# *Tribhuvan University*
# *Ramshwaroop Ramsagar Multiple Campus*



## A Project Proposal

## On

## "Hello Hospital Helper (H3)"

## Submitted by:

**Jibachh Kumar Mahato (24522/076)**

**Nabin Thakur(24526/076)**

**Prameet Sah(24527/076)**

**Sanjeep Raut(24531/076)**

## Submitted to:

Department of Computer Science and Information Technology

Ramshwaroop Ramsagar Multiple College

Janakpurdham, Dhanusha, Nepal

To

The Head of Department,

Bsc.CSIT,RRM College

Janakpurdham-04, Nepal

### Sub:<u>Supervisor allocation for 7<sup>th</sup> semester project</u>

Dear sir,

      This application is a formal request for allocation of supervisor for our 7<sup>th</sup> semester project. The title of our project that we are going to work on is **"HELLO HOSPITAL HELPER"**. This application is totally based on cross platform so the relevant teacher that can provide his guidance on our project. So, it is a huge request to the relevant department to manage us by the given teacher .

  Mr. Abhilash Thakur

Your's Obedient,

Jibachh Kumar Mahato

Nabin Thakur

Prameet Sah

Sanjeep Raut

Table of contents

## 1. Introduction

Hello Hospital Helper is a simple web based application . H3 is a computerised system that help in managing clinical, financial, laboratory, Inpatient, outpatient, pharmaceutical, etc. operations in a hospital.It basically provide a common source of information about a patient's health history, and doctors schedule timing.

## 2. Problem Statement

With the widespread computerization of health records and other information resources, including hospital administration functions and health human resources information, health informatics and health information technology are being increasingly utilized in information management practices in the health care sector.

## 3. Objective

The objectives of this application can be summarized as:

a.  Computerize all the details of the patient and hospital.

b.  To perform automation of workflows.

c.  Design a system to improve patient experience.

## 4. Scope and Limitations

## 4.1. Scope

H3  takes care of all the requirements of the hospitals and can provide easy and effective storage of information related to patients who come to the hospital for better patient care service. It is a complete hospital suite serving all functional areas of the hospital. It covers the cycle of hospital workflow from appointment, patient registration, patient history, patient care, and doctor.

**4.2 Limitation**

Different limitations of this project are:

a.   Users are supposed to have any system with  internet connection

b.   Minimum RAM required is 1GB

c.   First we have to register then only use this application

## 5.   Methodology

### 5.1 Requirement identification

### 5.1.1 Study of Existing System

A reference to existing system like Hospital Management System (HMS) was introduced to solve the complications coming from managing all the paperwork of every patient associated with the various departments of hospitalization with confidentiality. HMS provides the ability to manage all the paperwork in one place, reducing the work of staff in arranging and analyzing the paperwork of the patients. HMS does many works like:-

Maintain the medical records of the patient.

Maintain the contact details of the patient.

Keep track of the appointment dates.

Save the insurance information for later reference.

Tracking the bill payments.

### 5.2 Requirement Collection

### 5.2.1 Functional Requirement

### i. User Registration:

-Registration should be open to patients, where they can enter using email id and their detailed information.


### ii. User Function

-patients can select their date of the visit to hospital as well as can select OPD doctors.


### iii. User Profile

-The user must be able to put their details like name, address, contact number, blood group.


### 5.2.2 Non Functional Requirement

### i. User Friendly:

-Users with basic knowledge of technology should be able to easily use the application.

-User interface should be user friendly.


### ii. Easy Access:

H3 is a web based  application. Thus, it should be accessible anytime from anywhere with the help of android phone and Internet Connection.

### iii. Speed of Application:

The speed of application depends on basically two factors: RAM space and Internet speed.

**5.2.3 Implementation Tools**

<u>**Software Requirements:**</u>

# <u>Front End:</u>

1) HTML
2) CSS
3) JAVASCRIPT
4) BOOTSTRAP
5) LESS

# <u>Back End:</u>

1) PHP
2) MYSQL
3) XAPP

**IDE: NetBean**

<u>**Hardware Requirements**</u>

- Any System with Internet connection

**5.3 Feasibility Study**

**5.3.1 Technical Feasibility**

The web based application will be technically feasible in terms of many factors. It will be within the limit of current technology. The software and hardware requirement for this application is not so much. The application will be developed using existing development tools and technologies.

**5.3.2 Operational Feasibility**

It is supposed to be a free open source application so will be easily available to all the users. This application will be supported by all the android phones above Android 4.0 OS having Internet connection. The application will run smoothly on phones with good Internet connection. It will be easily accessible from anywhere and will take the physical memory of the device only during runtime.

**5.3.3 Economic Feasibility**

This application will be economically feasible because it will be developed using open source tools and technology. No any other hardware resources will be required except a smart phone.

**5.3.4 Schedule Feasibility**

Estimated time to be spent in the development of this application is around 3 months and scheduled as:

| Weeks | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | 11th | 12th |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Planning | ■ | ■ | | | | | | | | | | |
| Requirement Analysis | | | ■ | ■ | | | | | | | | |
| System Design | | | | | ■ | ■ | ■ | ■ | | | | |
| Implementation | | | | | | | | ■ | ■ | ■ | | |
| Testing | | | | | | | | | | ■ | ■ | ■ |
| Documentation | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

Figure 5.4.4: Gantt Chart

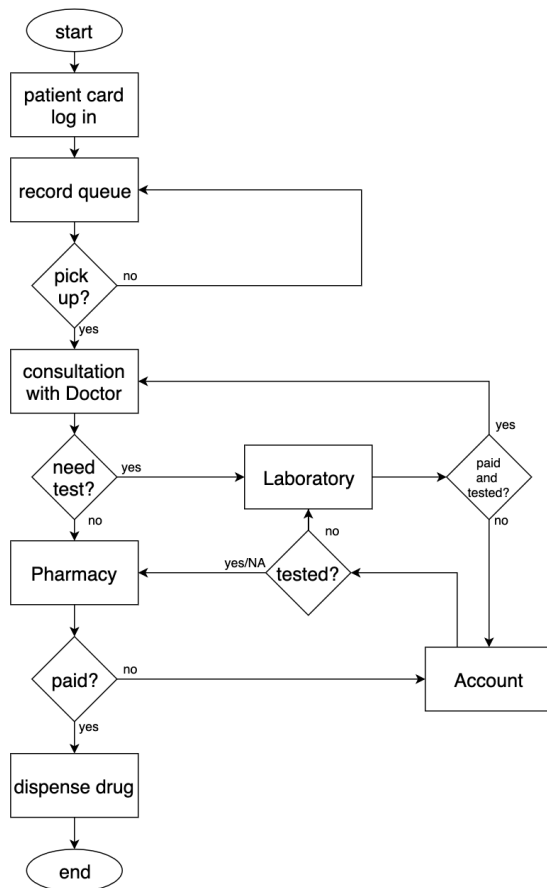## 6. High Level Design of Proposed System
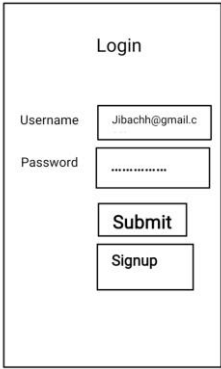


Figure 6: System Flowchart

When the application will be started, the login interface will appear. User have to login to the application using their email id and password in case if user is new to application or is not the member of the application then he/she have to signup first by filling up the necessary details mentioned on the signup interface. Only after that one will be able to take benefits or be able to use the application in future.

4

## 7. Algorithms to be used:

For the successful completion of the project, the AES encryption algorithm is used for creation of message section. It is an encryption algorithm used widely in hardware and software both. It is generally used to encrypt and decrypt any sensitive text or data. In this context, AES encryption is used in secured way for sending messages. AES encryption is used by U.S. for securing sensitive but unclassified material, so we can say it is enough secure. AES includes three block ciphers: AES-128, AES-192 and AES-256. AES-128 uses a 128-bit key length to encrypt and decrypt a block message, while AES-192 uses a 192-bit key length and AES-256 a 256-bit key length to encrypt and decrypt a block of messages. Each cipher encrypts and decrypts data in blocks of 128 bits using cryptographic keys of 128, 192 and 256 bits respectively.

.

## 8. Expected Outcome

After the successful completion of this project, users/patients can access it through using their login id password and after that they can select their date of visit to hospital and can select the desired OPD doctors to get checked and can use all the services provided in the application.
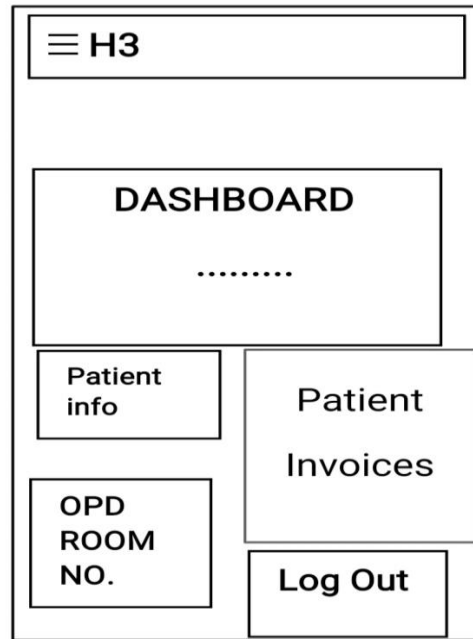


Fig 8.1 expected outcome

Figure 8.2 Expected Outcome

**References**

[1]     https://en.m.wikipedia.org/wiki/Hospital_information_system

[2]     https://scopex.in/main-objectives-of-the-hospital-management-system/

[3]     https://www.scribd.com/presentation/267183493/Unit-5-Health-Management-Information-System-HMIS-ppt