

CLINIC MANAGEMENT SYSTEM

A Project Work

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IN

CSE

Submitted by:

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DECLARATION

I, '**Amit Kumar**', student of '**Bachelor of Engineering in CSE**', session:**2020**, Department of Computer Science and Engineering, Apex Institute of Technology, Chandigarh University, Punjab, hereby declare that the work presented in this Project Work entitled '**Clinic Management System**' is the outcome of our own bona fide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics. It contains no material previously published or written by another person nor material which has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

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List of Symbols

<i>Symbol</i>	<i>Description</i>
<i>DFD</i>	<i>Data Flow Diagram</i>
<i>IDE</i>	<i>Integrated Development Environment</i> (C++: -Platform Independent and Object-oriented programming language)
<i>SRS</i>	<i>Software Requirement Specifications</i>

1 INTRODUCTION

1.1 Problem Definition

As we are all well aware of the issues people face while going for a treatment in India despite being at a prestigious position in the medical field and during this desperate time of corona it is no doubt people are completely dependent on hospitals and clinics for treatment. So, the question arises why getting treatment from hospital and clinic near your house is so difficult here, and there are two main reasons for this besides other issues, first poor infrastructure and second one lack of concern or poor management. So, by the means of this project on clinic management system we have tried our best to get rid of the problems faced in the management system in hospitals and clinic which will not only help in easing the management part for the clinic but also the patient to get quick diagnosis in case of emergency and otherwise so that more time can be spent on treatment rather than wasting it on availing the treatment.

1.2 Project Overview/Specifications

Clinic Management is a simple C++ project. Talking about the features of the project, this project allows the users to take the details of the patient.

The user can add patient records, their prescriptions, view history of patient, update the patient details, unique way of identifying patient using their Aadhar card, easy to take doctor appointment. Also, this project is easy to operate and understood by the users.

1.3 Hardware Requirement

[1] 1GB RAM

[2] 24MB Storage

[3] Processor: Intel Pentium Dual Core or AMD equivalent

1.4 Software Requirement

C++ compiler

2 LITERATURE REVIEW

2.1 Existing clinic management system

Before this, the management of the clinic is done manually. For the private hospital and clinic, usually they are using digital system to record the patient information and other information that related to the clinic. The system is developed due to the problems that exist when using the manual system. There are some problems arise especially for the data retrieval. There are many systems for clinic management system, but it does not meet the local user requirement. come to the clinic before. Data inconsistency, data mix with other data and problem regarding reporting is the main problem that the user is facing. Clinic has a problem of loss of patient data. There is also redundant patient data if the patient not sure whether they have Currently, the inventory for the medicine is done manually. The system use before has caused a lot of problems to the user. Due to that, using manual system seems to be the only solutions in managing the daily works. The management of the clinic also have to takes times to check for the medicine inventory.

2.2 Proposed clinic management system

Due to that, this system is developed to overcome the problems. Clinic Management System is C++ programming-based project. The main objective is to develop the program that covers all the aspects of management and operations of clinics. This is a complete package one needs for a clinic to deal with all the day to day operations taking place. This program of Clinic Management System Project keeps all records and transaction details for a particular clinic. Clinic management system project is a software application in C++ programming language.

The Clinic management System is developed to decrease the work that is done manually at clinic centres.

2.3. Feasibility Study

As the overall scope of the feasibility study was to provide sufficient information to allow division to be made as to whether the clinic management system project should proceed and so, its relative priority in the context of the other existing clinic management system.

The feasibility study of this project had undergone through various steps which as describe as under

1. Identify the origin of the information at different level
2. Identify the expectation of user from computerized system.
3. Analyze the drawback of existing system.

2.1 Literature Review Summary

Table 2.1: Literature review summary

Year and citation	Purpose of study	Intermediate representation	Granularity Level	Patient Data entry requirements	Type of issues in old method	Program Features
2020	To make a computerized clinical data management system.	Using Dev C++ Output screen	Vast	Name Aadhar number Age Blood group Disease Symptoms Medicine	Easy destruction due to manually storing it in registers or paperback format due to termites or water. More time consumption while data entering or while accessing or finding the already existing data	The user can add patient records. Their prescriptions View history of patient. Update the patient details. Unique way of identifying patient using their Aadhar card. Easy to take doctor appointment.

3 PROBLEM FORMULATION

In today's era, the rush of patients in the hospital is very high, due to which it becomes very difficult for the hospital management to handle the patients. Like in the olden days, many hospitals still do their hospital work on paper, due to which they have to face many problems like storage of documents, finding the files, renewal of the staff data and many more. Therefore, it becomes difficult for the hospital to extract the old information like medical treatment history of its patients, they find it difficult to extract the file of one patient out of thousands of patients. The higher authority of the hospital finds it difficult to manage its staff data.

There are many difficulties faced by the management to manage the staff in manual way. Most of the hospital staff check their roster in the morning and then they lie down for their work due to which people get upset. Patients are not treated on time. To get treatment, patients have to wait in long lines and wait for their turn, which causes a lot of trouble to them. People have trouble in giving money because most of the people come to the hospital in emergency and they have cards and online payment methods instead of cash to pay the fees of hospital. There are many problems faced by the patients, staff and management in manual way.

4 RESEARCH OBJECTIVES

The proposed research is aimed to carry out work leading to the development of an approach for smooth and easy management of clinic and hospital data. The proposed aim will be achieved by dividing the work into following objectives:

1. To understand and explore various types of issues related to data management including data storage and its accessibility.
2. To study and analyze various data management techniques that are suitable for smoothen the process data management.
3. To design and develop the technique for data management for clinic and hospital by.
4. To enhance the process of data accessibility and storage.

5 METHODOLOGY

The following methodology will be followed to achieve the objectives defined for proposed project work:

1. Detailed study of data management issues, their types and impact of these issues on the overall functioning of a Clinic will be done.
2. Installation of this new computerized data management system and study on experience on existing approaches of data management using paper pen method or by using a ledger to keep records will be done. Relative pros and cons will be identified.
3. Different features in this new method of data management will be included keeping in mind of the main objective i.e., to get rid of old and slow data management.
4. An approach will be developed for enhanced data storage and easy access to store the data.
5. Various features will be included to ensure the enhanced and easy data management.
6. Comparison of new implemented approach with exiting approaches will be done.



Figure 1.1: Zero Level diagram of (DFD) data flow diagram of clinic management system.

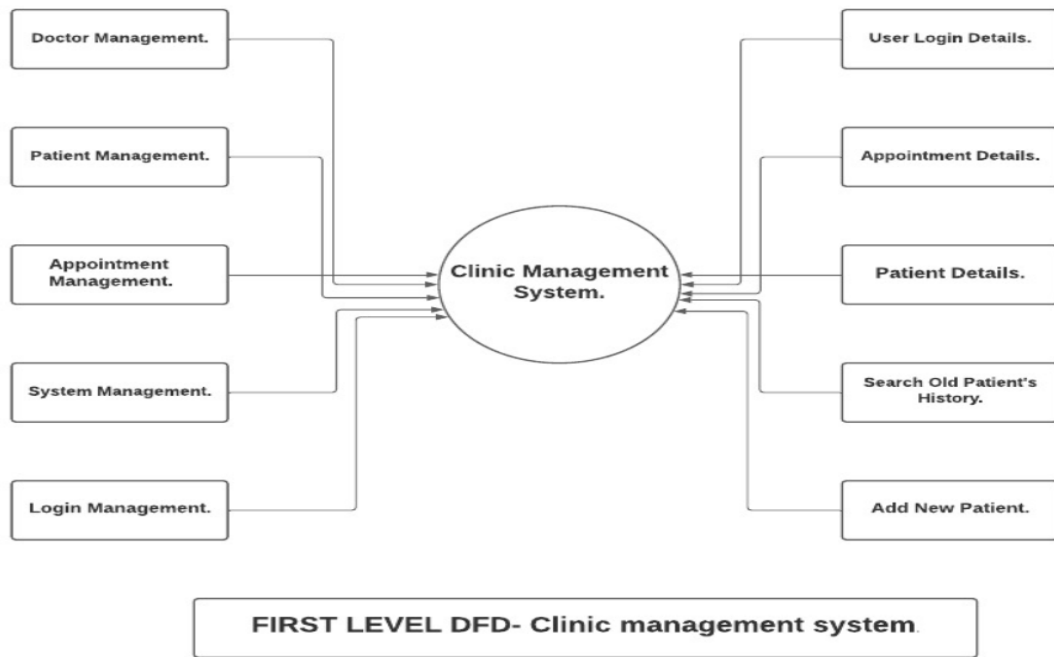


Figure 1.2: First Level diagram of (DFD)data flow diagram of clinic management system.

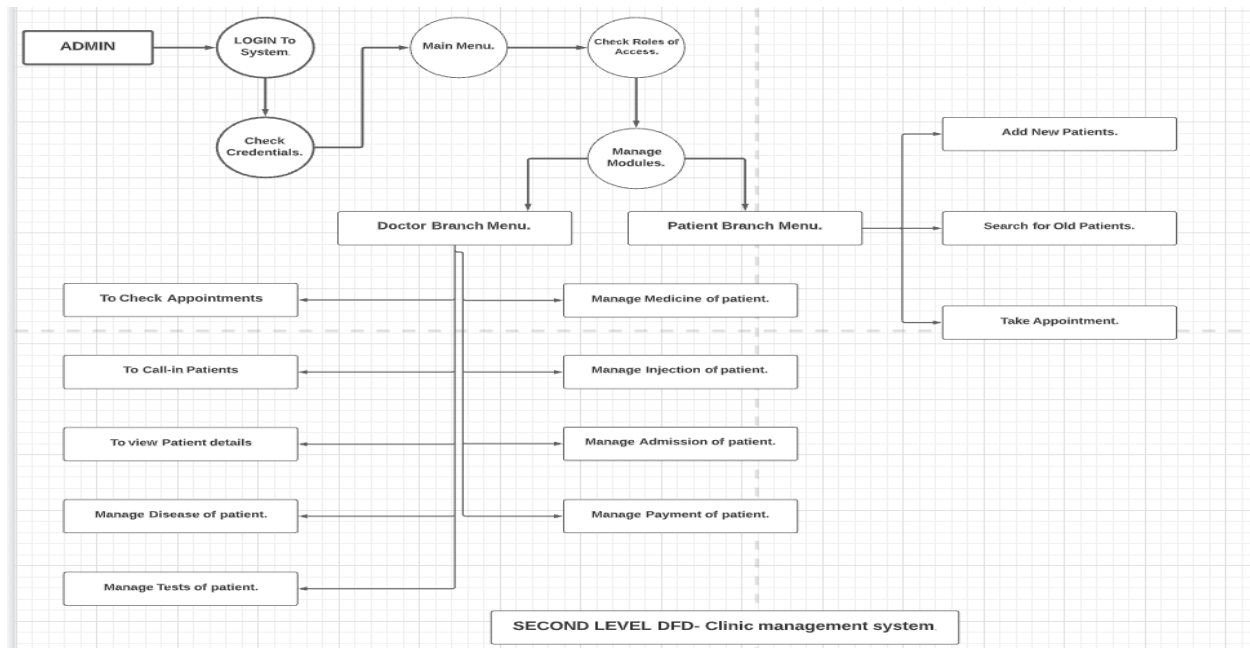


Figure 1.3: Second Level diagram of (DFD)data flow diagram of clinic management system.

6 RESULTS AND DISCUSSION

The project Clinic Management System is for computerizing the working in a clinic or hospital. It is a great improvement over the manual system. The computerization of the system has speed up the process. In the current system, the front office managing is very slow. The clinic managing system was thoroughly checked and tested with dummy data and thus is found to be very reliable.

The program takes care of all the requirements of an average clinic or hospital and is capable to provide easy and effective storage of information related to patients that come up to the clinic.

It generates test reports and also provides the facility for searching the details of the patient. It also provides billing facility in cash or card on the basis of patient's status. The program also provides the facility of doctor's appointment requirement.

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