

# **DESIGN AND IMPLEMENTATION OF HOSPITAL MANAGEMENT SOFTWARE**

**By**

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## CERTIFICATION

This project titled Design and Implementation of Hospital Management Software, by Lawal, Hakeem Ajibade meets the regulations governing the award of Postgraduate Diploma in Computer Science Department of Federal University of Technology, Minna.

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Date

## **DECLARATION**

I Lawal Hakeem Ajibade, declare that this research work is the product work of my intellect, done in the pursuit of my post graduate diploma without contravention to any law relating to copyright, hence all books, material and quotations in this work has been fully acknowledged by references, this writer remains responsible for error in any part of this research work.

## **DEDICATION**

This project work is dedicated to the Almighty Allah for his love, guidance, strength, protection and mercies throughout this program to my lovely wife (DR Halima Bello-Lawal) and to my entire family for their understanding and support.

## ACKNOWLEDGEMENT

I wish to sincerely appreciate Allah for his wisdom, guidance and protection throughout my stay in school.

My special thanks go to my project supervisor and coordinator, Mallam A. Ndanusa for his contributions, guidance and direction during the writing of this project. Also my sincere appreciation goes to my Head of Department, Prof. N. I. Akinwande and all other lecturers in my department for wonderful contributions, efforts and guidance throughout my stay in school.

Finally, I wish to appreciate the effort of my business partner, Mrs Ngozi Kanu, my colleague (Ayanniyi Mohammed) my friends and classmates, to them, I am saying God bless you all.

## TABLE OF CONTENT

CONTENT	PAGE
Title Page	i
Certification	ii
Declaration	iv
Dedication	v
Acknowledgement	vi
Table of contents	vii
Abstract	viii

## CHAPTER ONE

<b>1.1</b> Preamble	1
<b>1.2</b> What is Hospital Management Software	1
<b>1.3</b> Features of Hospital Management Software	2
<b>1.4</b> The Benefits of Hospital Management Software	3
<b>1.5</b> Capabilities of Hospital Management Software	4
<b>1.6</b> Design Issues	5
<b>1.7</b> Statement of Problem	5
<b>1.8</b> Objectives of the Study	6
<b>1.9</b> Scope of the Study	6
<b>1.10</b> Significance of the Study	8

## **CHAPTER TWO**

LITERATURE REVIEW	8
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## **CHAPTER THREE**

### **SYSTEMS ANALYSIS AND DESIGN**

3.1 Diagnosis of Disease	11
--------------------------	----

## **CHAPTER FOUR**

### **SYSTEM IMPLEMENTATION AND TESTING**

4.1 Software Design Objective	17
4.2 Software Specification	17
4.3 Software Design	18
4.4 Hospital Management Software Interface Structure	19
4.5 Software Implementation	19
4.6 System Requirement	20
4.7 Program Testing and Debugging	20
4.8 User Documentation	21

## **CHAPTER FIVE**

### **SUMMARY, RECOMMENDATION AND CONCLUSION**

5.1 Summary	22
5.2 Recommendation	24

5.3 conclusion	24
Reference	25
Appendix A	27
Appendix B	33



## **ABSTRACT**

Healthcare has been recognized as one of the most important areas in humanity. Presently, the Information technologists and system engineers all over the world are working towards achieving better efficiency and quality of service in various sectors of healthcare, such as telemedicine, hospital management, patient care and treatment. This paper addresses the issue of more effective and efficient handling of doctor-patient relationship.

The idea is to use the hospital management software to extend hospital-patient/doctor-patient relationship beyond physical and logistical limitation of face to face consultation in patient management. Hospital management software can provide an extension of the doctor by interacting with the patient via a computer.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Preamble

As in many developing countries, lack of reliable data and grossly inadequate appreciation and use of available information in planning and management of health services are two main weaknesses of the health information systems especially in Africa. It is imperative to begin strengthening health management information system with an analysis of the strengths and weaknesses of existing information systems and sharing findings with all stakeholders. All would agree on the need for reformation of various vertical program-specific information systems into a comprehensive, integrated, decentralized and action-oriented simple system. As a first step towards conceptualization and design of the system, a minimum set of indicators should be identified and a strategy formulated for establishing a system. The design focus will be on the use of information in planning, management and improvement of quality and coverage of services. All health and support personnel should be trained, employing a training of trainers cascade approach. Information management and use should be incorporated into the pre-service training curriculum and the job description of all health workers and support personnel. Quarterly feedback, supportive supervision visits and annual reviews will be institutionalized. Civil society organizations are to be involved in monitoring coverage of health services at local levels.

The conclusion is that, no matter how good the design of an information system, it will not be effective unless there is internal desire, dedication and commitment of leadership to have an effective and efficient health service management system in the country.

### 1.2 What is Hospital Management Software

Hospital Management Software is a software product suite designed to improve the quality and management of clinical care and hospital health care management in the areas of clinical process analysis and activity-based costing. Hospital Management Software enables you to develop your organization and improve its effectiveness and quality of work. Managing the key processes efficiently is critical to the success of the hospital. Hospital Management Software

helps you manage your processes. Hospital Management Software provides all process management tool elements: modeling, analysis, and simulation. Documentation though an important part of a Hospital, is a non-productive exercise for the intellectual human being, whose ability lies in core areas of excellence. Hence a systematic approach to the way documents are managed, can transform your Hospital resources to its highest utility and advantage.

### **1.3 Features of Hospital Management Software:**

- a. Hospital Management Software eases the usage and adaptations to working practices of busy departments.
- b. It helps in faster clinical assessment and administrative handling of patients.
- c. It generates timely & accurate patient information and helps in clinical audit.
- d. Hospital Management Software supports care at the point of delivery.
- e. It generously uses templates to reduce usage of keyboard by busy professional.
- f. It helps in informed clinical decision making based on up-to date patient information.
- g. It has intuitive, easy to use screen designs for smooth navigation between modules.
- h. Hospital Management Software has single point data entry in all relevant modules and departments.
- I. It supports dynamics data sharing throughout the institution.
- j. It gives access to accurate information only after multi-level security validation most user- friendly software available.
- k. It is flexible to meet the changing requirement and needs of users.
- l. Hospital Management Software comes with point of care knowledge bases.

- m. It is built on latest recommendation of International Standards in healthcare.

#### **1.4 The Benefits of Hospital Management Software**

An Electronic Management in a Hospital or a Nursing Home would require being very precise and must result into cost cutting and efficient management. Hospital Management Software has been developed as a revolutionary product to be very accurate in its approach and suit all environments including large, medium or small sites. The crucial points that Hospital Management Software emphasis on are listed in the following paragraphs which in turn justify the benefits.

- Less number of Staff will be required by the hospital to cater for more patients in same time or even less and they would have the choice to re-deploy them at other suitable locations.
- Hospital Management Software not only provides an opportunity to the hospital to enhance their patient care but also can increase the profitability of the organization.
- Hospital Management Software would enable hospitals or Nursing Homes to serve the rapidly growing number of health care consumers in a cost-effective manner.
- Hospital Management Software can also save extra money on your current computer hardware shopping. Check up with our executive to more on this.
- Hospital administrators would be able to significantly improve the operational control and thus streamline operations.
- This would enable to improve the response time to the demands of patient care because it automates the process of collecting, collating and retrieving patient information.
- The senior Doctors would spend his precious time more in clinical activities than to put in clerical activities otherwise.
- This software interface would also save them a lot of time for special jobs only.
- Accounting sometimes becomes awfully pathetic and complex. This software will eliminate any such complexity, since the retrieval of information through its Management Information System will become virtually on the tip of your fingers.

- Very important for some, the reduced cost of the manpower would pay for the cost of this software within a short time after its implementation.

### **1.5 Capabilities of Hospital Management Software**

Hospital Management Software is a very powerful tool for patient management, pathology reporting, attendance / payroll and Accounting. The software has powerful features to take care of all requirements of a Hospital. It serves as a complete hospital management system including accounting. The design of Hospital Management Software is modular. The data from various modules flows in Accounts module and all your final reports are produced at a touch of a button. Being Window based Hospital Management Software is in tune with the latest computer software technology and will be a long time companion to a profitable and efficient hospital.

This software is designed for use on Windows 98/2000/NT/2003/ME/XP. It has much improved functionality and more power under Windows (TM). It is equipped with context sensitive On Line help to make the whole operation easy for a new user.

The software is compatible with MYSQL, PLSQL and Microsoft Access databases powered by Microsoft Jet Database Engine for fast and efficient storage and retrieval of Data. Multitasking (Carrying out two tasks at a time; i.e. printing reports or vouchers is simultaneously possible while viewing the reports or making new vouchers. The software uses spreadsheet to display all data on the screen at the same time for easy readability.

Hospital Management Software includes built in tools like Information Export Panel **Information Export Panel** that allows you to export all reports from to program to Printer with print preview, email, MS Excel, MS Word, CSV Text and also upload to web using FTP. All reports can be displayed in grid as well as in list view (sort-able) format. Another tool included with the program is **Communication Control** that is linked to party (customer, supplier, employee etc.) records. You can write a communication using word, excel or notepad or send an

email to a party. The communication is linked with the party record and can be re-accessed again. Also telephone numbers can be dialed by click of a button using the computer modem.

The software has an OCX user interface that make data entry effortless and editing of all records is possible with ledger and inventory being updated automatically. A number of reports are displayed with graphs. All reports can be exported in various formats as described above.

## **1.6 Design Issues**

Interesting issues to consider in development of Hospital Management Software includes:

- i. How tasks are scheduled and how synchronization of tasks is achieved.
- ii. How tasks are prioritized by Hospital Management Software.
- iii. How Hospital Management Software can collaborate or recruit resources.
- iv. Hospital Management Software can be re-instantiated in different environments and how their internal state can be stored.
- v. How the environment will be probed on how a change of environment leads to behavioral change of Hospital Management Software.
- vi. How messaging and communication can be achieved.
- vii. What hierarchies of Hospital Management Software are useful (e.g task execution, scheduling and resource providers). For Hospital Management Software to work efficiently they must share semantics of their data elements. This can be done by having computer system publish their Meta Data.

## **1.7 Statement of Problem**

Hospitals in our economy deals with large number of patients every day. Most of these hospitals are understaffed with doctors and nurses due to poor financial condition of the hospitals and this leads to the inefficient performance in the health sector as a result the quality of treatment given to patients will be very poor. However, death rate increases

everyday as a result of this inefficiency in health sector. In order to improve the quality of health care services delivery, the need for design and implementation of Hospital Management Software arises.

This software enhances the doctor-patient relationship; it provides medical information to patients by action as an extension to the doctor. Instead of time-consuming manual data entry, the data can be easily scanned into the computer to appropriate data field.

### **1.8 Objectives of the Study**

The objective of this project work is to design and implement a Hospital Management Software that will be such a tool that empowers the management to visualize the entire business Happening of the organization sitting in front of a PC The software ensures full data handshaking among the modules to ensure error-free operation with minimum effort and ensure availability of data when and where it is required. The hospital and healthcare centers can definitely improve the operational efficiency and save cost of Operation through proper implementation of the modules.

Hospital Management Software is also a revenue-generating tool. The fundamental concepts of origin being Cost analysis/reduction and Management of the healthcare Center with same resources when the business grows The management technology of several fairy-tale success stories in Healthcare business has been incorporated in consonance with state of the art system analysis and design.

### **1.9 Scope of the Study**

This project focuses on the use of Hospital Management Software for disease diagnosis, and it also include the diagnosis of different diseases like malaria, typhoid fever, diarrhea, diabetics mellitus, hypertension etc.

## CHAPTER TWO

### LITERATURE REVIEW

**Adepoju, (2002)** pointed out that the alarming rate at which computer is advancing has made it possible for it to cut across every field of life. As a result of this, the development of expert systems which allow a computer to perform task that require human intelligence is on the increase.

**Onifade (2001)**; assessed that the objective of the study is to assess the method of computerizing the hospital using hospital management software. The process of the diagnosis of various diseases is based purely on the signs and symptoms manifested, and the laboratory result of each patient blood tested. Based on this, Comprehensive Computer Language was designed to aid in laboratory system of Malaria Parasite.

**Fagbemi (2000)**; attempted to investigate and discovered that the need and demand for reliable and efficient automated Medical Information System especially for the Raw Material Research and Development Council (RMRDC) in-house Clinic is enormous. In this work, an attempt was made to investigate the existing system (manual) and a critical evaluation of the automated system with respect to its claimed objectives of reliability, extensibility and high performance. The design approach is structured and programming techniques and data structure used were highlighted. The software runs on Fox Pro and the systems response time shows that the software is efficient.

**Sidi (2002)**; in his work using the Laboratory Unit of General Hospital Minna, stressed that computerization of that unit will go a long way to solve the problems of record keeping. These problems ranging from slow response to report requested to loss of data made access to test result difficult. She suggested the development of software suitable for this record keeping purpose and that a database Management System package is required.

**Campbell, (1997)**; Lippeveld et al. (2000) discovered that Information Systems are increasingly important for measuring and improving quality and coverage of health services. The global shift from curative to preventive care, from hospital care to community and public health care, from centralized to decentralized health care, from a specific project approach to a comprehensive



sectoral approach, has necessitated the restructuring of fragmented health information systems into single comprehensive health and management information systems. The restructuring of health information systems has become an important trend in the entire developing world since the adoption of primary health care as a global strategy for achieving the 'health for all' goals (Campbell 1997). Ever since, the restructuring or strengthening of information systems has been a learning process. A standard package that could be adapted to all situations has not yet been discovered. Hundreds of academics and practitioners are continuously contributing to the better understanding of the design and role of health information systems. Pioneering countries started with trial and error, and the countries starting at a later stage are benefiting from the lessons learned by their predecessors.

**Ramneet Singh Chadha et al (2008)** in their paper presentation mentioned that the Operation Theatre is a critical area of the hospital. Therefore, Operation Theatre Management System (OTMS) is an important component of the Hospital Information Management System (HIMS). The paper presented the design and implementation aspects of an OTMS. The innovative features like Generic Dynamic Template for capturing various types of data, Generic Consent forms, Alert Facility, Vital Monitoring and Graph Plotting facility, etc. have been integrated in this module. Design aspects related to check list facility, patient monitoring utility, video streaming, and decision support system, etc. implemented as a part of this module were also presented.

**Oxford Journals, (2005)** cited that as in many developing countries, lack of reliable data and grossly inadequate appreciation and use of available information in planning and management of health services were two main weaknesses of the health information systems in Malawi. Malawi began strengthening its health management information system with an analysis of the strengths and weaknesses of existing information systems, sharing findings with all stakeholders. All were agreed on the need for reformation of various, vertical programme-specific information systems into a comprehensive, integrated, decentralized and action-oriented simple system. As a first step towards conceptualization and design of the system, a minimum set of indicators was identified and a strategy was formulated for establishing a system in the country. The design focused only on the use of information in planning, management and the improvement of quality and coverage

of services. All health and support personnel were trained, employing a training of trainers cascade approach. Information management and use was incorporated into the pre-service training curriculum and the job description of all health workers and support personnel. Quarterly feedback, supportive supervision visits and annual reviews were institutionalized. Civil society organizations were involved in monitoring coverage of health services at local levels. A mid-term review of the achievements of the health information system judged it to be one of the best in Africa. For the first time in Malawi, the health sector has information by facility by month. Yet very little improvement has been noted in use of information in rationalizing decisions. The conclusion is that, no matter how good the design of an information system, it will not be effective unless there is internal desire, dedication and commitment of leadership to have an effective and efficient health service management system.

It was concluded by suggesting that taking full advantage of lessons learned by pioneers around the world and others who had recent experience of HMIS reform, Malawi conceptualized, designed and implemented a simple, decentralized, action-oriented HMIS. Though the achievements made in 4 years are quite remarkable, the main aim of optimizing data quality and use have not yet been fully achieved. The support for further strengthening must be continued until a culture of information is created in the entire health sector.

## CHAPTER THREE

### SYSTEMS ANALYSIS

#### 3.1 Diagnosis of Disease

In this part of world (Nigeria) diagnosis of disease is done or carried out manually. There are two way of diagnosis:

- A. Clinical diagnosis
- B. Laboratory diagnosis

**Clinical diagnosis** is carried out by the doctor before proceeding to the laboratory for confirmation. In the case of laboratory request form is obtained and filled by the doctor with the patient clinical information, before it is sent to the laboratory, for **laboratory diagnosis**.

#### A. Clinical Diagnosis

This involves examining the patient. It is based on:

- i. Medical examination (physical)
  - ii. Medical history
- i. Medical Examination (Physical)**

In the course of this examination, certain things are watched out for, such as signs symptoms;

**Signs:** These are what the doctor can see or elicit (i.e. assessment of the general appearance of the patient).

**Symptoms:** This is what the patient complains about.

#### ii. Medical History

These include: name, tribe, place of origin, hospital number, age and sex, patient occupation, religion, complain, systemic review, past medical history, family history, social history and drug history.

A laboratory-request form is obtained by the doctor and with this the clinical information type of laboratory test to be carried out, would be documented. Below is a sample of Aminu Kano Teaching Hospital clinical request form;

**AMINU KANO TEACHING HOSPITAL CLINICAL LABORATORY REQUEST FORM**

SURNAME.....	SEX	HOSPITAL CLINICAL WARD	HOSPITAL REF.NO
OTHER NAME	AGE	CLINICAL I/C CAST	LAB. REF. NO
ETHNIC GROUP			

NATURE SPECIMEN COLLECTED

AT (TIME) \_\_\_\_\_

ON (DATE) \_\_\_\_\_

CLINICAL INFORMATION

EXAMINATION REQUESTED

LABORATORY DIAGNOSIS

---

SIGNATURE OF DOCTOR

**Figure 3.1 CLINICAL LABORATORY REQUEST FORM**

Diagnosis carried out in the laboratory is based on lab investigation of patient clinical information specimen from body of the patient is which is taken to the lab. Examples of specimen are; blood, urine, stool, sputum, cerebrospinal fluid (CSF), swab from ear, throat, wound, vaginal, eye e.tc.

Tissue specimen (biopsy) can also be taken to the lab for examination.

The basic labs involved in the investigation of specimen include:

- a. Medical microbiology
- b. Chemical pathology
- c. Homology
- d. Morbid anatomy

The other aspect of lab investigation is radiology which includes:

- a. X-Ray
- b. Ultra-sound scan
- c. Computer Tomography scans (CTS)
- d. Magnetic resource imaging (MRI)

### A. Medical Microbiology

Test conducted in this laboratory are malaria parasite, urine, swab, serology test. After laboratory test, the result is documented on a lab report form and sent to the doctor. Below is a sample of Aminu Kano Teaching Hospital microbiology report form.

#### AMINU KANO TEACHING HOSPITAL, MICROBIOLOGY DEPT LABORATORY REQUEST FORM

SURNAME	SEX	HOSPITAL CLINICAL WARD	HOSPITAL REF.NO.
OTHER NAME ETHNIC GROUP	AGE	CLINICAL I/C CAST	LAB.REF.NO

SPECIMEN RECEIVED

REPORT

DATE RECEIVED

-----  
SIGNATURE

DATE

## REPORT

### Figure 3.2 MICROBIOLOGY DEPT LABORATORY REQUEST FORM

#### B. Homology

The best conducted in this lab are packed cell volume (PVC), full blood and cross matching before blood transfusion.

#### C. Morbid Anatomy

In this lab, two types of diagnosis are carried out

- I. **Autopsy or past mortem:** it values examining dead bodies which necessary to know the cause of death.
- II. **Biopsy and histology:** This involves taking tissue samples, preparing it and looking at it under microscope in order to diagnose disease.

#### D. Chemical Pathology

In this laboratory the test done include body fluid which include urine test, sugar test e.t.c. After lab test, the result is documented on a lab report for and sent to the doctor. Below is a sample of Aminu Kano Teaching Hospital Chemical pathology report form.

DCP/RII

MR.33A

### AMINU KANO TEACHING HOSPITAL CHEMICAL PATHOLOGY

#### REPORT FORM

SURNAME.....	SEX	HOSPITAL CLINICAL WARD	HOSPITAL REF. NO
OTHER NAME ETHNIC GROUP	AGE	CLINICAL I/C CAST	LAB. REF. NO

### Figure 3.3 CHEMICAL PATHOLOGY REPORT FORM



**REPORT**

<b>RENAL PROFILE</b>	<b>LIVER FUNCTION</b>
Urea.....mg/d Sodium.....mmd/l Potassium.....mmd/l Bicarbonate.....mmd/l Chloride.....mmd/l  Scrum creatinine.....mg/dl Urine creatinine.....mg/dl 24HR urine volume.....m/s Urine flow rate.....m/s/mi Creatinine clearance.....m/s/mi	Alkaline phosphate..... I.u./L Aspirate aminotransferase(AST).....I.u./L Alkaline aminotransferase(ALT).....I.u./L  Total bilirubin.....mg/dl Conjugated bilirubin.....mg/dl Total protein.....g/dl Albumin.....g/dl Albumin..... ...g/dl Albumin/Globulin ratio.....g/dl
<b>LIPID PROFILE</b>  Total serum cholesterol.....mg/dl HDL cholesterol.....mg/dl LDL cholesterol.....mg/dl Triglycerides.....mg/dl	Serum protein electrophoresis
SERUM Amylase.....mg/dl SERUM uric acid.....mg/dl SERUM irony phosphate.....mg/dl	SERUM P.S.A .....mg/ml Total Acid phosphate.....I.u./L Prostatic acid phosphate.....I.u./L Creatinine kinase.....I.u./L

\_\_\_\_\_  
Date received

\_\_\_\_\_  
Chemical pathology

\_\_\_\_\_  
Date report

**Figure 3.4 REPORT**





## Radiology

In this aspect of laboratory, x-ray, ultra sound scan, computer tomography scans (CTS) and Magnetic resource imaging (MRI) are used to check patients. Patient's clinical information is documented by the doctor on a radiology constitution form and sent to the lab. The result is documented on a report form and forwarded to the doctor along with the photographic film. A sample of the report is shown below:

**AMINU KANO TEACHING HOSPITAL KANO**  
**REPORT FROM RADIOLOGY DEPARTMENT**

PATIENT NAME:  
WARD OR CLINIC:  
DATE OF EXAMINATION:

X-RANO:  
UNIT NO:

Report

---

Signature

**Figure 3.5** REPORT FROM RADIOLOGY DEPARTMENT

After the various lab investigation on specimens sent to the by the doctor, the result is sent back to the doctor, this will enable to be sure of what he/she has suspected from what has been elicited from the patients. Then the proper medication will be prescribed for the patient.

Then there is proper management software that could be handled using software agent. This agent reduces the work-load of doctors, except form severe cases which would require the attention of physicians or doctors.

In other words Hospital Management Software can be applicable in minor cases of illness, not in major cases of illness.

# CHAPTER FOUR

## DESIGN AND IMPLEMENTATION

### 4.1 Software Design Objective

The objective here is to design and implement hospital management software in disease diagnosis. Due to time constraint cases that could be handled by many software agents is narrowed down to the diagnosis of such disease such as malaria, typhoid fever, diarrhea, diabetes mellitus, and diabetes insipid us, conjunctivitis pneumonia hypertension, hypotension, TB and hypertension and some other.

### 4.2 Software Specification

Our concern here is to give a detailed and precise definition of the system. The hospital management software is an interactive system. It prompts the user to provide such information as.

- Name
- Country
- Hospital No
- Age
- Sex
- Occupation
- Address
- Next of kin

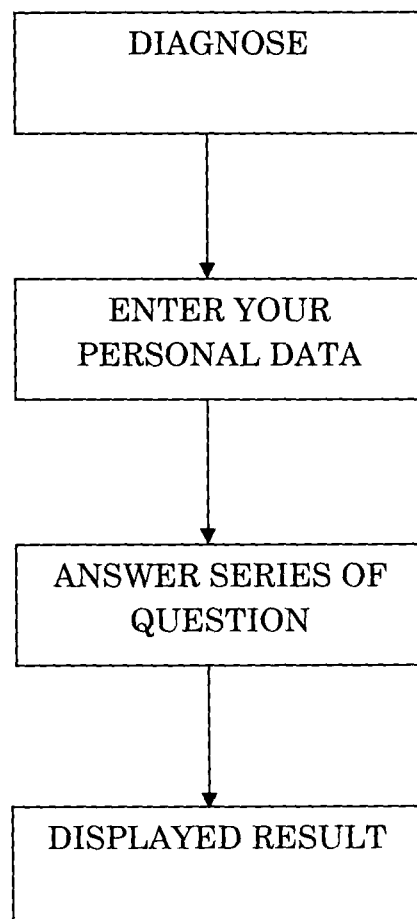
And some certain questions have to be answered for correct diagnosis such questions includes:

- Do you feel headache?
- Do you feel feverish?
- Do you vomit?
- Do you have muscle pain?
- Is your body temperature high?
- Do you observe loss of weight?

- Is sputum mixed with blood?
- Do you feel weak?
- Do you feel well at night?
- Do you feel nervous?
- Do you feel dizzy?
- Do you stool frequently?

### 4.3 Software Design

Good user interface design is critical to the success of a system. An interface that is difficult to use will at best result in a high level of user error. At worst, if information is presented in a confusing or misleading way, users may misunderstand the meaning of the information. They may initiate a sequence of actions that corrupt data or even cause catastrophic system failure, assembling the specification above result in the interface structure diagram below:



**Figure 4.1 Hospital Management Software Interface Structure**

#### **4.4 Hospital Management Software Interface Structure**

The hospital management software interface diagrams shown above, shows how the software interfaces is displayed. The diagnosis interface is the first interface; it has program title written on it. It is followed by personal data interface; it prompts patients/user to provide his/her data. It is followed by another interface, which asked series of questions, expected to be answered by the patient. This enables diagnosis to be carried out. Finally display result interface is followed, this contains patient data, the name of the type of sickness a patient is having and an ok button which when clicked returned control back to the first interface, ready for another diagnosis for different user. This process is a recursive cycle. Hospital management software is distinct from other traditional software, as a result of it interaction with users.

#### **4.5 Software Implementation**

Implementation is to set up the entire system and testing is using the data design and the system detest is using the data design and the system design phase. The test is to ensure that the system is working properly and that it meets the desired specifications. To implement any system design into a computer program, the most important consideration is first and foremost, the computer programming language to use. It can be a major factor in determining the cost, complexity and user operas ability of the program or software. Hospital management software for medical disease diagnosis was implemented using PHP (personal Home Page). PHP is a scripting language originally designed for producing dynamic web pages. It has evolved to include a command line interface capability and can be used in standalone graphical applications. The main implementation of PHP is now produced by the PHP group and serves as the factor standard for PHP as there is no formal specification. PHP is free software released under the PHP license; however it is incompatible with the GPL due to restrictions on the usage of the term PHP.

PHP is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. It can be deployed on most web servers and

on almost every operating system and platform free of charge. PHP is installed on more than 20 million websites and 1 million web servers.

#### 4.6 System Requirement

- The package requires a minimum of the following installations
- Pentium III processor
- Ram size of at least 128MB
- Hard disk space of at least 1 Gigabyte
- Windows 2000 NT, Windows XP operating system
- Cake PHP, PRADO, Symfony and Zend Framework

#### 4.7 Program Testing and Debugging

**Testing:** It is the execution of programs to check if it works according to specification and also checks for any possible errors. Error could be syntax/compilation error or execution/runtime errors or logical errors.

**Syntax Errors:** These are errors which occur as a result of wrong use of grammars of rule of the language of implementation. The compiler usually diagnoses the class of errors at the stages of program compilation.

**Execution/Runtime Error:** These are errors, which occur during program execution

Stages. These are errors, which occur as a result of faulty representation of the logic involved in the program design.

**Debugging:** This involved the elimination of errors discovered during testing/execution of programs. After the program was developed, it was tested and some

errors like syntax and runtime error were detected. Some modifications and add-in were done.

#### 4.8 User Documentation

The user documentation will be in the format of spreadsheet, where it will have the patient personal data such as name, address, age, occupation, next of kin, hospital registration number and sex. This personal data is what will help the system to differentiate different patient information and their diagnosis it will have a data base to this.

Names	Age	Hospital Reg. No	Address	Occupation	Next of Kin	Sex

**Figure 4.2 User Documentation**

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 Summary**

Hospital Management Software is a software product suite designed to improve the quality and management of clinical care and hospital health care management in the areas of clinical process analysis and activity-based costing. Hospital Management Software enables you to develop your organization and improve its effectiveness and quality of work

Being Window based, Hospital Management Software is in tune with the latest computer software technology and will be a long time companion to a profitable and efficient hospital.

This software is designed for use on Windows 98/2000/NT/2003/ME/XP. It has much improved functionality and more power under Windows (TM). It is equipped with context sensitive On Line help to make the whole operation easy for a new user.

The objective of this project work is to design and implement a Hospital Management Software that will be such a tool that empowers the management to visualize the entire business Happening of the organization sitting in front of a PC The software ensures full data handshaking among the modules to ensure error-free operation with minimum effort and ensure availability of data when and where it is required. The hospital and healthcare centers can definitely improve the operational efficiency and save cost of Operation through proper implementation of the modules.

The scope of this project focuses on the use of Hospital Management Software for disease diagnosis, and it also include the diagnosis of different diseases like malaria, typhoid fever, diarrhea, diabetics mellitus, hypertension etc.



Good user interface design is critical to the success of a system. An interface that is difficult to use will at best result in a high level of user error. At worst, if information is presented in a confusing or misleading way, users may misunderstand the meaning of the information. They may initiate a sequence of actions that corrupt data or even cause catastrophic system failure.

Implementation is to set up the entire system and testing is using the data design and the system design phase. The test is to ensure that the system is working properly and that it meets the desired specifications. To implement any system design into a computer program, the most important consideration is first and foremost, the computer programming language to use. It can be a major factor in determining the cost, complexity and user operas ability of the program or software. Hospital management software for medical disease diagnosis was implemented using PHP (personal Home Page). PHP is a scripting language originally designed for producing dynamic web pages. It has evolved to include a command line interface capability and can be used in standalone graphical applications. The main implementation of PHP is now produced by the PHP group and serves as the factor standard for PHP as there is no formal specification. PHP is a widely-used general-purpose scripting language that is especially suited for web development and can be embedded into HTML. It generally runs on a web server, taking PHP code as its input and creating web pages as output. It can be deployed on most web servers and on almost every operating system and platform free of charge. PHP is installed on more than 20 million websites and 1 million web servers.

The conclusion is that, no matter how good the design of an information system, it will not be effective unless there is internal desire, dedication and commitment of leadership to have an effective and efficient health service management system in the country.

## **5.2 Conclusion**

This paper has discussed hospital management software for the implementation of networked application and services in health care industries. The ideal is that the interaction of human role in health care can be enriched by computational interactions of agents representing each human role. This is illustrated in the paper using a typical doctor-patient interaction process in the diagnosis of malaria, typhoid fever, diarrhea, diabetes mellitus and diabetes insipid us, conjunctivitis pneumonia hypertension, hypotension, TB and hypertension and some others.

## **5.3 Recommendations**

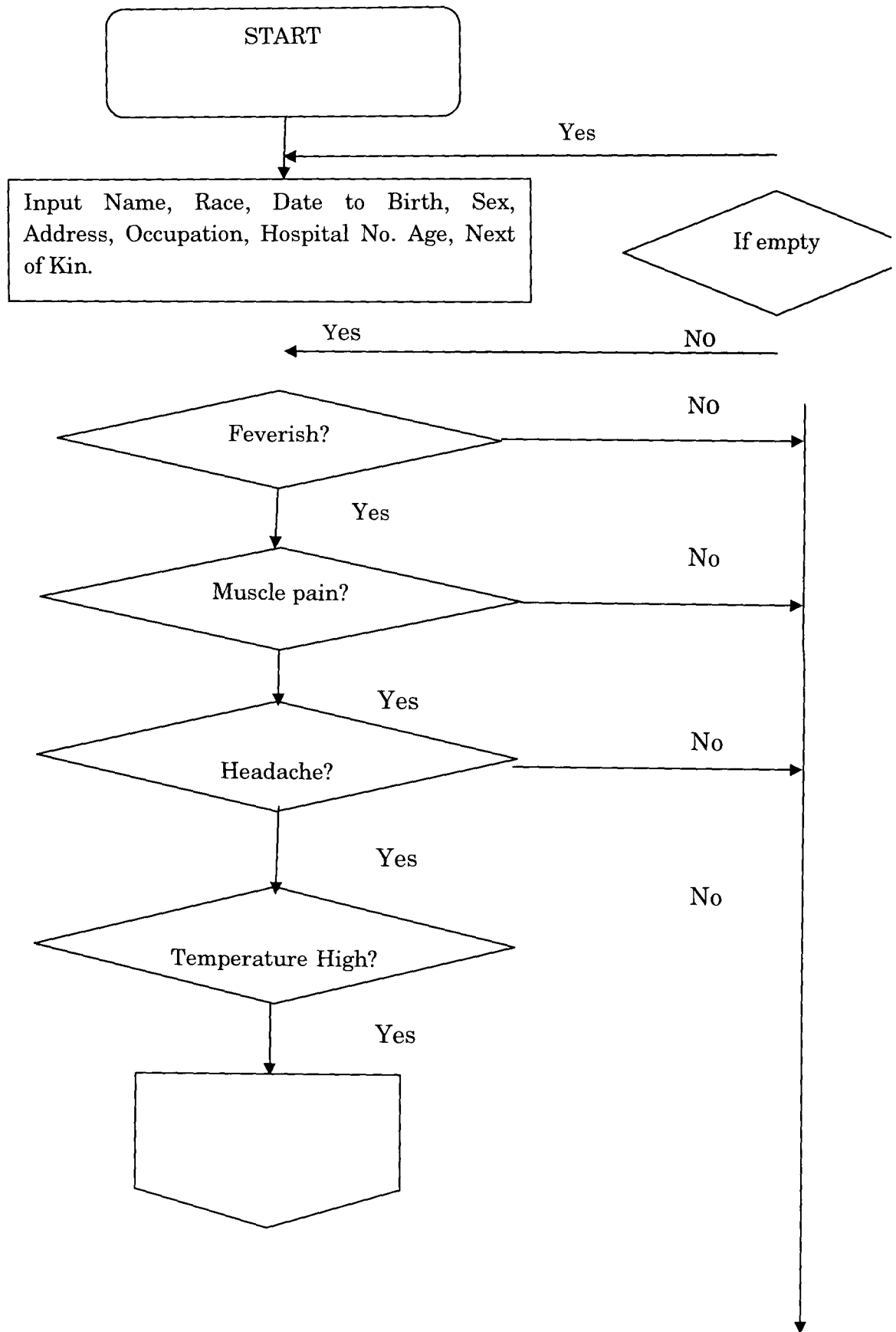
After taking a critical study of hospital management software, it was observed that it would be of great importance if every hospitals management should embark on providing hospital management software for diagnosis of disease, in their various hospitals. It would relief doctors the stress of attending to large number of patients a day. Hence, it helps doctors in diagnosing diseases except for major cases that the doctor would take care of, but as for minor cases software agent could take care of that, it would also reduce the problem of self medication, which is major problem in our economic.

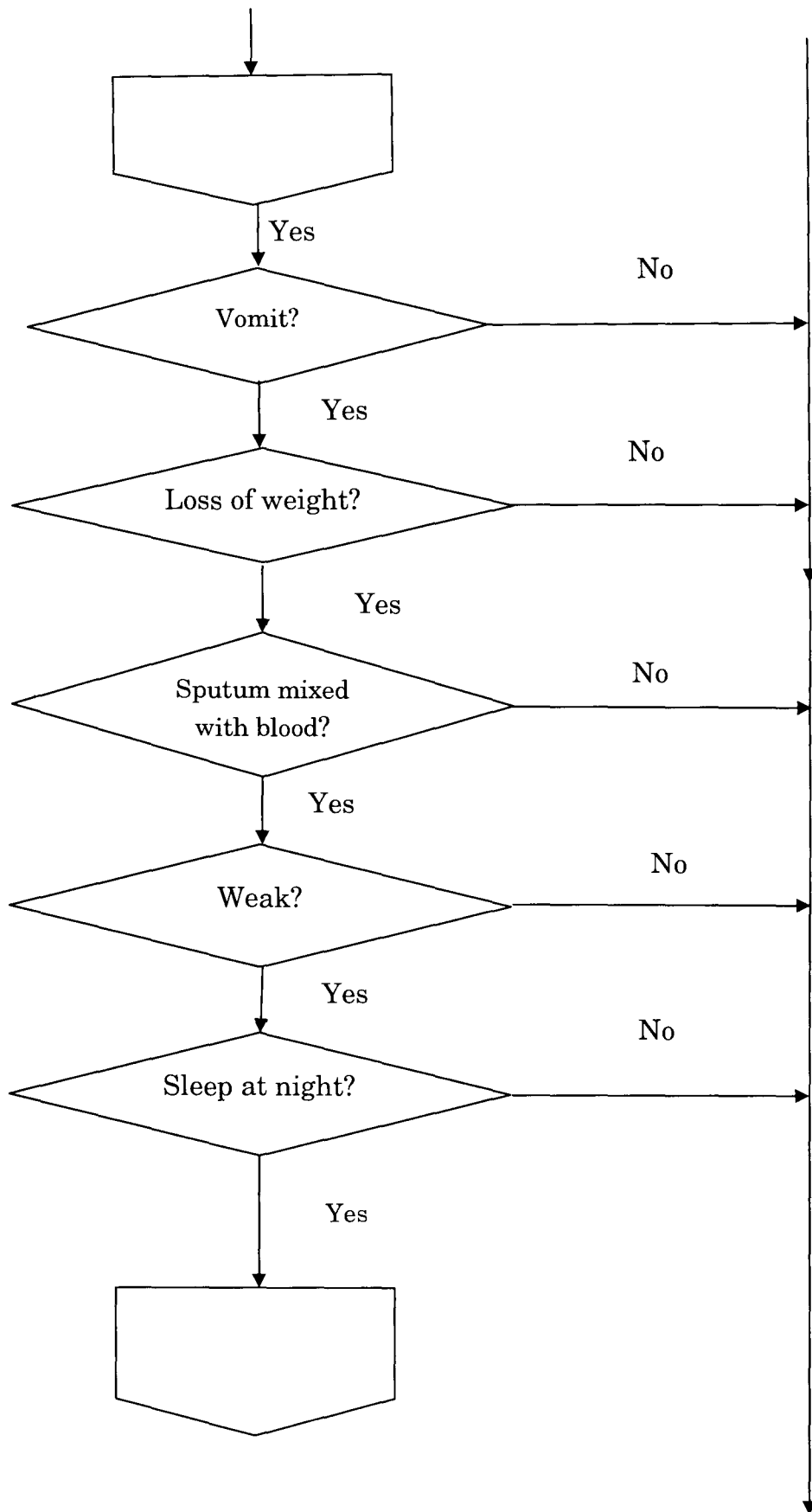
## REFERENCES

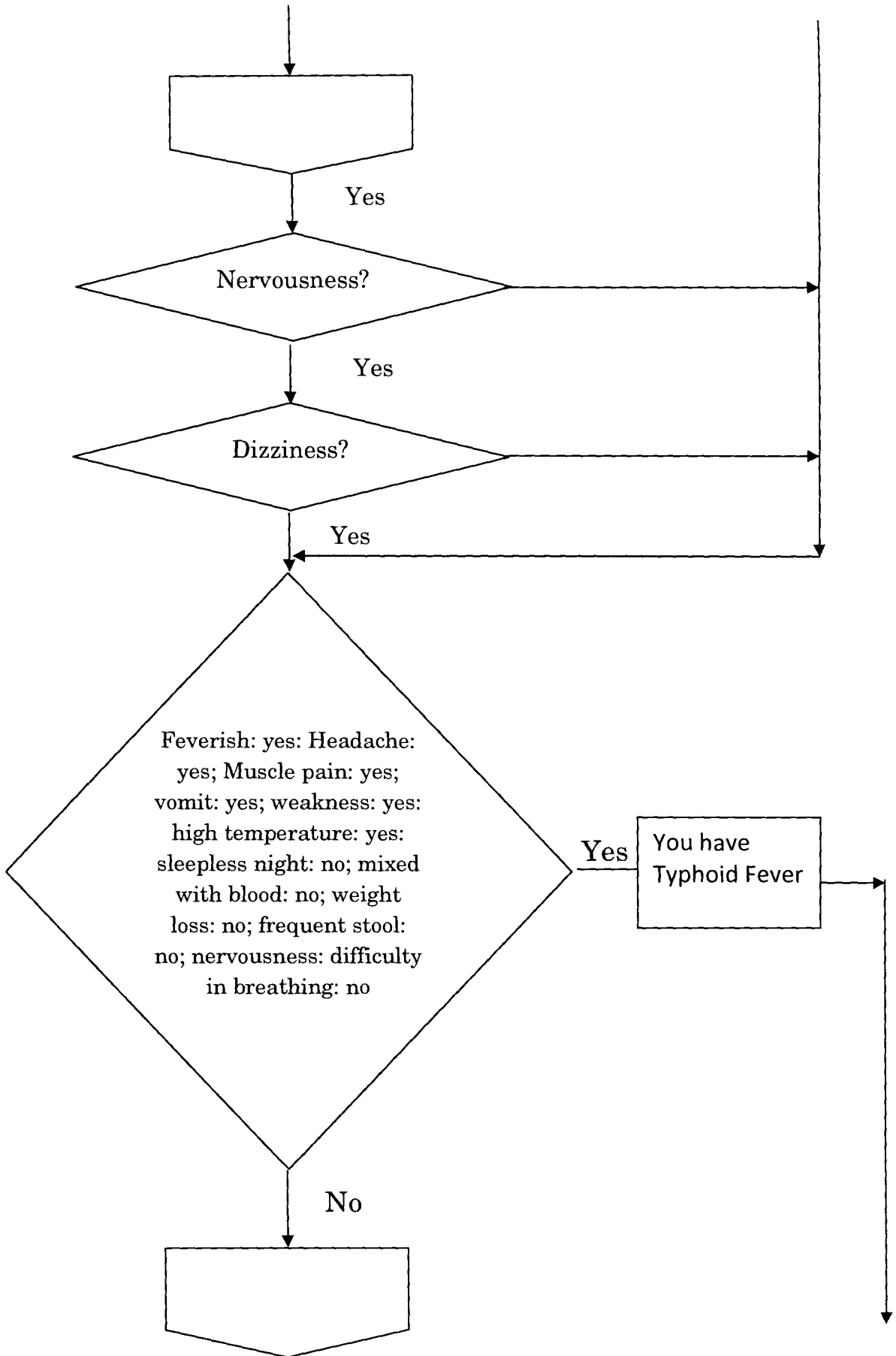
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2. **Sidi Amina (2002), Computerization of Medical test Record Keeping System (A Case Study of medical Laboratory Unit General Hospital Minna).**
3. **Samuel Oladiran Fagbemi (March 2000) Automation of Medical Clinic Services (A case Study of The Raw Material Research and Development Council in-house Clinic Abuja).**
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5. **Adepoju Adelowo Solomon (2002) Computer Assisted Diagnosis (A Case Study of Diabetics Mellitus).**
6. **Ramneet Singh Chadha, Umesh Sharma, Vijay Uniyal (2008) Design & Implementation Aspects of Operation Theatre Management Module in HMIS**
7. **Cibulskis R, Hiawalyer G. (2002).** Development of a National Health Information System in Papua New Guinea. Boston, MA: Harvard School of Public Health. Available at: [[http:// www.hsph.harvard.edu/takemi/RP190.pdf](http://www.hsph.harvard.edu/takemi/RP190.pdf) ].
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10. **Heeks R. (2002)** Failure, success and improvisation of information systems projects in developing countries. Manchester: Institute for Development Policy and Management, University of Manchester. Development Informatics, Working Paper Series, No. 11. Accessed on 30 October 2003 at: [[http://idpm.man.ac.uk/publications/wp/di/di\\_wp11.pdf](http://idpm.man.ac.uk/publications/wp/di/di_wp11.pdf)]

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- 13. Lippeveld T, Sauerborn R, Bodart C (eds). 2000.** Design and implementation of health information systems. Geneva: World Health Organization. WHO. Design and implementation of health information systems, World Health Organisation, Geneva, 2000.
- 14. AbouZahr, C., and Boerma, T (2005).** Health information systems: the foundations of public health, *Bulletin of the World Health Organisation* (83:8), pp. 578-583.
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- 16. Bui t. (2000):** Building Agent-based corporate Information system. An application to telemedicine. *European Journal of Operational Research* 122, 243-257.

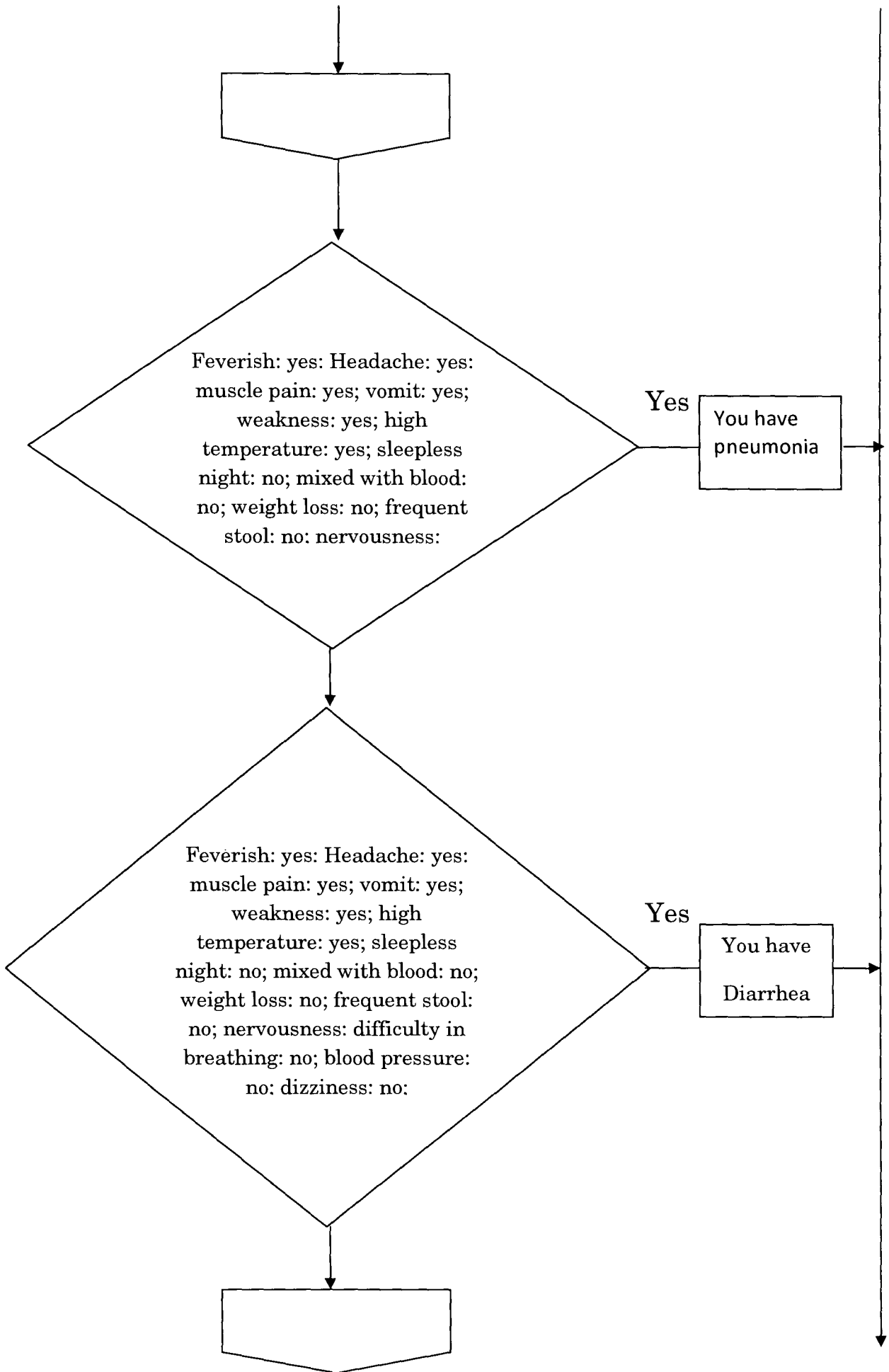
**APPENDIX A**  
**(FLOW CHART)**

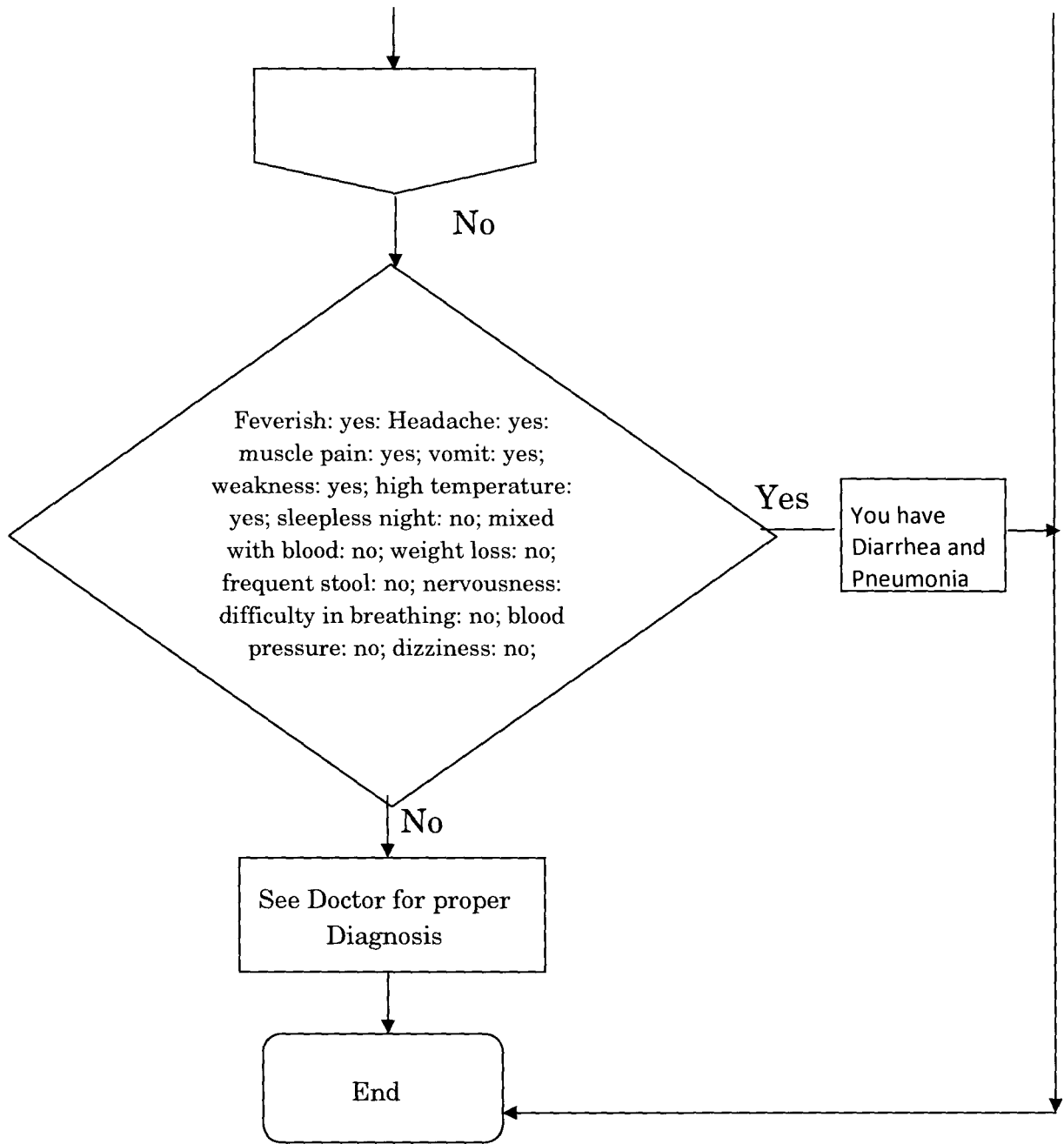












## APPENDIX B

### SOURCE CODE

#### CONNECTION TO THE DATABASE

```
<?php

$dbLink = mysqli_connect("localhost", "project", "chi", "test");
if(mysqli_connect_errno()) {
    die("MySQL connection failed: ". mysqli_connect_error());
}

?>
```

#### INSERTING DATA TO THE DATABASE

```
<?php

//Get form elements
$name = $_POST['name'];
$sex = $_POST['sex'];
$age = $_POST['age'];
$address = $_POST['address'];
$phone = $_POST['phone'];
$ad_no = $_POST['ad_no'];
$occupation = $_POST['occupation'];
```

```
$headache = $_POST['headache'];  
$feverish = $_POST['feverish'];  
$vomit = $_POST['vomit'];  
$pain = $_POST['pain'];  
$temp_high = $_POST['temp_high'];  
$weight = $_POST['weight'];  
$blood = $_POST['blood'];  
$week = $_POST['week'];  
$night = $_POST['night'];  
$nervous = $_POST['nervous'];  
$dizzy = $_POST['dizzy'];  
$frequently = $_POST['frequently'];
```

```
$query = mysqli_query($dbLink, "INSERT INTO info (name, sex, age, address, phone, ad_no, occupation,  
headache, feverish, vomit, pain, temp_high, weight, blood, week, night, nervous, dizzy, frequently)  
VALUES('$name', '$sex', '$age', '$address', '$phone', '$ad_no', '$occupation', '$headache', '$feverish',  
'$vomit', '$pain', '$temp_high', '$weight', '$blood', '$week', '$night', '$nervous', '$dizzy',  
'$frequently')")or die(mysql_error());
```

```
if($query){  
    $msg= "Registration successful";  
    include('ticket.php');  
}else{  
    $msg = "Registration failed";  
    include('client.php');  
}  
  
?>
```

## INDEX PAGE

```
<!doctype html public "-//w3c//dtd html 3.2//en">
```

```
<html>
```

```
<head>
```

```
<title>Welcome, Hospital Management Application...</title>
```

```
<meta name="GENERATOR" content="Arachnophilia 4.0">
```

```
<meta name="FORMATTER" content="Arachnophilia 4.0">
```

```
<style type="text/css">
```

```
<!--
```

```
.style1 {
```

```
    color: #FFFFFF;
```

```
    font-weight: bold;
```

```
}
```

```
body {
```

```
    background-color: #E8F9DB;
```

```
}
```

```
-->
```

```
</style>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>
```

```
<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
```

```

<center>
<p>&nbsp;</p>
<p>&nbsp;</p>
<table width="100%" border="0">
<tr>
<td width="19%">&nbsp;</td>
<td width="65%"></td>
<td width="16%">&nbsp;</td>
</tr>
<tr>
<td>&nbsp;</td>
<td bgcolor="#FFFEEC"><table border='0' width='71%' cellspacing='0' cellpadding='0' align=center>
</table>
<table width="74%" border="0" align="center">
<tr>
<td width="47%"><a href="client.php"></a></td>
<td width="53%"><a href="dr.php"></a></td>
</tr>
<tr>
<td bgcolor="#ECFOEC"><a href="user.php"></a></td>
<td><a href="user2.php"></a></td>
</tr>
</table></td>
<td>&nbsp;</td>
</tr>
</table>

```

```
</center>
```

```
<map name="Map"><area shape="rect" coords="41,18,263,53" href="#"><area shape="rect"
coords="37,58,269,85" href="../signup/signup2.php"></map>
```

```
<map name="Map2"><area shape="rect" coords="22,10,277,55" href="#"><area shape="rect"
coords="37,58,274,83" href="../signup/signup.php"></map>
```

```
</body>
```

```
</html>
```

## **CLIENT REGISTRATION PAGE**

```
<?php
```

```
$user = 'client';
```

```
$pass = 'admin';
```

```
function httpauth(){
```

```
    header('WWW-Authenticate: Basic realm="My SITE!');
```

```
    header('HTTP/1.0 401 Unauthorized');
```

```
    echo 'Text to send if user hits Cancel button';
```

```
    exit;
```

```
}
```

```
while($_SERVER['PHP_AUTH_USER'] != $user && $_SERVER['PHP_AUTH_PW'] != $pass){
```

```
    httpauth();
```

```
}
```

```
?>
```

```

<!doctype html public "-//w3c//dtd html 3.2//en">

<html>

<head>
<title>Registration Form</title>
<meta name="GENERATOR" content="Arachnophilia 4.0">
<meta name="FORMATTER" content="Arachnophilia 4.0">
<style type="text/css">
<!--
body {
    background-color: #FFF0EC;
}
.style7 {font-family: Geneva, Arial, Helvetica, sans-serif}
.style8 {font-size: x-small}
-->
</style>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>

<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
<center>
<table width="100%" border="0" align="center">
<tr>
<td width="22%">&nbsp;&nbsp;&nbsp;</td>
<td width="62%" bgcolor="#FFF0EC"></td>
<td width="16%">&nbsp;&nbsp;&nbsp;</td>
</tr>
<tr>

```



```
<td>&nbsp;</td>
```

```
<td bgcolor="#FFFEEC"><table width="544" height="124" border="1" align="center" cellpadding="0" cellspacing="0" bordercolor="#C30000" id="table14">
```

```
<tr>
```

```
<td height="28"></td>
```

```
</tr>
```

```
<tr>
```

```
<td valign="top"><form id="form1" name="form1" method="post" action="script_reg3.php">
```

```
<table width="544" border="0" align="center">
```

```
<tr>
```

```
<td width="407" height="30"><div align="right" class="style8"><span class="style7">Name</span></div></td>
```

```
<td width="10">&nbsp;</td>
```

```
<td width="404"><label>
```

```
<input name="name" type="text" id="name" />
```

```
</label></td>
```

```
</tr>
```

```
<tr>
```

```
<td bgcolor="#f1f1f1"><div align="right" class="style8">Sex</div></td>
```

```
<td bgcolor="#f1f1f1">&nbsp;</td>
```

```
<td bgcolor="#f1f1f1"><input name="sex" type="text" id="sex" /></td>
```

```
</tr>
```

```
<tr>
```

```
<td><div align="right" class="style8">Age</div></td>
```

```
<td>&nbsp;</td>
```

```
<td><input name="age" type="text" id="age" /></td>
```

```
</tr>
```

```
<tr>
```

```

        <td bgcolor="#F1F1F1"><div align="right" class="style8"><span
class="style7">Address</span></div></td>

        <td bgcolor="#F1F1F1">&nbsp;</td>

        <td bgcolor="#F1F1F1"><label>

            <input name="address" type="text" id="address" />

        </label></td>

    </tr>

    <tr>

        <td><div align="right" class="style8"><span class="style7">Phone</span></div></td>

        <td>&nbsp;</td>

        <td><label>

            <input name="phone" type="text" id="phone" />

        </label></td>

    </tr>

    <tr>

        <td bgcolor="#F1F1F1"><div align="right" class="style8">Admission Folder no.</div></td>

        <td bgcolor="#F1F1F1">&nbsp;</td>

        <td bgcolor="#F1F1F1"><label>

            <input type="text" name="ad_no" id="ad_no" />

        </label></td>

    </tr>

    <tr>

        <td><div align="right" class="style8">Occupation</div></td>

        <td>&nbsp;</td>

        <td><input type="text" name="occupation" id="occupation" /></td>

    </tr>

    <tr>

        <td bgcolor="#f1f1f1"><div align="right" class="style8">Do you feel headache? </div></td>

```

```

<td bgcolor="#f1f1f1">&nbsp;</td>
<td bgcolor="#f1f1f1"><input name="headache" type="text" id="headache" /></td>
</tr>
<tr>
<td><div align="right" class="style8">Do you feel feverish?</div></td>
<td>&nbsp;</td>
<td><input name="feverish" type="text" id="feverish" /></td>
</tr>
<tr>
<td bgcolor="#F1F1F1"><div align="right" class="style8"><span class="style7">Do you
vomit?</span></div></td>
<td bgcolor="#F1F1F1">&nbsp;</td>
<td bgcolor="#F1F1F1"><label>
<input name="vomit" type="text" id="vomit" />
</label></td>
</tr>
<tr>
<td><div align="right" class="style8"><span class="style7">Do you have muscle
pain?</span></div></td>
<td>&nbsp;</td>
<td><label>
<input name="pain" type="text" id="pain" />
</label></td>
</tr>
<tr>
<td bgcolor="#F1F1F1"><div align="right" class="style8">Is your body temperature
high?</div></td>
<td bgcolor="#F1F1F1">&nbsp;</td>
<td bgcolor="#F1F1F1"><label>

```

```



```

```

<td bgcolor="#F1F1F1">&nbsp;</td>
<td bgcolor="#F1F1F1"><label>
  <input name="nervous" type="text" id="nervous" />
</label></td>
</tr>
<tr>
  <td><div align="right" class="style8"><span class="style7">Do you feel
dizzy?</span></div></td>
  <td>&nbsp;</td>
  <td><label>
    <input name="dizzy" type="text" id="dizzy" />
  </label></td>
</tr>
<tr>
  <td bgcolor="#F1F1F1"><div align="right" class="style8">Do you stool frequently?</div></td>
  <td bgcolor="#F1F1F1">&nbsp;</td>
  <td bgcolor="#F1F1F1"><label>
    <input type="text" name="frequently" id="frequently" />
  </label></td>
</tr>
<tr>
  <td height="26">&nbsp;</td>
  <td>&nbsp;</td>
  <td><label>
    <input type="submit" name="Submit" value="Register" />
  </label></td>
</tr>
</table>

```

```
</form></td>
</tr>
</table>
</td>
<td>&nbsp;</td>
</tr>
</table>
</center>

</body>

</html>
```

## **DOCTORS RECOMMENDATION PAGE**

```
<?php

$user = 'dr femi';
$pass = 'admin';

function httpauth(){
    header('WWW-Authenticate: Basic realm="My SITE!');
    header('HTTP/1.0 401 Unauthorized');
    echo 'Text to send if user hits Cancel button';
    exit;
}

while($_SERVER['PHP_AUTH_USER'] != $user && $_SERVER['PHP_AUTH_PW'] != $pass){
    httpauth();
```

```
}  
?>
```

```
<!doctype html public "-//w3c//dtd html 3.2//en">
```

```
<html>
```

```
<head>
```

```
<title>Doctor's Recommendation</title>
```

```
<meta name="GENERATOR" content="Arachnophilia 4.0">
```

```
<meta name="FORMATTER" content="Arachnophilia 4.0">
```

```
<style type="text/css">
```

```
<!--
```

```
body {
```

```
    background-color: #E8F9DB;
```

```
}
```

```
.style2 {color: #666666;
```

```
    font-weight: bold;
```

```
    font-size: 14px;
```

```
}
```

```
.style3 {font-size: small}
```

```
-->
```

```
</style>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>
```

```
<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
```

```
<center>
```

```
<table width="100%" border="0">
```

```

<tr>
  <td width="20%">&nbsp;</td>
  <td width="64%" bgcolor="#FFF0EC"></td>
  <td width="16%">&nbsp;</td>
</tr>
<tr>
  <td>&nbsp;</td>
  <td bgcolor="#FFFEEC"><table width="100%" border="0">
    <tr>
      <td width="44%"><table width="321" height="77" border="1" align="center" cellpadding="0"
        cellspacing="0" bordercolor="#C30000" id="table14">
        <tr>
          <td width="317" height="21" background="img/regbg3.png">&nbsp;</td>
        </tr>
        <tr>
          <td valign="top"><form name="form1" method="post" action="list.php">
            <table width="286" border="0" cellspacing="0" cellpadding="0">
              <tr>
                <td width="200"><div align="right" class="style2">User ID</div></td>
                <td width="10">&nbsp;</td>
                <td width="390"><label>
                  <input type="text" name="id" id="id">
                  <input type="submit" name="button" id="button" value="Check">
                </label></td>
              </tr>
            </table>
          </form></td>
        </tr>
      </td>
    </tr>
  </table>
  </td>
</tr>

```



```
</table></td>
```

```
<td width="56%"><table width="389" height="77" border="1" align="center" cellpadding="0" cellspacing="0" bordercolor="#C30000" id="table14">
```

```
<tr>
```

```
<td width="385" height="21" background="img/drrm.png">&nbsp;</td>
```

```
</tr>
```

```
<tr>
```

```
<td valign="top"><form name="form1" method="post" action="script_reg.php">
```

```
<table width="100%" border="0">
```

```
<tr>
```

```
<td width="32%"><div align="right">Client Id </div></td>
```

```
<td width="68%"><label>
```

```
<input name="client_id" type="text" id="client_id">
```

```
</label></td>
```

```
</tr>
```

```
<tr>
```

```
<td><div align="right" class="style3">Dr Name</div></td>
```

```
<td><label>
```

```
<input name="name" type="text" id="name">
```

```
</label></td>
```

```
</tr>
```

```
<tr>
```

```
<td><div align="right">Dr Remarks</div></td>
```

```
<td><label>
```

```
<textarea name="Doctor_Recommendation" cols="40" rows="15" id="Doctor_Recommendation"></textarea>
```

```
</label></td>
```

```
</tr>
```

```
<tr>
```

```

        <td>&nbsp;</td>
        <td><label>
            <input type="submit" name="Submit" value="Submit">
        </label></td>
    </tr>
</table>
<label></label>
</form></td>
</tr>
</table></td>
</tr>
<tr>
    <td colspan="2"><div align="center"><a href="index.php">home</a></div></td>
</tr>
</table>
<table border='0' width='71%' cellspacing='0' cellpadding='0' align=center>
</table>
</td>
<td>&nbsp;</td>
</tr>
</table>
</center>

<map name="Map"><area shape="rect" coords="41,18,263,53" href="#"><area shape="rect"
coords="37,58,269,85" href="../signup/signup2.php"></map>

<map name="Map2"><area shape="rect" coords="22,10,277,55" href="#"><area shape="rect"
coords="37,58,274,83" href="../signup/signup.php"></map>

</body>

```

```
</html>
```

```
TO CHECK CLIENT INFO (SCRIPT FOR ADMIN PAGE)
```

```
<!doctype html public "-//w3c//dtd html 3.2//en">
```

```
<html>
```

```
<head>
```

```
<title>Client Card Info</title>
```

```
<meta name="GENERATOR" content="Arachnophilia 4.0">
```

```
<meta name="FORMATTER" content="Arachnophilia 4.0">
```

```
<style type="text/css">
```

```
<!--
```

```
body {
```

```
    background-color: #E8F9DB;
```

```
}
```

```
.style3 {
```

```
    font-size: small;
```

```
    font-weight: bold;
```

```
}
```

```
-->
```

```
</style>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>
```

```
<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
```

```
<center>
```

```
<p>&nbsp;</p>
```

<p>&nbsp;</p>

<table width="100%" border="0">

<tr>

<td width="18%">&nbsp;</td>

<td width="66%" bgcolor="#FFF0EC"></td>

<td width="16%">&nbsp;</td>

</tr>

<tr>

<td>&nbsp;</td>

<td bgcolor="#FFFEEC"><table width="321" height="68" border="1" align="center" cellpadding="0" cellspacing="0" bordercolor="#C30000" id="table14">

<tr>

<td height="21" colspan="2" background="img/regbg4.png">&nbsp;</td>

</tr>

<tr>

<td colspan="2" valign="top">

<?php

\$id = \$\_POST['id'];

\$dbLink = mysqli\_connect("localhost", "project", "chi", "test");

if(mysqli\_connect\_errno()) {

die("MySQL connection failed: ". mysqli\_connect\_error());

}

\$user = mysqli\_query(\$dbLink, "SELECT \* FROM info WHERE us\_id='\$id'");

if (\$user){

# Print each file

while(\$row = mysqli\_fetch\_assoc(\$user))

```

{
    echo "<strong>User_ID: </strong>".$row['us_id']."<br />";
    echo "<strong>Name: </strong>".$row['name']."<br />";
    echo "<strong>Sex: </strong>".$row['sex']."<br />";
    echo "<strong>Age: </strong>".$row['age']."<br />";
    echo "<strong>Phone: </strong>".$row['phone']."<br />";
    echo "<strong>Address: </strong>".$row['address']."<br />";
    echo "<strong>Do you feel headache?: </strong>".$row['headache']."<br />";
    echo "<strong>Do you feel feverish?: </strong>".$row['feverish']."<br />";
    echo "<strong>Do you vomit?: </strong>".$row['vomit']."<br />";
    echo "<strong>Do you have muscle pain?: </strong>".$row['pain']."<br />";
    echo "<strong>Is your body temperature high?: </strong>".$row['temp_high']."<br />";
    echo "<strong>Do you observe loss of weight?: </strong>".$row['weight']."<br />";
    echo "<strong>Is sputum mixed with blood?: </strong>".$row['blood']."<br />";
    echo "<strong>Do you feel weak?: </strong>".$row['week']."<br />";
    echo "<strong>Do you feel well at night?: </strong>".$row['night']."<br />";
    echo "<strong>Do you feel nervous?: </strong>".$row['nervous']."<br />";
    echo "<strong>Do you feel dizzy?: </strong>".$row['dizzy']."<br />";
    echo "<strong>Do you stool frequently?: </strong>".$row['frequently']."<br />";
}

```

```

}

```

```

# Free the result

```

```

    mysqli_free_result($user);

```

```

?>         </td>

```

```
</tr>
<tr>
  <td width="128" height="15" valign="top"><div align="center"><span class="style3"><a
href="index.php">home</a></span></div></td>
  <td width="187" valign="top"><div align="center"><a href="dr.php" class="style3">Doctor's
Recommendation</a> </div></td>
</tr>
</table>
<table border='0' width='71%' cellspacing='0' cellpadding='0' align=center>
</table>
</td>
<td>&nbsp;</td>
</tr>
</table>
</center>
```

```
</body>
```

```
</html>
```

TO CHECK DOCTORS RECOMMENDATION(Script for PHARMACIES PAGE)

```
<!doctype html public "-//w3c//dtd html 3.2//en">
```

```
<html>
```

```
<head>
```

```
<title>Dr Recommendation</title>
```

```
<meta name="GENERATOR" content="Arachnophilia 4.0">
```

```

<meta name="FORMATTER" content="Arachnophilia 4.0">
<style type="text/css">
<!--
body {
    background-color: #E8F9DB;
}
.style3 {
    font-size: small;
    font-weight: bold;
}
-->
</style>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>

<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
<center>
<p>&nbsp;</p>
<p>&nbsp;</p>
<table width="100%" border="0">
<tr>
<td width="17%">&nbsp;</td>
<td width="67%" bgcolor="#FFF0EC"></td>
<td width="16%">&nbsp;</td>
</tr>
<tr>
<td>&nbsp;</td>
<td bgcolor="#FFFEEC"><table width="321" height="68" border="1" align="center" cellpadding="0"
cellspacing="0" bordercolor="#C30000" id="table14">

```

```

<tr>
  <td height="21" colspan="2" background="img/regbg4.png">&nbsp;  </td>
</tr>
<tr>
  <td colspan="2" valign="top">
    <?php
$cid = $_POST['id'];
$dbLink = mysqli_connect("localhost", "project", "chi", "test");
if(mysqli_connect_errno()) {
  die("MySQL connection failed: ". mysqli_connect_error());
}

$user = mysqli_query($dbLink, "SELECT name,client_id,dr_name,dr_recommendation FROM info,
remarks WHERE info.us_id='$cid' AND remarks.client_id='$cid'");

if ($user){

  # Print each file
while($row = mysqli_fetch_assoc($user))
{
  echo "<strong>Client ID: </strong>".$row['client_id']."<br />";
  echo "<strong>Name: </strong>".$row['name']."<br />";
  echo "<strong>Dr Name: </strong>".$row['dr_name']."<br />";
  echo "<strong>Doctor Recommendation: </strong>".$row['dr_recommendation']."<br
/>";
}

}

# Free the result

```



```
mysqli_free_result($user);
```

```
?>          </td>
</tr>
<tr>
    <td width="128" height="15" valign="top"><div align="center"><span class="style3"><a
href="index.php">home</a></span></div></td>
    <td width="187" valign="top"><div align="center"><a href="dr.php" class="style3">Doctor's
Recommendation</a> </div></td>
</tr>
</table>
<table border='0' width='71%' cellspacing='0' cellpadding='0' align=center>
</table>
</td>
<td>&nbsp;</td>
</tr>
</table>
</center>

</body>

</html>
```

## **SCRIPT TO POST DOCTORS RECOMMENDATION**

```
<?php
```

```

$dbLink = mysqli_connect("localhost", "project", "chi", "test");
if(mysqli_connect_errno()) {
    die("MySQL connection failed: ". mysqli_connect_error());
}
//Get form elements
$client_id = $_POST['client_id'];
$name = $_POST['name'];
$Doctor_Recommendation = $_POST['Doctor_Recommendation'];

$query = mysqli_query($dbLink, "insert into remarks (client_id,dr_name,dr_recommendation)
VALUES('$client_id','$name','$Doctor_Recommendation')")or die(mysql_error());

if($query){
    $msg= "Registration successful";
    include('posted.php');
}else{
    $msg = "Registration failed";
    include('client.php');
}

?>

</body>
</html>

```

TO GENERATE CLIENT ID (SCRIPT TO GENERATE CLIENT ID)

```
<!doctype html public "-//w3c//dtd html 3.2//en">

<html>

<head>
<title>Client Card Info</title>
<meta name="GENERATOR" content="Arachnophilia 4.0">
<meta name="FORMATTER" content="Arachnophilia 4.0">
<style type="text/css">
<!--
.style1 {
    color: #FFFFFF;
    font-weight: bold;
}
body {
    background-color: #E8F9DB;
}
.style2 {color: #666666;
    font-weight: bold;
    font-size: 14px;
}
-->
</style>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>

<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
<center>
<p>&nbsp;</p>
```

<p>&nbsp;</p>

<table width="100%" border="0">

<tr>

<td width="18%">&nbsp;</td>

<td width="66%" bgcolor="#FFF0EC"></td>

<td width="16%">&nbsp;</td>

</tr>

<tr>

<td>&nbsp;</td>

<td bgcolor="#FFFEEC"><table width="321" height="77" border="1" align="center" cellpadding="0" cellspacing="0" bordercolor="#C30000" id="table14">

<tr>

<td width="317" height="21" background="img/regbg4.png">&nbsp;</td>

</tr>

<tr>

<td valign="top"><form action="login\_process.php" method="post">

<div align="left">

<table width="478">

<tr>

<td width="88"><div align="right"><strong>Client ID </strong></div></td>

<td width="1">&nbsp;</td>

<td width="373"><label>

<?php

    \$dbLink = mysqli\_connect("localhost", "project", "chi", "test");

if(mysqli\_connect\_errno()) {

    die("MySQL connection failed: ". mysqli\_connect\_error());

    }

```

        $result = mysqli_query($dbLink, "SELECT * FROM info WHERE name = '$name'");
        if($result) {
while($row = mysqli_fetch_assoc($result))
    {
        echo $row['us_id'];

    }

# Free the result
mysqli_free_result($result);

```

```

        }else{
            echo "could not locate table";
        }
    ?>
</label></td>
</tr>
<tr>
    <td><div align="right"><strong>Client name </strong></div></td>
    <td>&nbsp;</td>
    <td><label>
        <?php
            echo $name;
        ?>
    </label></td>
</tr>
<tr>

```

```
<td>&nbsp;</td>
<td>&nbsp;</td>
<td><a href="index.php">Hospital Management Project Go to Home page </a></td>
</tr>
</table>
</div>
</form></td>
</tr>
</table>
<table border='0' width='71%' cellspacing='0' cellpadding='0' align=center>
</table>
</td>
<td>&nbsp;</td>
</tr>
</table>
</center>
```

```
<map name="Map"><area shape="rect" coords="41,18,263,53" href="#"><area shape="rect"
coords="37,58,269,85" href="../signup/signup2.php"></map>
```

```
<map name="Map2"><area shape="rect" coords="22,10,277,55" href="#"><area shape="rect"
coords="37,58,274,83" href="../signup/signup.php"></map>
```

```
</body>
```

```
</html>
```

### **ADMIN PAGE SCRIPT 1**

```
<?php
```

```
$user = 'admin';
```

```

$pass = 'admin';

function httpauth(){
    header('WWW-Authenticate: Basic realm="My SITE!');
    header('HTTP/1.0 401 Unauthorized');
    echo 'Text to send if user hits Cancel button';
    exit;
}

while($_SERVER['PHP_AUTH_USER'] != $user && $_SERVER['PHP_AUTH_PW'] != $pass){
    httpauth();
}
?>

<!doctype html public "-//w3c//dtd html 3.2//en">

<html>

<head>
<title>Check Info</title>
<meta name="GENERATOR" content="Arachnophilia 4.0">
<meta name="FORMATTER" content="Arachnophilia 4.0">
<style type="text/css">
<!--
.style1 {
    color: #FFFFFF;
    font-weight: bold;
}

```

```

body {
    background-color: #E8F9DB;
}
.style2 {color: #666666;
    font-weight: bold;
    font-size: 14px;
}
-->
</style>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>

<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
<center>
<p>&nbsp;</p>
<p>&nbsp;</p>
<table width="100%" border="0">
<tr>
<td width="18%">&nbsp;</td>
<td width="66%" bgcolor="#FFF0EC"></td>
<td width="16%">&nbsp;</td>
</tr>
<tr>
<td>&nbsp;</td>
<td bgcolor="#FFFEEC"><table width="100%" border="0">
<tr>
<td width="50%"><table width="321" height="77" border="1" align="center" cellpadding="0"
cellspacing="0" bordercolor="#C30000" id="table14">
<tr>

```



```

<td width="317" height="21" background="img/regbg3.png">&nbsp;</td>
</tr>
<tr>
<td valign="top"><form name="form1" method="post" action="list.php">
<table width="286" border="0" cellspacing="0" cellpadding="0">
<tr>
<td width="200"><div align="right" class="style2">User ID</div></td>
<td width="10">&nbsp;</td>
<td width="390"><label>
<input type="text" name="id" id="id">
<input type="submit" name="button" id="button" value="Check">
</label></td>
</tr>
</table>
</form></td>
</tr>
</table></td>
<td width="50%"><table width="321" height="77" border="1" align="center" cellpadding="0"
cellspacing="0" bordercolor="#C30000" id="table14">
<tr>
<td width="317" height="21" background="img/regbg3.png">&nbsp;</td>
</tr>
<tr>
<td valign="top"><form name="form1" method="post" action="list2.php">
<table width="297" border="0" cellspacing="0" cellpadding="0">
<tr>
<td width="200"><div align="right" class="style2">Dr Remark </div></td>
<td width="10">&nbsp;</td>

```

```

        <td width="390"><label>
            <input type="text" name="id2" id="id2">
            <input type="submit" name="button2" id="button2" value="Check">
        </label></td>
    </tr>
</table>
</form></td>
</tr>
</table></td>
</tr>
<tr>
    <td colspan="2"><div align="center"><a href="index.php">home</a></div></td>
</tr>
</table>
<table border='0' width='71%' cellspacing='0' cellpadding='0' align=center>
</table>
</td>
<td>&nbsp;</td>
</tr>
</table>
</center>

<map name="Map"><area shape="rect" coords="41,18,263,53" href="#"><area shape="rect"
coords="37,58,269,85" href="../signup/signup2.php"></map>

<map name="Map2"><area shape="rect" coords="22,10,277,55" href="#"><area shape="rect"
coords="37,58,274,83" href="../signup/signup.php"></map>

</body>

```

```
/html>
```

## **ADMIN PAGE SCRIPT 2**

```
<?php
```

```
$user = 'pham';
```

```
$pass = 'admin';
```

```
function httpauth(){
```

```
    header('WWW-Authenticate: Basic realm="My SITE!');
```

```
    header('HTTP/1.0 401 Unauthorized');
```

```
    echo 'Text to send if user hits Cancel button';
```

```
    exit;
```

```
while($_SERVER['PHP_AUTH_USER'] != $user && $_SERVER['PHP_AUTH_PW'] != $pass){
```

```
    httpauth();
```

```
>
```

```
!doctype html public "-//w3c//dtd html 3.2//en">
```

```
html>
```

```
head>
```

```
title>Check Info</title>
```

```
meta name="GENERATOR" content="Arachnophilia 4.0">
```

```
meta name="FORMATTER" content="Arachnophilia 4.0">
```

```

<style type="text/css">
<!--
.style1 {
    color: #FFFFFF;
    font-weight: bold;
}
body {
    background-color: #E8F9DB;
}
.style2 {color: #666666;
    font-weight: bold;
    font-size: 14px;
}
-->
</style>
<meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1"></head>

<body text="#000000" link="#0000ff" vlink="#800080" alink="#ff0000">
<center>
<p>&nbsp;</p>
<p>&nbsp;</p>
<table width="100%" border="0">
<tr>
<td width="18%">&nbsp;</td>
<td width="66%" bgcolor="#FFF0EC"></td>
<td width="16%">&nbsp;</td>
</tr>
<tr>

```

```

<td>&nbsp;</td>

<td bgcolor="#FFFEEC"><table width="321" height="77" border="1" align="center" cellpadding="0"
cellspacing="0" bordercolor="#C30000" id="table14">

<tr>

<td width="317" height="21" background="img/regbg3.png">&nbsp;</td>

</tr>

<tr>

<td valign="top"><form name="form1" method="post" action="list2.php">

<table width="297" border="0" cellspacing="0" cellpadding="0">

<tr>

<td width="200"><div align="right" class="style2">Dr Remark </div></td>

<td width="10">&nbsp;</td>

<td width="390"><label>

<input type="text" name="id" id="id">

<input type="submit" name="button" id="button" value="Check">

</label></td>

</tr>

</table>

</form></td>

</tr>

</table>

<table border='0' width='71%' cellspacing='0' cellpadding='0' align=center>

</table> </td>

<td>&nbsp;</td>

</tr>

<tr>

<td>&nbsp;</td>

<td height="15" valign="top" bordercolor="#C30000"><div align="center"><span class="style3"><a
href="index.php">home</a></span></div></td>

```

```
<td valign="top" bordercolor="#C30000"><div align="center"></div></td>
</tr>
</table>
</center>
```

```
<map name="Map"><area shape="rect" coords="41,18,263,53" href="#"><area shape="rect"
coords="37,58,269,85" href="../signup/signup2.php"></map>
```

```
<map name="Map2"><area shape="rect" coords="22,10,277,55" href="#"><area shape="rect"
coords="37,58,274,83" href="../signup/signup.php"></map>
```

```
</body>
```

```
</html>
```

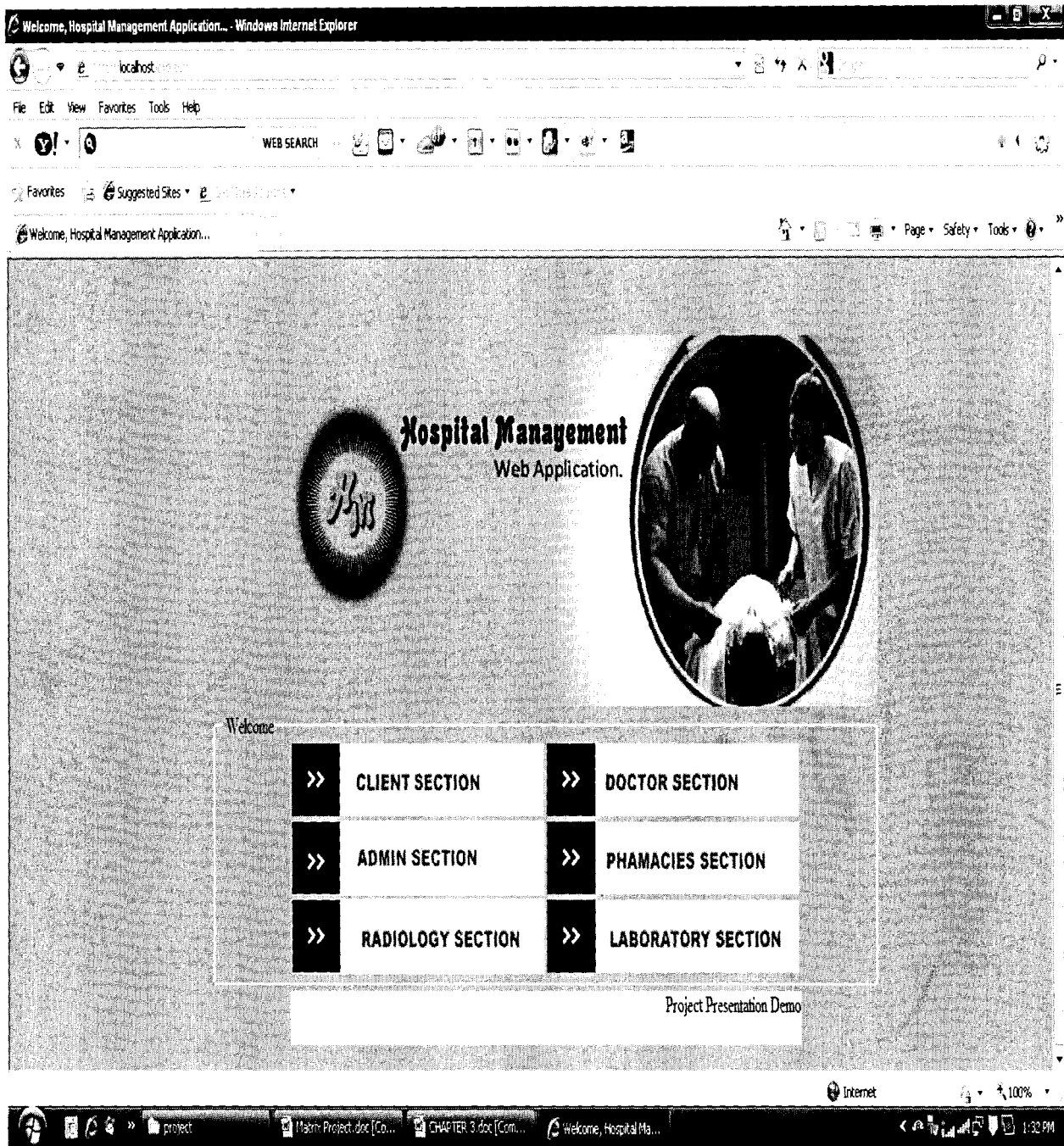


Figure 1: Login Page

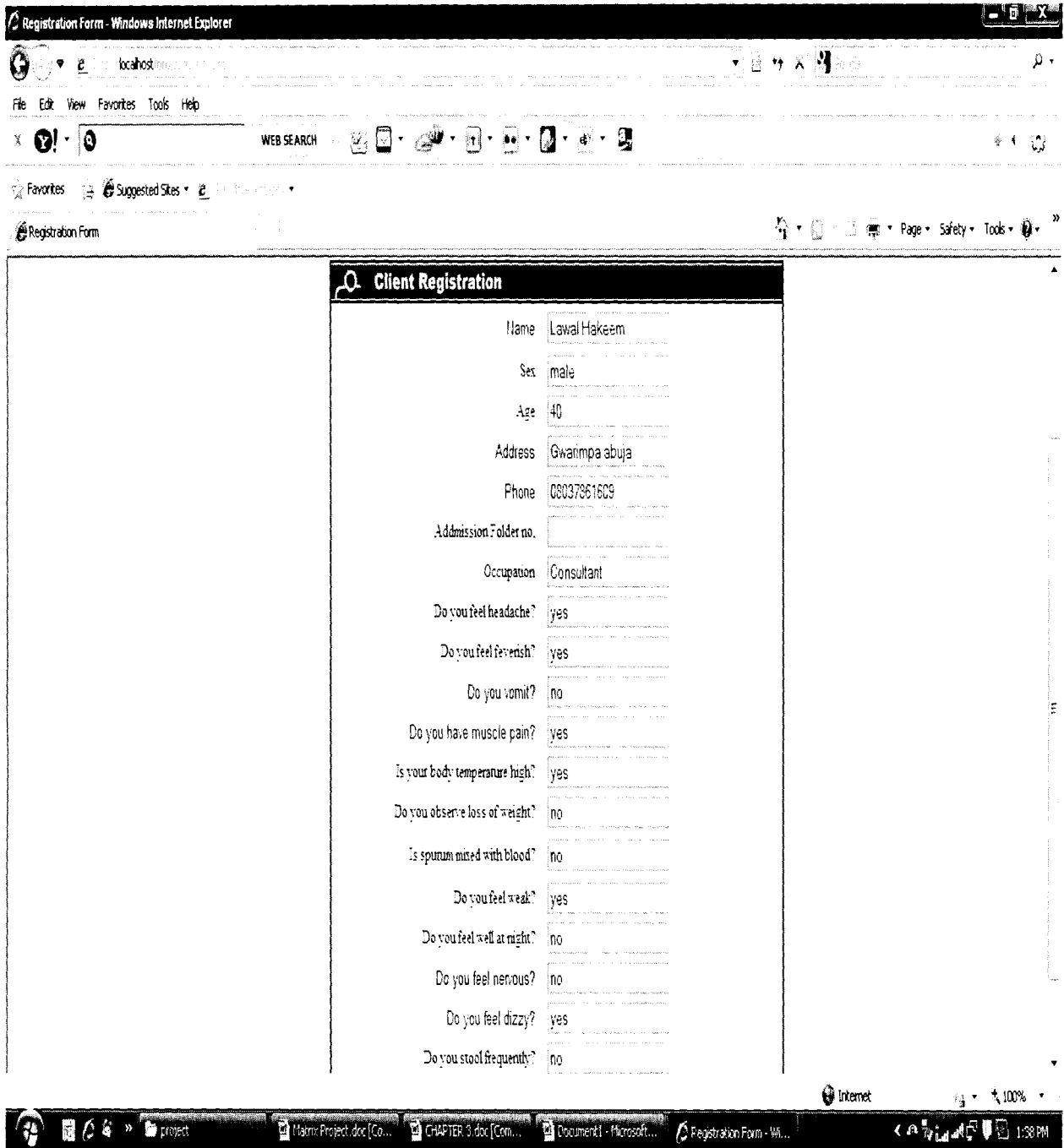


Figure 2 : Client Registration Page



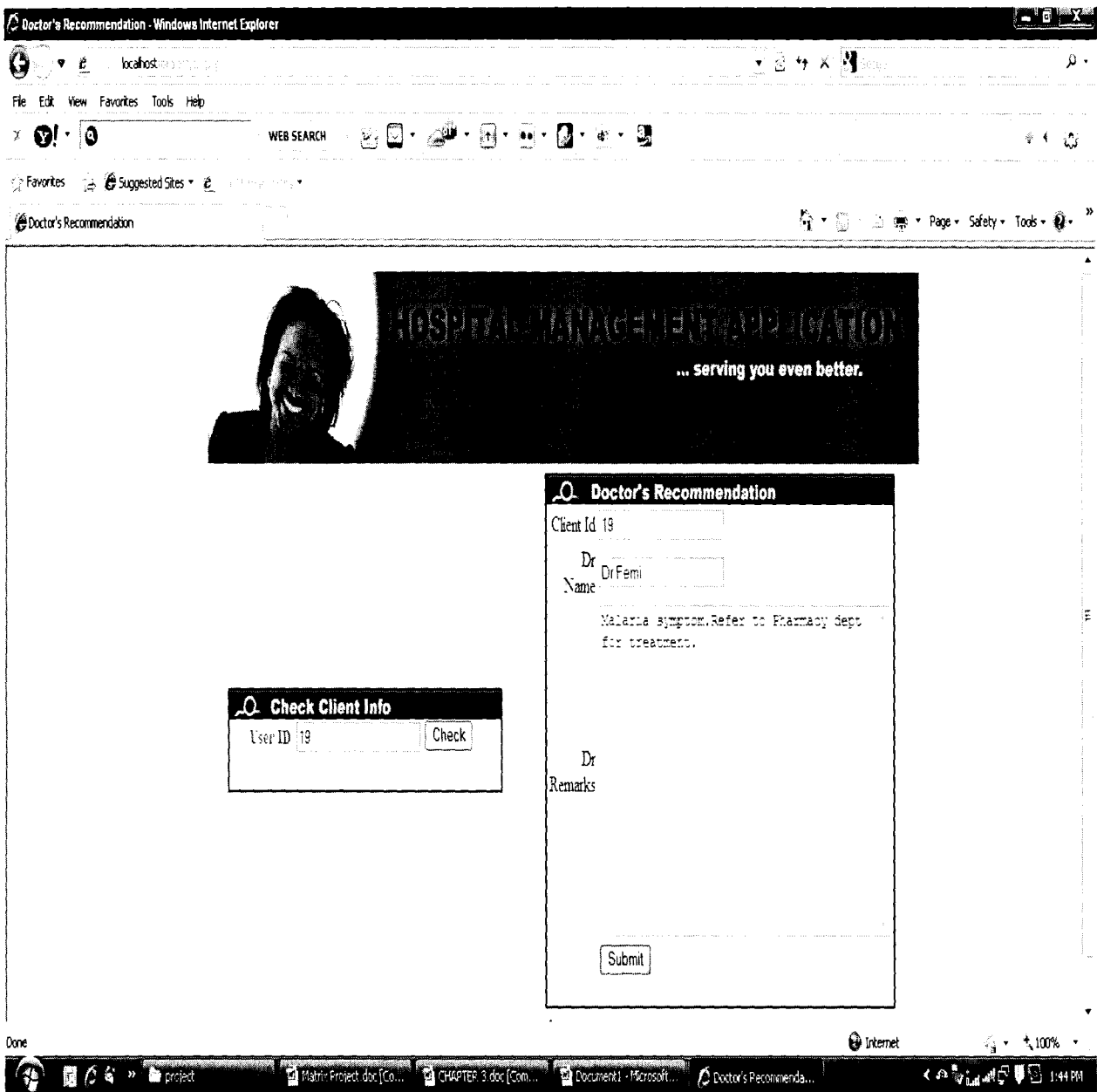


Figure 3 :Doctor's Remark Page

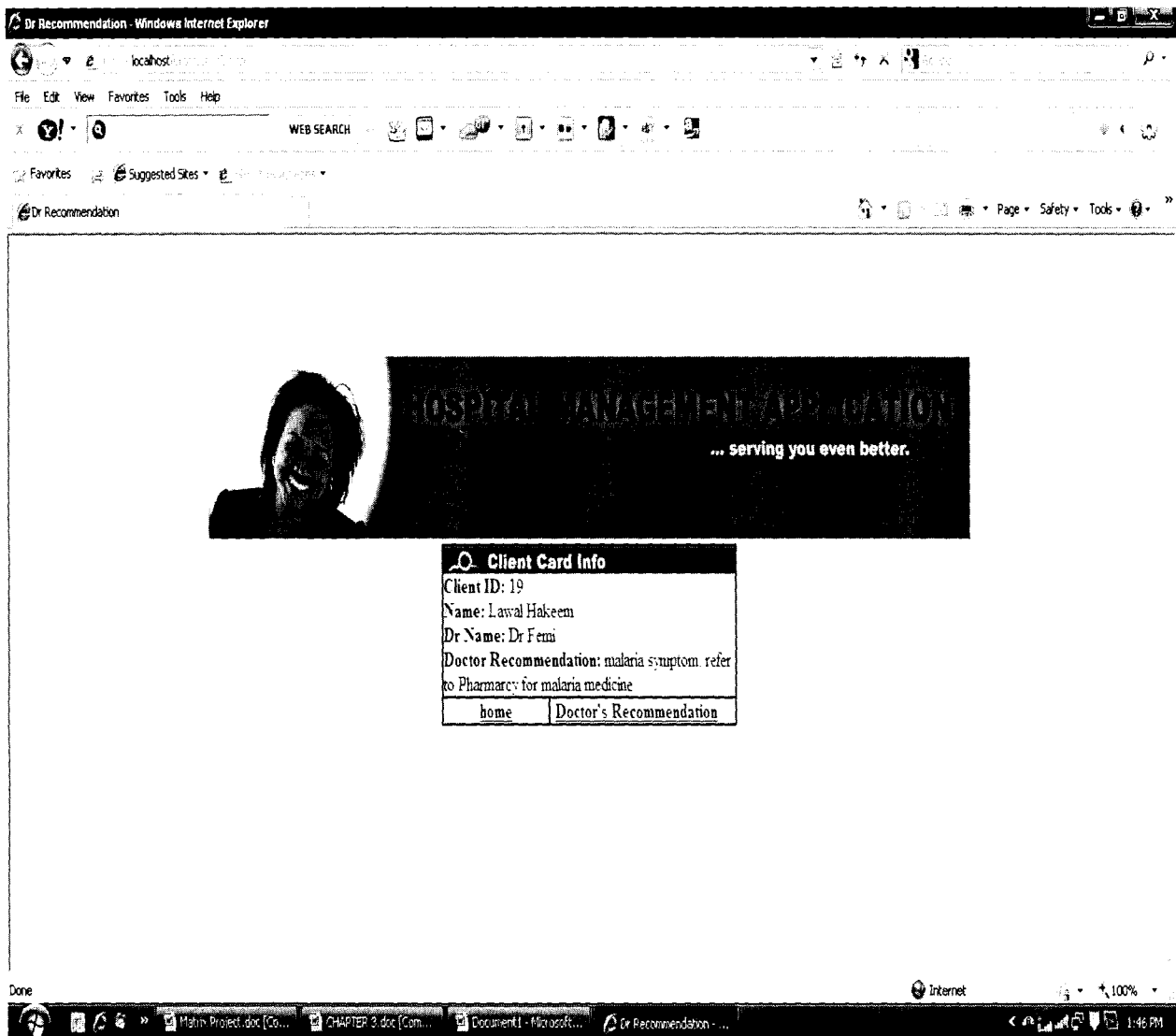


Figure 4 : Pharmacy Page

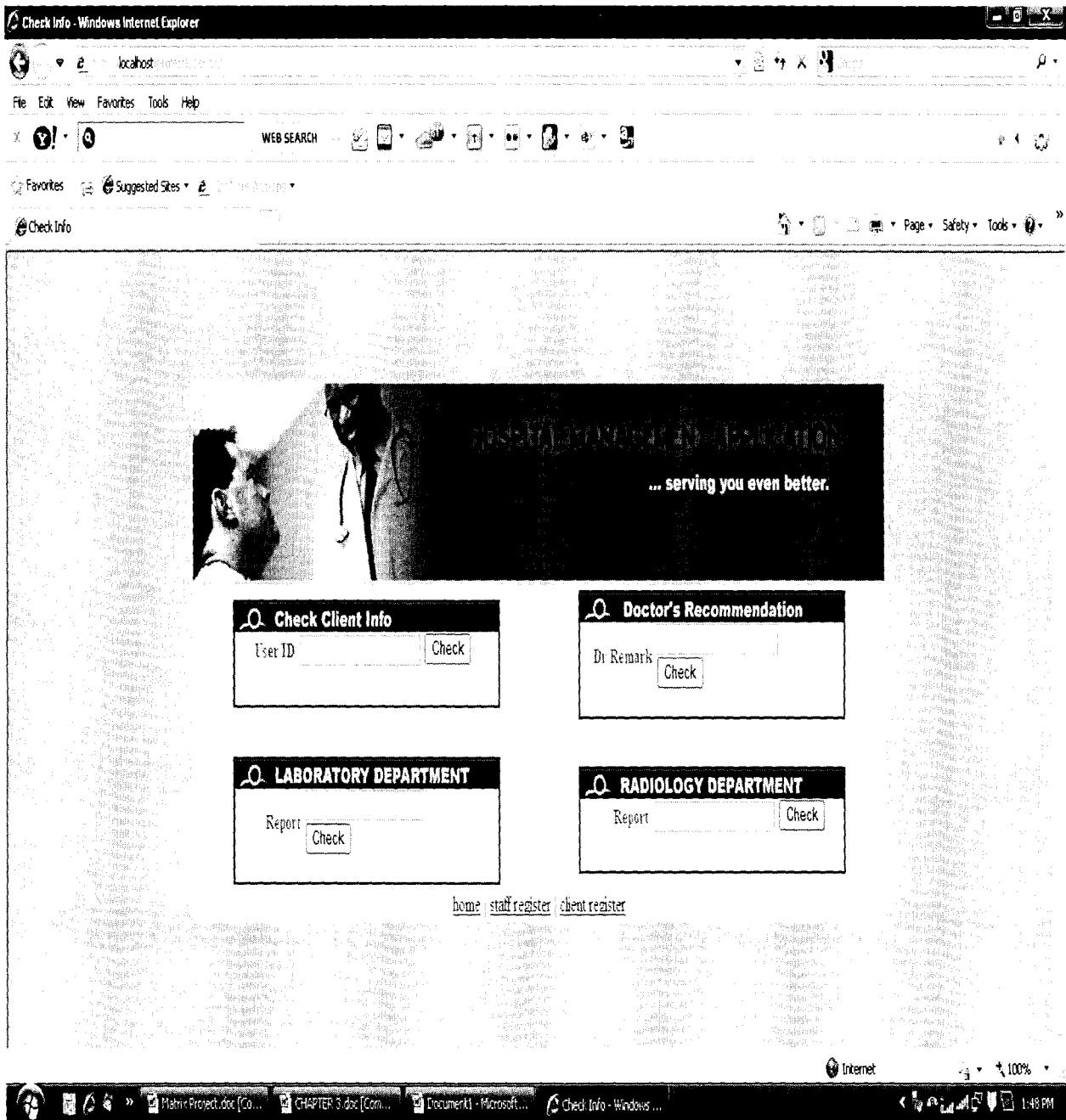


Figure 5 : Admin Page

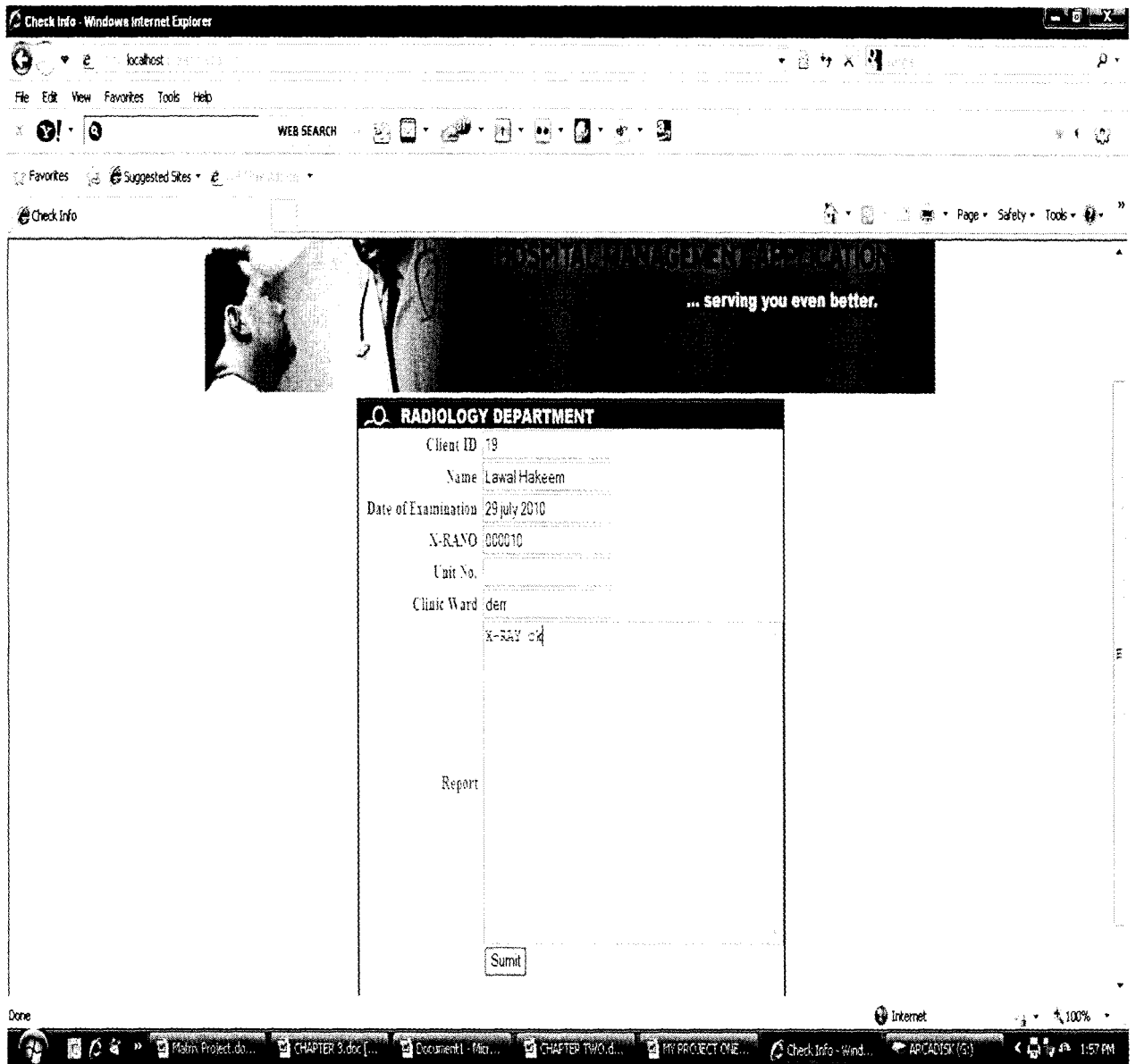


Figure 6 :Radiology Page

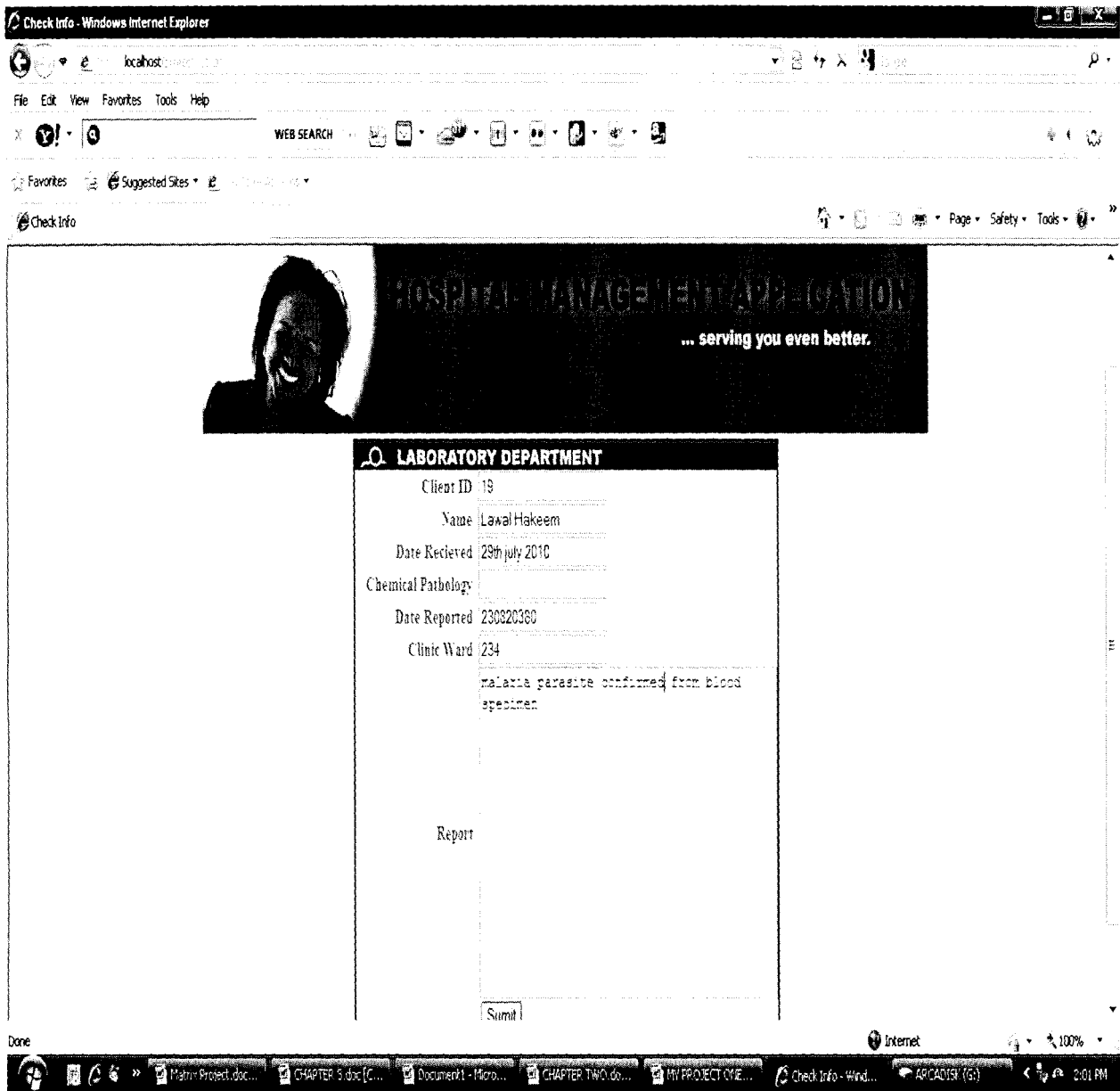


Figure 7 : Laboratory Page