

**PURBANCHAL UNIVERSITY**



**DEPARTMENT OF COMPUTER ENGINEERING**

**KHWOPA ENGINEERING COLLEGE LIBALI-2, BHAKTAPUR**

**A MID-TERM REPORT**

**ON**

**HOSPITAL MANAGEMENT SYSTEM**

Project work submitted in partial fulfillment of requirements for the award of the degree of  
Bachelor of Engineering in Computer Engineering (Third Semester)

**SUBMITTED BY**

1. Anurag Paudel (760305)
2. Ashal Upreti (760307)
3. Madan Acharya (760321)
4. Sujan Dhoj Karki (760342)

**UNDER THE GUIDANCE OF**

Er. Avijit karn

December 2021

## ACKNOWLEDGEMENT

In performing our project, we had to take help and guidelines of some respected persons, who deserve our greatest gratitude. We would like to express our deepest gratitude to **Er. Bikash Chawal** (HOD) of Department of Computer Engineering of Khwopa Engineering College. We would like to thank our friends, seniors, and all those who have been guiding and helping us indirectly for the completion of project.

## **ABSTRACT**

Our project Hospital Management system includes registration of patients, storing and editing details of patients, doctor, nurses. It also includes work schedule, attendance and staff details.

The Hospital management system can be entered using username and password. It is accessible by administration, general staff and doctor. The data can be retrieved easily. The interface is user-friendly.

## Table of Contents

Chapter	Title	Page
	Acknowledgement	
	Abstract	
1	Introduction	
	1.1 Background	1
	1.2 Motivation	1
	1.3 Statement of Problems	2
	1.4 Objectives	2
	1.5 Scope and limitation	2
2	Literature Review	3
3	Project Management	
	3.1 Team Management	4
	3.2 Feasibility Study	4
4	Methodology	
	4.1 Context Diagram	5
	4.2 Generic Model	6
	4.3 Algorithm	7
	4.4 Flowchart	8-10
5	RESULT	
	5.1 Work completed	11-13
	5.2 Work left	14
6	References	15

---

# CHAPTER-1

## INTRODUCTION

### 1.1 Background

Hospitals deal with the life and health of their patients. Good medical care relies on well-trained doctors and nurses and on high quality facilities and equipment. Good medical care also relies on good record keeping. Without accurate, comprehensive and up to date and accessible patient notes, medical personnel may not offer the best treatment or may in fact misdiagnose the condition, which can have serious consequences. Associated records, such as x-rays, specimens, drug records and patient registers, must also be well cared for if the patient is to be protected. Good records care also ensures the hospitals administration runs smoothly; unneeded records are transferred or destroyed regularly, keeping storage areas clear and accessible; and key records can be found quickly, saving time and resources. Records also provide evidence of the hospital's accountability for its actions and they form a key source of data for medical research, statistical reports and health information systems [1].

**Hospital Management system (HMS)** is an integrated software that handles different directions of clinic workflows. In other words, HMS is a computer system that helps to manage the information related to health care and aids in the job completion of health care providers effectively. HMS came into the picture of hospital management as early as 1960 and have ever since been evolving and synchronizing with the technologies while modernizing healthcare facilities. In today's world, the management of healthcare starts from the hands of the patients through their mobile phones and facilitates the needs of the patient. It manages the smooth healthcare performance along with administrative, medical, legal, and financial control, laboratory, inpatient, outpatient, materials, nursing, etc. That is a cornerstone for successful operation of the healthcare facility. Well-tuned hospital management workflow involves a lots of important decisions that should be made in the most efficient and quick way [2].

We need **Hospital Management system** because an integrated **Hospital Management system** will allow you to share patient health records and required tests with the laboratory. Likewise, the laboratory can send you the patient's electronic test results in no time. ... Data that needs to be taken care of efficiently for the smooth everyday functioning of the hospital.

### 1.2 Statements Of Problems:

- i) **Difficult to find data:** - In hospital sector with a lot of proper works it is difficult to find out data immediately.

Eg:- Difficult to find out the patients history and late retrieval.

- ii) Immediate information storage:-** In hospital sector there is no immediate information storage technique than paper works.
- iii) Lack of updating:-** To change the details there will be so much difficulties in the paperworks. So updating time to time is almost impossible.
- iv) Time wasting management:-** Due to involvement in paperworks most of the hospital of Nepal has time wasting management system.
- v) Error prone:-** Error during updating the details.

### 1.3 Objectives

- i) To improve the problem solving skills ii) To use or familiarize with c/c++ language to build a large program.
- iii) To make a system that has immediate storage, updating, time saving and errorless interface and reduce the workload.

### 1.4 Scope And Application

- i) Hospital Management system is easy to use and eliminate errors caused by paperworks.
- ii) Helps to provide all information of staff and patients, bill generating system, time scheduling system and so on.

## **CHAPTER-2**

### **LITERATURE REVIEW**

Hospital Management system streamlines and integrates the operations process and information flow in hospitals and is designed to manage all data through single interface [2]. It provides the ability to manage all proper works in one place reducing work to staff in every aspects. So it mainly target to reduce in work through easy record keeping interface [3].

It is mainly focus on the administrative needs of hospital that can achieve easily managing ability of hospital staff [4]. Hospital Management System generate the flexibility to staff and patients , keeping record of staffs as attendance and all records related them to solve the problems in Hospital sector.

The project dealing with computerization of services of Hospital is crucial part of our lives. It is essential to preserve track of its day to day action and records of its patients , doctor, nurses and other staff person that keeping hospital running smoothly and successfully [5]. Hospital Management System can control Billing management, Prescription management, Discharging, Lab management system and so on. Hospital Management System greatly changed over the last decade, modern technology , knowledge, health care helps to implement in system. Quality and security still remains the main criteria of the medical industry.

Through Hospital Management System each hospital sector has opportunity to create the efficient, clear and fast delivering healthcare model.

## CHAPTER-3

### PROJECT MANAGEMENT

#### 3.1 Team Management

All the required efforts for this project were done by all of the four members of a team: a) Anurag Paudel (760305)  
b) Ashal Upreti (760307)  
c) Madan Acharya (760321)  
d) Sujan Dhoj Karki (760342)

#### 3.2 Feasibility Study

In this 21<sup>st</sup> century, most of our daily works are done through computer. Our project aims to run a user friendly hospital management system and expanding the features as requirements. This system doesn't use any other additional software. It is cost effective in the sense that has eliminated paper work completely.

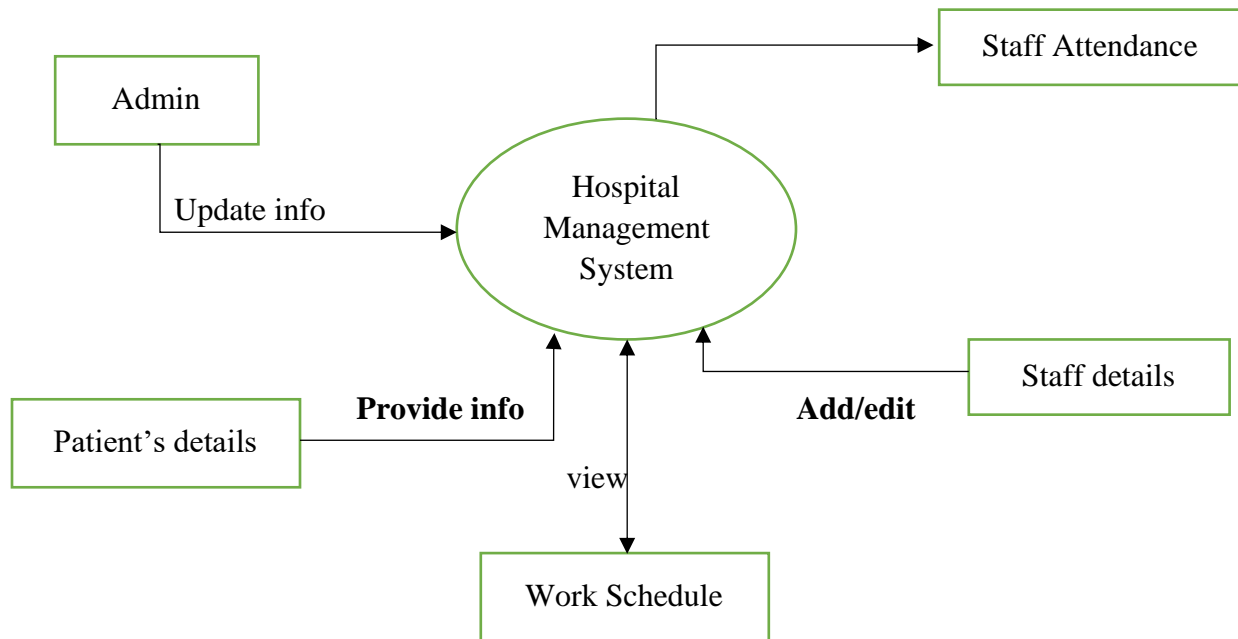
#### 3.3 Work Breakdown Structure

S.N.	Week Job Description	Duration	1 <sup>st</sup> week	2 <sup>nd</sup> week	3 <sup>rd</sup> week	4 <sup>th</sup> week	5 <sup>th</sup> week	6 <sup>th</sup> week
1.	Problem identification	3days						
2.	Analysis	5days						
3.	Design	7days						
4.	Coding	21days						
5.	Implementation & testing	7days						
6.	Documentation	26days						



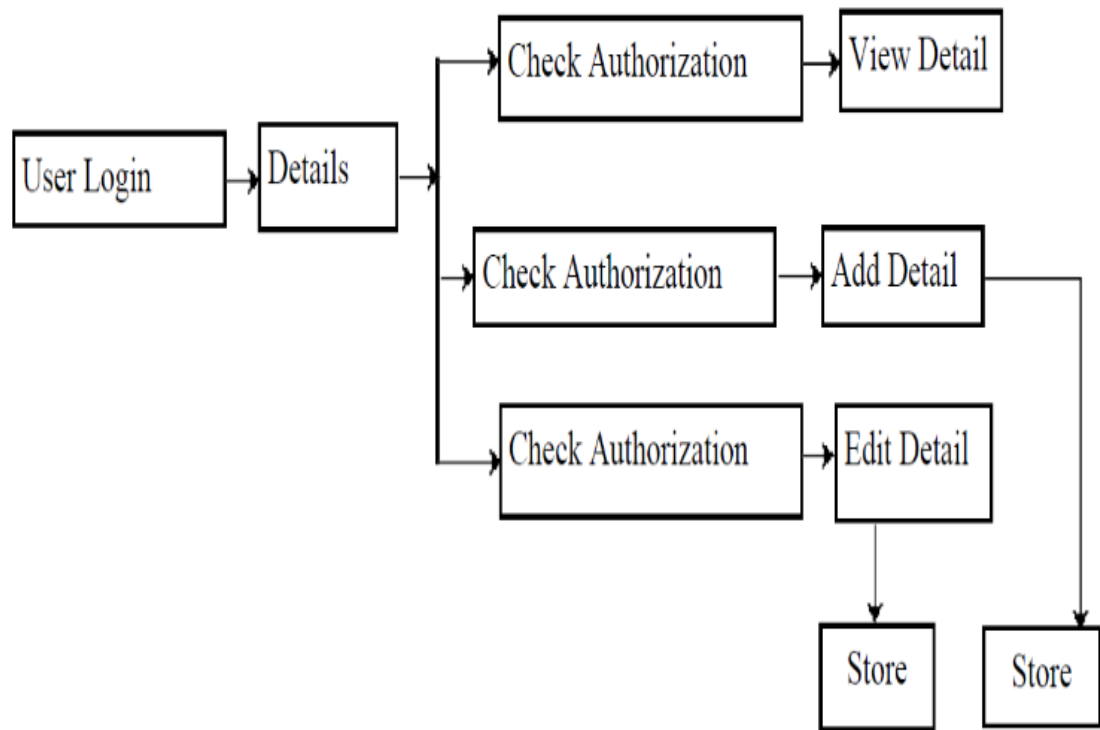
## CHAPTER-4 METHODOLOGY

### 4.1 Context Diagram:



**Fig: Context diagram**

## 4.2 Generic Model



**Fig:**Generic model

### 4.3 Algorithm

Step 1: Start

Step 2: Declare variable character choice.

Step 3: Print

a) Admin login

b) General staff

c) Doctor login

Step 4: If valid choice where check weather a, b or c. if invalid choice then goto step 2.

Step 5: If choice is 'a' enter admin user name and password. if user name and password is valid goto further process. If invalid goto step 4.

Step 6: If username and password is valid and then declare variable character choice and print

a) Hospital detail.

b) Staff detail.

c) patient detail.

d) Work schedule.

e) Staff attendance.

Step 7: If choice is valid then goto further process and if invalid goto step 4.

Step 8: If choice is made then show variable character choice and print

a) View detail.

b) Add detail.

c) Edit detail.

Step 8: If choice is valid goto further process and if invalid goto step 6.

Step 9: Check authorization if authorized then edit or add or view details.

Step 10: If edited or added then store it and if viewed then goto further process.

Step 11: If not authorized then show character choice and print

a) Continue.

b) Exit.

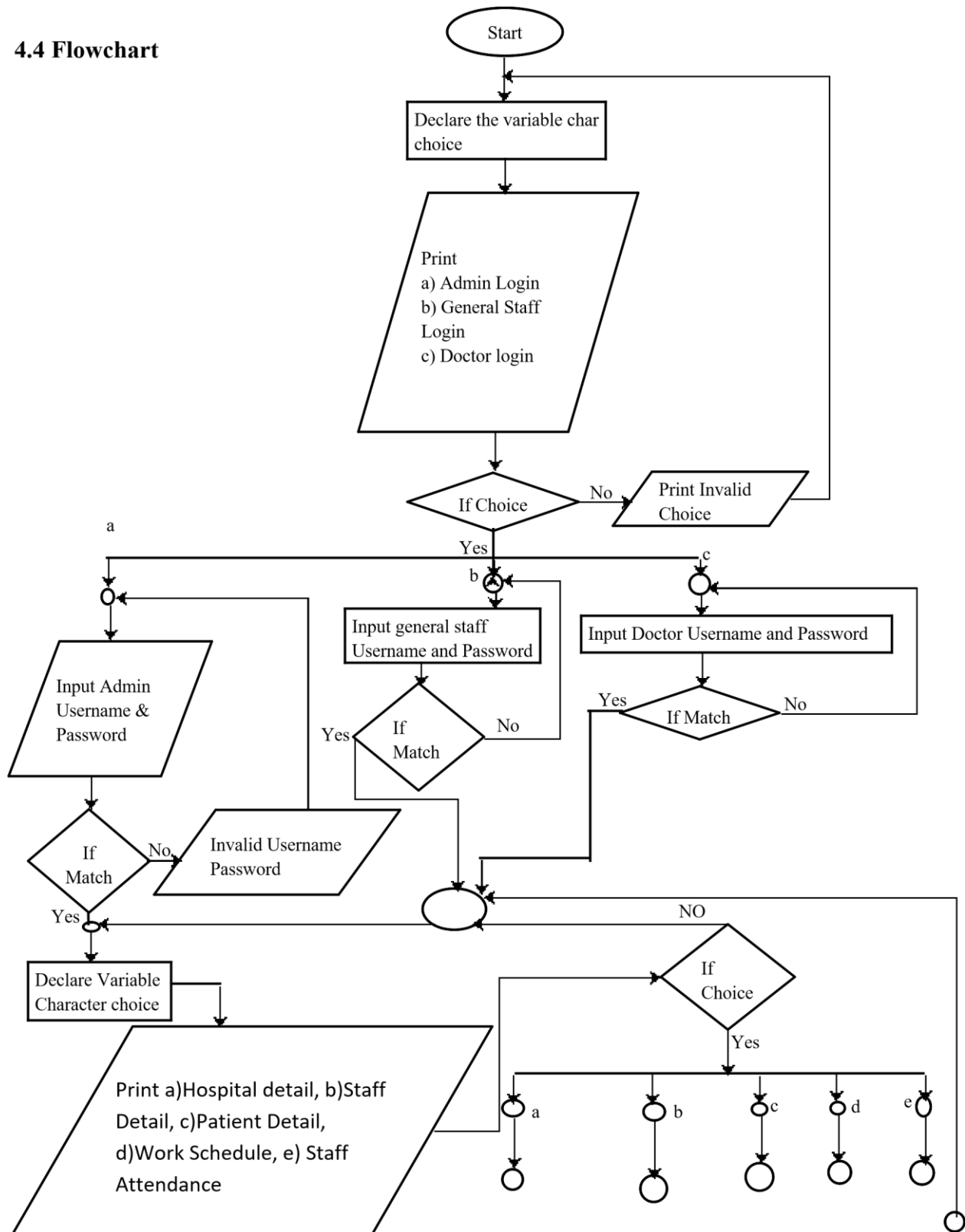
Step 12: If continued then goto step 4. if exit goto end. if invalid goto step 10.

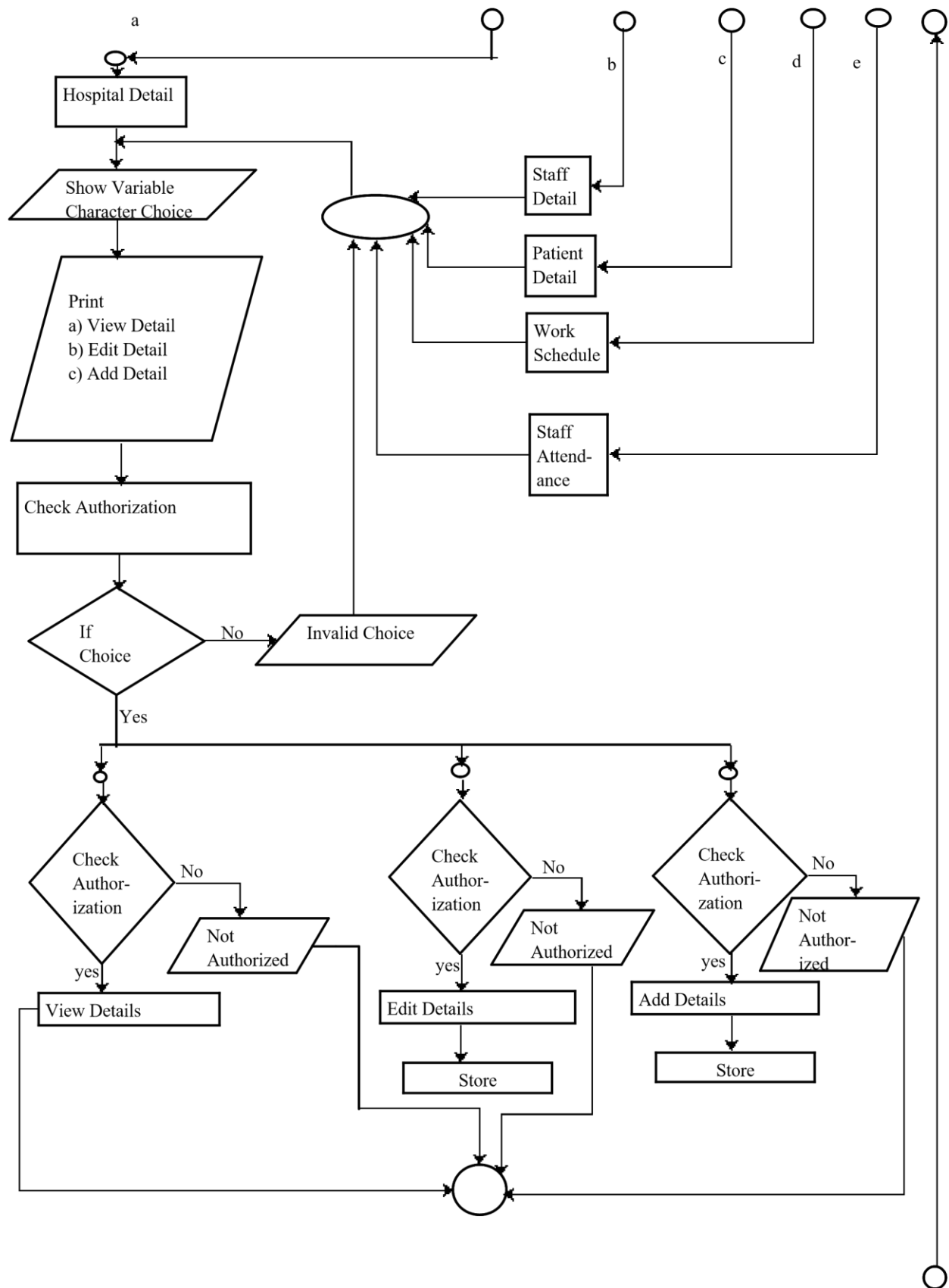
Step 13: If choice is 'b' enter General staff username and password. If invalid Goto step 12 and if valid goto step 4.

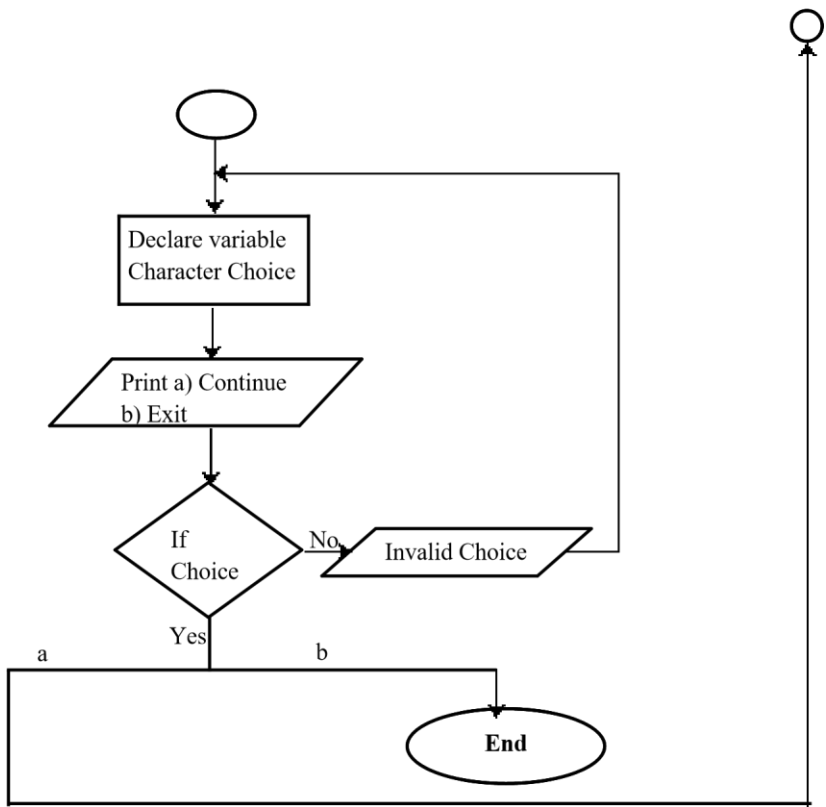
Step 14: If choice 'c' enter doctor username and password. if invalid goto step 13. if valid goto step 4.

Step 15: end

#### 4.4 Flowchart







## CHAPTER-5

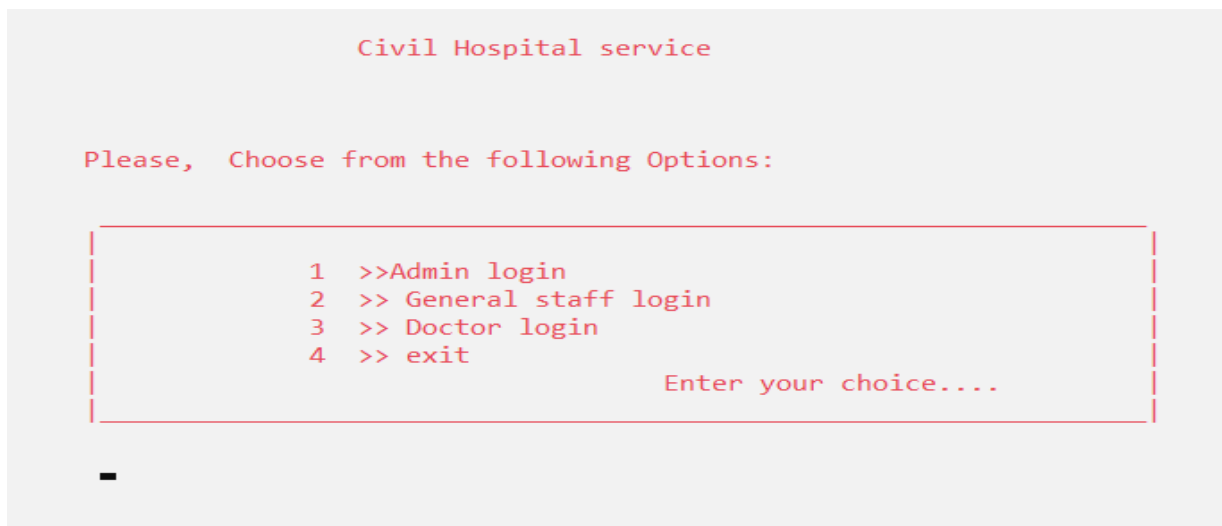
## RESULT

## 5.1 WORK COMPLETE

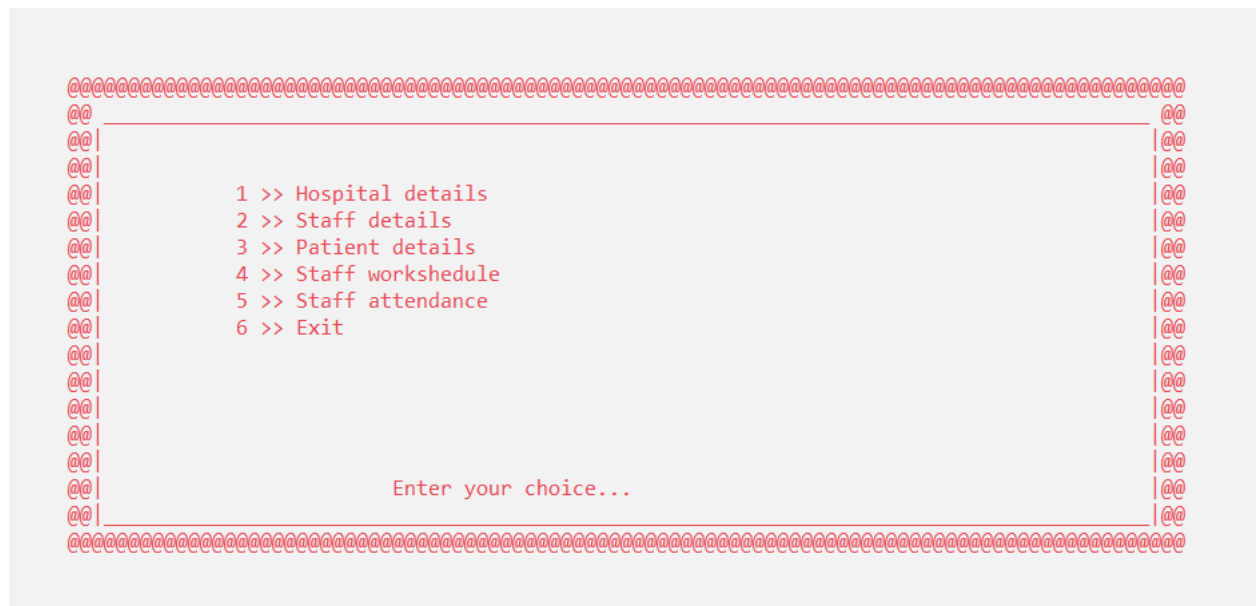
This system helps to records of doctors, nurses, patients and other staffs also their work schedule, attendance will be stored by different user with authorization..



**Fig 1.1: Welcome screen**



**Fig 1.2: Login**



#### Civil Hospital service

Please, Choose from the following Options:

1 >> Add a hospital details

2 >> View hospital details

3 >> Delete hospital details

4 >> Update hospital details

5 >> Search hospital details

6 >> Exit

Enter your choice....

**Fig 1.3: Details**



## Civil Hospital Service

Please, Choose from the following Options:

- 1 >> add a attendance Record
- 2 >> view all attendance record
- 3 >> delete the attendance record
- 4 >> update the attendance record
- 5 >> search a attendance record
- 6 >> Exit

**Fig 1.4: Record**

Please, Choose from the following Options:

- 1 >> Add a work shedule
- 2 >> View workschedule
- 3 >> Delete workshedule
- 4 >> Update workshedule
- 5 >> Search a workshedule
- 6 >> Exit

Enter your choice....

-

**Fig 1.5: work schedule**

## **5.2. Work left**

In this system the work we left to be done is authorization process up to now Doctor, Staff and Admin can visit each detail. After authorization admin, staff and doctor can view ,edit, search and add the detail which is authorized. Example doctor can only view and search work schedule but cannot edit and add .

## REFERENCES

### Journal

1. Author(s): Musa, A. Lancashire Bus. Sch., Univ. of Central Lancashire, Preston, UK  
Yusuf, Y, Meckel. M. Systems and Informatics (ICSAI), 2012 International Conference

### Website

2. (2021, June 11 ). A detailed view of hospital management system, Available :  
<https://mocdoc.in/blog/a-detailed-view-of-hospital-management-system-hms?fbclid=IwAR04tUbfz2nSAiqf0fbRneTNFG5inxSAmSM5BYajMX0UqFdOEeWqCpEWw>
3. (2021, June 28). Hospital management software in Nepal, Available  
:<https://deltatechnepal.com/business-apps/hospital-management-system?fbclid=IwAR3TaJQXPInw0yl0l5QxHQCRLP9EAjGCr3Q3cXloECC7pHHuhHy2me6CD4#:~:text=Hospital%20Management%20System&text=It%20streamlines%20and%20integrates%20the,hospital%20administration%20into%20one%20software>
4. (2021, June 29). Hospital information system, Available :  
[https://en.m.wikipedia.org/wiki/Hospital\\_information\\_system](https://en.m.wikipedia.org/wiki/Hospital_information_system)
5. (2021, June 30). Hospital management system, Available:  
<https://existek.com/blog/hospital-managementsystem/?fbclid=IwAR14nMD3gEfb9X8bUnNNCJ5q0KlwIkNoZpBB31JXv7dhksCmhs9DD9hSOJg>

