

# *Health Centre Monitoring System*

## *Chettinad Health City*

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**Abstract**— The software is for automation of Health Centre monitoring. The software includes maintaining patient details, providing services, fixing appointments, providing and maintaining all kinds of tests for patients and billing report generator.

**Keywords**— *Automation Software;Health Centre monitoring;HTML/CSS;JS;PHP;MS SQL.*

### I. INTRODUCTION

Health Centre monitoring system is a process of implementing all the activities of the hospital in a computerized automated way to fasten the performance. It is a decision making support system which is use for simplifying the task of doctors. It is a system that checks a patient at initial level and diagnosis the diseases. It starts with, an initial registration where the user has to give in his/her name, age, sex, address, phone number and the issue/problem faced by the patient. The system collects the information about the patient by asking for the symptoms/issue faced by the patient, and fixes appointment with the corresponding doctor who specialise in it, followed by a few medicines, treatments if required. This system not only simplifies task of the doctors but also helps the patients by providing initial medicines for small diseases in emergency.

General users with basic computer skills can use this software. The users of this system could be doctors who can use this system for a referential purpose.

### II. DESCRIPTION

It is a multi-tier architecture, which provides a form that shows a list of issues. The user will select the issue. List of doctors according to the issue is given in the data. Whenever a patient creates his/her account, automatically patient file is created where all the details and history of the patient is mentioned. The patient can simply type their issue and the

name of medicines will be displayed. On the basis of the information a query is generated and the data base responses to that query.

The aim is to maintain the patient details, lab reports and to calculate the bill of the patient.

### III. PRODUCT PERSPECTIVE

The main purpose of our system is to make hospital task easy and is to develop software that replaces the manual hospital system into automated hospital management system.

Hospital Management System is a process of implementing all the activities of the hospital in a computerized automated way to fasten the performance. It can be used by the hospital staff to assign the doctors. It is an expert system or decision making support system which is use for simplifying the task of doctors. It starts with, an initial registration where the user has to give in his/her name, age, sex using which an account is created for the user , the user can there by access the system using his/her username and password. The system collects the information about the patient by asking for the issues/symptoms of the patient. This system not only simplifies task of the doctors but also helps the patients by providing initial medicines for small diseases in emergency.

#### IV. PRODUCT FUNCTION

The data represented in Hospital Management application will perform the following major function:

- The user has to register with his/her name to access this system.
- The patient has to select the issues/symptoms from a list of issues/symptoms provided.
- Appointment with the doctor is fixed.
- It specifies the type of doctor that the patient has to consult.
- Login Capabilities: User can login using his username and password.
- This software will help to calculate the bill much quicker and simpler way. This enables the organization to keep the information in efficient and systematic way.

#### V. PRODUCT SCOPE AND OBJECTIVES

- This system provides the facility of fixing appointment with the doctor of concerned medical field according to the issue/symptom faced by the patient.
- The system will also recommend a doctor the patient can consult from time to time.
- The system provides logon facility to the user.
- This facility is available 24x7 except when the system is being updated or modified.
- The system will also keep a record of the disease history that the patient has logged in.

#### VI. CHARACTERISTICS

- It is objective.
- It starts with an initial registration where the user has to give in his/her name, age, sex using which an account is created for the user.
- The user can there by access the system using his/her username and password.
- The system collects the information about the patient by asking for the issues/symptoms of the patient.
- Appointment with the doctor is fixed.
- General users with basic computer skills can use this software.
- The system cannot be relied upon completely but we have to try to attain maximum reliability.
- The information provided in the database and by the user should be correct.

#### VII. CONSTRAINTS

- All the information about the diseases has to be stored in the database.
- Only a limited number of issues can be entered by the user.
- Information is available only for limited diseases.
- A user can view only his account.
- Any update regarding the patient's information from the hospital is to be recorded to have updated and correct values.
- References to external sources may be done if needed.

#### VIII. ASSUMPTIONS AND DEPENDENCIES

- User has basic knowledge of computers.
- User should have sufficient knowledge of English since the system interface will be in English.
- The user is assumed to give system correct information about his details and also about the symptoms.
- The system will have simple and easy to use interfaces.
- Provides accurate data.
- All the data entered will be correct and up-to-date.

#### IX. PRODUCT AND ACTIVITIES

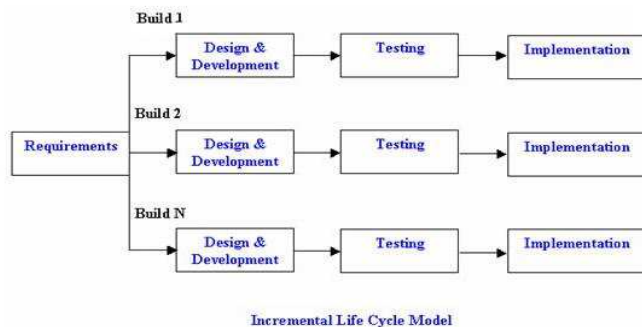
- The project is a website with multiple pages, for example there is a new user page, an existing user page, contact us, about us, fix appointments, tests and bills.
- The user has to register with his/her name to access this system.
- The patient has to select the issues/symptoms from a list of issues/symptoms provided.
- Appointment with the doctor is fixed.
- Login Capabilities: User can login using his username and password.
- This software will help to calculate the bill much quicker and simpler way. This enables the organization to keep the information in efficient and systematic way.

#### X. PROCESS MODEL USED

The process model used for our project is incremental. The whole requirement is divided into various builds. Multiple development cycles take place making life cycle a 'multi-waterfall' cycle.

Cycles are divided into smaller, more easily managed modules. Each module passes through the requirements, design, implementation and testing phase.

Measurement and others are deliberate, using specifications that anticipate your paper as one part of the entire proceedings, and not as an independent document. Please do not revise any of the current designations.



## XI. SPECIFIC REQUIREMENTS

### 1 Functionality:

- The user registers to use the system.
- It specifies the type of doctor that the patient has to consult.
- Logon Capabilities: User can login using his username and password.

### 2 Usability:

- The interface is simple and easy to use.
- System is user friendly, self-explanatory and also it is provided with a help guide.
- This system can be used by the doctors, hospital staff as well as the patients.

### 3 Reliability:

- The system cannot be relied upon completely but we have to try to attain maximum reliability.
- Reliability will also be higher since we try to attain maximum accuracy.
- Immediate retrieval of information.
- Maintain proper and updated database to improve reliability.

### 4 Accuracy

- The information provided in the database and by the user should be correct.
- All operations will be done correctly to increase the level of accuracy.
- We can also refer to external sources for higher accuracy.

## 5 Performance

- Speed: The system should be made as fast as possible to reduce response time.
- Throughput: The throughput should be as high as possible. We should be able to attain maximum output in minimum time.
- Capacity: We should try to make it accessible to maximum users at a time.
- Resource Utilization: Resources are modified according to user requirements.

## 6 Supportability:

- Compatibility: The browsers should be compatible with the system.
- Security: The system has to be secure from attacks.
- Robust: The system should be tough and not prone to breakdowns and in case of breakdown should be stabilized soon.
- Maintenance: The administrators maintain the system as per the maintenance contract.

## XII. DESIGN CONSTRAINTS

Software Language used: This software package is developed using html/css for front end along with the concept of angular js and php, MS SQL as the back end.

## XIII. BENEFITS

1) **Transparency:** -The system will provide transparency. All requisite details would be readily available on computer.

2) **Integration:** - The important function of the office would be integrated through information interchange. The integration would lead to effective policy making planning and control.

3) **Better monitoring and control:** - The hospital staff would be able to devote more time in planning, monitoring and control. This would lead to better follow up and disposal of cases since required information would be available online and on time.

4) **Improved Efficiency:** - Another important intangible benefit of would be improved efficiency by way of systematic record keeping and timely generation of information and analysis.

5) **Optimum Utilization of Resources:** - Manpower would now be utilized optimally and in the right direction. Other resources of the corporation would also be utilized in better way.

#### XIV. GOALS OF THE PROPOSED SYSTEMS

**1. Planned approach towards working:-**The working in the organization will be well planned and organized. The data will be stored properly in data stores, which will help in retrieval of information as well as its storage.

**2. Accuracy:** - The level of accuracy in the proposed system will be higher. All operation would be done correctly and it ensures that whatever information is coming from the centre is accurate.

**3. Reliability:** - The reliability of the proposed system will be high due to the above stated reasons. The reason for the increased reliability of the system is that now there would be proper storage or information.

**4. No redundancy:** - In the proposed system utmost care would be that no information is repeated anywhere, in storage or otherwise. This would assure economic use of storage space and consistency in the data stored.

**5. Immediate Retrieval of Information:** -The main objective of proposed system is to provide for a quick and efficient retrieval of information. Any type of information would be available whenever the user requires.

**6. Immediate Storage of Information:** -In manual system there are many problems to store the largest amount of information.

**7. Economic:** -The system should be easy to operate and should be such that it can be developed within a short period of time and fit in the limited budget of the user.

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