

# Medical Report Generation And Analysis

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**Abstract-** *The Medical Report Generation and Analysis project is to develop software that is user-friendly, simple, and fast. It deals with the collection of Patient information, Basic details, Medical test details. The main function of the system is to register and store patient details and doctor details and retrieves this information and when required, and also manipulate these details meaningfully. System input contains patient details, diagnosis details, while system output is to get these details onto the report screen. The Medical Report Generation and Analysis System can be entered using a username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The data are well protected for personal use and make the data processing very fast. The medical report is generated with all the details of the patient and the values of the patient will be fitted in the template and the report will be generated automatically. The report can be downloaded by the patient for their reference or consultancy. Then the data of the patients is collected and the analysis for the data is performed. After generating report, based on the data of the report processing is performed and analysis is done for values and heart disease prediction is done using machine learning – Logistic Regression algorithm.*

**Keywords-** Medical Report, Administrator, Receptionist.

## I. INTRODUCTION

The project Medical report generation and analysis system include registration of patients, and their details into the system, and also computerized billing in the pharmacy, and labs. Medical report generation and analysis have greatly changed over the last decades. Business, Modern technologies, mobile apps, and knowledge of healthcare are key elements for the implementation of report generation and analysis projects. The project includes registration of patients, storing their details into the system by using the MySQL database. The software has the facility to give a unique id for every patient and stores the details of every patient and user manual. Admin can view the availability of doctors and details of the patient using the report username. The concept of automation of the administration and management of the hospital is now being implemented in India also, with large hospitals having automated their existing system.

## II. LITERATURE SURVEY

**Devon M. Herrick, Linda Gorman, John C. Goodman (2010):** "Health Information Technology: Benefits and Problems", National Centre for Policy Analysis. [1] This book represents the involvement of information technology in all healthcare-related sectors in the United States.

**G. Maheshwari, E. Grace Mary Kanaga (2012):** "Literature Review on Patient Scheduling Techniques", International Journal on Computer Science and Engineering (IJCSSE). [2] This paper researcher describes the challenges of patient scheduling and patient scheduling techniques. They provide an option of patient scheduling with Multi-agent System; Distributed Computing; Coordination.

**Dr. Sandesh Kumar Sharma, Dr. Sudhinder Singh Chowhan (2013):** "Patient Survey to Measure the Quality of Care Provided by Health care Providers in OPD of Tertiary Care Hospitals", Indian journal of research. [3] This research paper investigated a set of dimensions that contribute to effective hospital management and sequential hospital operations. The study established reliable and valid scales and dimensions that affect hospital effectiveness and identified the gap between the optimal and actual performance perceived by outpatient visits.

**Yeo Symey, Suresh Sankaranarayanan, Siti Nurafifah Binti Sait (2013):** "Application of Smart Technologies for Mobile Patient Appointment System", International Journal of Advanced Trends in Computer Science and Engineering. [4] This describes the patient management system. It is an android application that reduces the patient waiting time towards appointments and collection of patient data. It describes the general patient flow through the outpatient services up to the moment of consultation.

**Aswar Nandkeshav R, Kale Kalpana M, Rewatkar Mangesh P, Jain Akanksha, Barure Balaji S (2014):** "Patients' Waiting Time and Their Satisfaction of Health Care Services Provided at Outpatient Department of Government Medical College, Nanded (Maharashtra, India)", International Journal of Health Sciences and Research. This describes the improvement of patient satisfaction towards health care

services by reducing their waiting time, attending the patient in time and sympathetic approach will create a positive image of the hospital in the mind of people and also will help hospital image building in the community.

**Irin Sherly. S, Mahalakshmi A, Menaka. D, Sujatha. R (2016):** "Online Appointment Reservation and Scheduling for Healthcare- A Detailed Study", International Journal of Innovative Research in Computer and Communication Engineering. This research represents online Appointment reservation and scheduling systems in healthcare that are used to maintain and manage access to the hospitals. This system allows individuals to securely and safely make their appointment reservations online.

The Existing system manual process of maintaining a patient record, maintain doctor scheduling information, day-to-day activities and billing are tough and hence a system or application which can complete these tasks is easy to use is what we can achieve by this application.

Hospitals currently use a manual system for the management and maintenance of critical information. The current system requires numerous paper forms, with data stores spread throughout the hospital infrastructure. Often information is incomplete or does not follow management standards. The form is often lost in transit between departments requiring a comprehensive auditing process to ensure that no vital information is lost. Multiple copies of the same information exist in the hospital and may lead to inconsistencies in data in various data stores.

**III. REPORT GENERATION**

The Medical Report Generation and Analysis are designed for any hospital to replace the existing manual, paper-based system.

The new system is to control the following information:

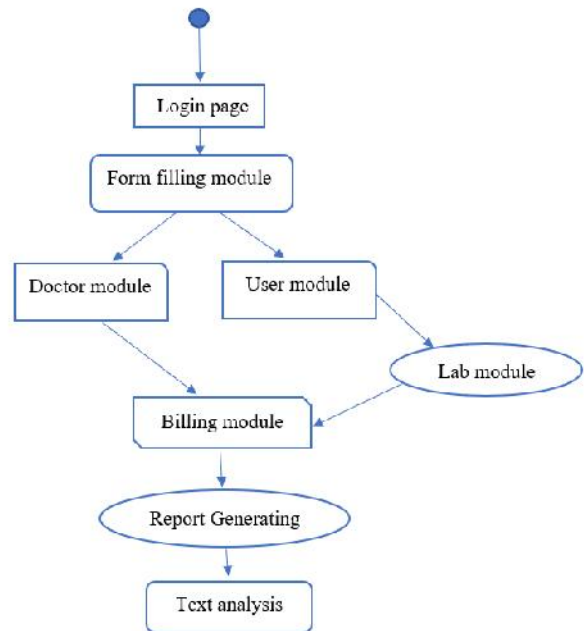
- Patient Information
- Medical test
- Billing method
- Lab procedure

These services are to be provided in an efficient, cost-effective manner, intending to reduce the time and resources currently required for tasks.

- Basic diagram
- Purpose of the system
- Advantages

- Scope of the project

**Basic diagram**



**Purpose of the system**

The main purpose of the project is to describe in a precise manner all the capabilities that will be provided by the software applications "Medical report generation and analysis system" these are to be exposed to the development, testing team, and end-users of the software. One of the solutions that we are going to discuss here to speed up the database response by using SQL Server database and to reduce the time complexity by using a multi-user environment reduces burden with effortless maintenance.

**Advantages**

- The following are the disadvantages of the Existing system
- Easy to maintain the information in the database wherein all data is saved easily via the application
- Managing historical patient data is made easy and less complex with less effort.
- Report generation will be easy and less time-consuming.
- You can download the report at any time.

**Scope of the project**

The system will be used in any hospital, clinic, medical, dispensary to get information from the patients and

then storing that data for future usage. The current system used is traditionally based. It is too slow and cannot provide an updated list of patients within a reasonable time frame. This system intends to reduce overtime pay and increase the number of patients that can be treated accurately. Requirement statements in this document are both functional and non-functional.

#### IV. FUTURE ENHANCEMENTS

This application avoids the manual works and the problems concern with it. It is an easy way to obtain information regarding the various services that are present in our system.

As software is used, the customer/user will recognize additional functions that will provide benefit. Perceptive maintenance extends the software beyond its original function requirements.

#### V. CONCLUSION

A Medical Report Generation and analysis system is a computerized patient report generating system. The main purpose of the system is to reduce the burden of doctors and nurses and improve patient records management, our system integrates clinic, scheduling, medical records, and data reports that enable medical to provide patients with quality care. In a conclusion, the proposed system will bring benefits to doctors, admin, receptionists, and nurses. Much workloads and planning can be scheduled more effectively. It aims to assist users in achieving their respective goals and objectives.

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