increased.
* Efficiency increases as prescribing via a system is less time consuming.
* Expenses for the stationary are reduced as less paper work is done.
* Stocks of drugs and other accessories can be maintained effectively.
* As allergic conditions and post medical treatments of a student is recorded in the system, doctor does not want to ask from the patient about them every time.
* Once the drug details are entered in the database, system can pre-notice about the drugs-to-be expired.
* Ordering new drugs can be done effectively as it is easy to find the shortages via the system.
* Printed medical certificate for absent days can be issued.
* Inventory object details can be maintained properly.

## Project Scope

This system is designed on the request of the medical officer of the Uva Wellassa University Medical Center as a substitute to the prevailing manual process of Patient and Stock management. The proposed system is only to be used by the Uva Wellassa University Medical Center Authority, and the Doctor, Pharmacist or Nurse of the center gets the privilege of accessing the system.

The System contains a database for Students, staff members, drugs and other inventory objects. The system will update the students details on registration and all the treatment details will be recorded under the patient. Only the doctor has the authentication in Patient management. Bar code of the student’s University identity card is used for user validation. Doctor can print a medical certificate for student if requested.

The system stores all the treatment details of patients and generates a printed summary report on daily basis. Each patient can obtain a medical report at the end of their study period.

All the drugs and other stocks are recorded in the system such that the shortages can be viewed easily. Expiration dates of the drugs are noticed 3 months before such that they should not be wasted.

There are mainly 2 user levels in the system

* Doctor
* Pharmacist/Nurse

**1.5. Objectives of the Proposed System**

* Easiness in managing patients’ records and stock details increased.
* Proper procedure to treat Academic and Non-academic staff can be introduced using a database.
* Every student can obtain a full medical report when leaving the University.
* Generate daily summary reports.
* Obtain a printed medical certificate easily.

# **CHAPTER TWO**

# **REQUIREMENTS IDENTIFICATION**

## Chapter Introduction

Requirements of the proposed system are identified in this chapter where these requirements are categorized as functional and nonfunctional. Moreover, user levels and capabilities of each user levels are described.

## Functional Requirements

* Add, update or remove a patient
* Validate the patient using barcode in the University ID.
* Add, update or remove stock details
* Record medicines prescribed for the patient and generate a message if the prescribes medicine is out of stock.
* View patient history
* Generate and print summary report for the day.
* Generate a report for the available drugs.
* Generate a message informing the drugs-to-be-expired before 3 months.
* Print a report about the out of stock drugs
* Generate and print medical reports for students on request.
* Generate and print the reports on inventory objects.
  1. **Non-Functional Requirements**
* Increasing the Performance of the system
* Security
* Scalability
* Maintainability
* Usability
* Efficiency

## User Roles

* Doctor - Administrator
* Pharmacist/Nurse – User

## Capabilities of User Roles

1. **Doctor**
   * Register a new patient
   * Remove a patient
   * Update patient details
   * Update stock details
   * Prescribe medicine to patient
   * View Patient’s history
   * View drug stocks
   * Generate medical report for the student
   * Generate daily summary report
   * Generate and print medical certificate for absent lectures.
2. **Pharmacist/Nurse**
   * Register a new patient
   * Remove a patient
   * Update patient details
   * Update stock details
   * View drug stocks
   * Generate daily summary report

# **CHAPTER THREE**

# **METHODOLOGY**

## Chapter Introduction

The methodologies followed to accomplish the specified objectives are discussed in this chapter.

* 1. **Methodology**
* Iterative development
* User interface prototypes are used to understand the specifications deeply.

# **CHAPTER FOUR**

# **RESOURCES**

## Chapter Introduction

In this chapter, the needed hardware and software requirements to design the proposed system are identified.

## Hardware requirements

* Computer with Server facility
* Internet Facilities
* Barcode reader
* Printer
  1. **Software requirements**
* Operating System: Microsoft Windows 8/8.1/10
* Java, java development kit (jdk)
* MySQL
* Wamp server

# **CHAPTER FIVE**

# **PROJECT PLAN (GANTT CHART)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Stage | Duration | | | | | | | | | | | | | | |
| AUG | | SEPT | | | | OCT | | | | NOV | | | | |
| W1 | W2 | W3 | W4 | W5 | W6 | W7 | W8 | W9 | W10 | W11 | W12 | W13 | W14 | W15 |
| 1. Requirement Gathering and Defining the scope |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Submit proposal and presentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Requirements Analysis and Specification |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Feasibility study |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. System design |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Interface design |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Database design |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Development session 1 (Database and connectivity) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Progress presentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Interface testing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Development session 2 (Functionality implementation) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Integration and testing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Interim report and presentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Progress presentation and draft report |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Scope review and improvements |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Development session 3 (mods) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Final testing |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1. Final presentation, report and publish |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |