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Hospital Maintenance System

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ABSTRACT

Every hospital needs an online system whereby it can accommodate the everyday hospital tasks comfortably and maintain smooth flow of operations. There should be a system where the patients are categorized under insurance policy and non policy holders and the system helps the hospital management to claim the bills from concerned insurance companies. All these needs and much more are fulfilled in Hospital Maintenance System. Hospital Maintenance System is useful to record patient's details. It also records the inpatient details and outpatient details and arranges the appointment of doctors. Hospital Maintenance System also provides the management reports like schedules, appointments of doctors, inpatients, insurances and discharges. It also is used to generate bills dynamically for the discharged patients etc. The administrative user can access all the details regarding the patients, doctors, accountants, and also manipulate them accordingly. He can also create new users and change their passwords. He can add/delete information related to inpatients, outpatients, rooms availability, billing, management reports and insurance information.

The doctors can view his own appointments and information of inpatients and outpatients for any day. An accountant can add the information related to patient insurances and view all the reports. He can view the details of inpatients, outpatients and discharged patient's information. He also collects the bill amount from the patient and enters it into the system. Hospital Maintenance System thus ensures centralized operation of the hospital management tasks and characterizes user friendliness and time saving.

Keywords : Hospital, Doctors, Accountant, Schedules, Appointments, Discharged Patients, Insurance Policy and Non-Policy Holders.

I. INTRODUCTION

Every hospital needs an online system where it can accommodate the everyday hospital tasks comfortably and avoid any confusion to the doctors regarding their work. There should be a system where the patients are categorized under insurance policy and non policy holders and the system helps the hospital management to claim the bills from concerned insurance companies. All these needs and much more are fulfilled in this Hospital Maintenance System.

Disadvantages:

• This system is useful to record patient's details.

• It also records the inpatient details and outpatient details and arranges the appointment of doctors.

• It provides the management reports like schedules, appointments of doctors, inpatients, insurances and discharges.

• It also helps in generating the bills dynamically.

Current system consists of the one in which users are maintaining books to store the information like Patients details, Doctors details, Available rooms and insurance facilities, as well as employee details, which is very difficult to maintain historical data also regular investments need to purchase stationary every year.

The following are the disadvantages of current system

1. Difficulty in the maintenance of these records
2. More time and effort needed in generating reports
3. Tedious to manage historical data
4. Large amount of confliction of data

II. PROPOSED SYSTEM

Proposed system is a software application that keeps the data in a centralized way which is available to all the users simultaneously. Easy management of historical data in database. No specific training is required for the employees to use this application. They can easily use this tool that increases the performance as the time and effort spent decreases. Data centralization helps in easy fixing of appointment between doctor and patient.

Advantages:

- Easy management of all the daily admissions of patients and appointments of the doctor.
- Generation of required reports effortlessly.
- Managing all the historic data in a secure manner.
- Centralized database helps in avoiding conflicts.
- Easy to use GUI that does not require specific training.

A Functional Requirement (FR) is a description of the service that the software must offer. It describes a software system or its component. A function is nothing but inputs to the software system, its behavior, and outputs. It can be a calculation, data manipulation, business process, user interaction, or any other specific functionality which defines what function a system is likely to perform. Functional Requirements in Software Engineering are also called Functional Specification.

Admin

- Can login using username and password
- Can add new doctor, patient or insurance claims
- Can change passwords
- View the number of doctors, patients and their details
- Manage appointments for patients, room details and discharges
- Allot new rooms for inpatients
- Generate all kinds of management reports Doctor
- Doctor can login using username and password
- Changing of password
- Viewing the details of all the available doctors, patients, his personal appointments, rooms, discharges and insurance claims.
- Allot his/her own appointments

Accountant

- Can Login
- Can Change password
- Can view the details of patients, discharges, insurance claims and management reports
- Makes insurance claims

III. SYSTEM ARCHITECTURE

Project architecture represents number of components we are using as a part of our project and the flow of request processing i.e., what components in procession the request and in which order. An architecture description is a formal description is a formal description and representation of a system organized in a way that supports reasoning about the structure of the system. Architecture is of 2 types. They are

1. Software architecture
2. Technical architecture

3.1.1 Software Architecture

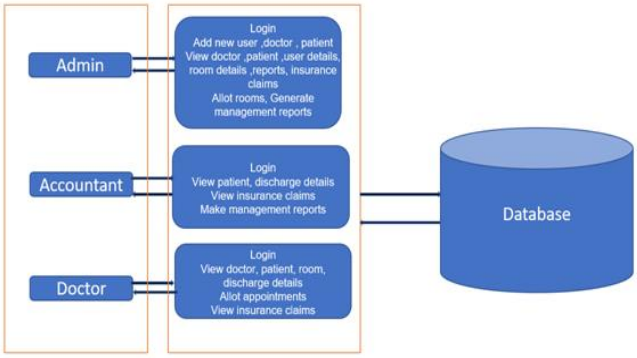

Fig 3.1 Software Architecture

The architecture of a system describes its major components, their relationships, and how they interact with each other. Software architecture and design includes several contributory factors such as Business strategy, quality attributes, human dynamics, design and IT environment.

Software Architecture typically refers to the bigger structures of a software system, and it deals with how multiple software processes cooperate to carry out their tasks. Software design refers to the smaller structures and it deals with the internal design of a single software process.

3.1.2 Technical Architecture

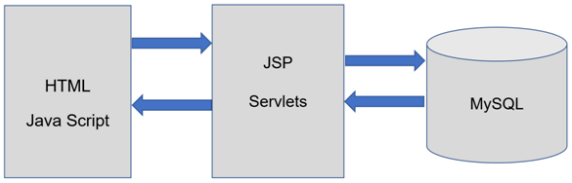

Fig 3.2 Technical Architecture

The technical architecture defines the technologies that are used to implement and support a Business Intelligence solution that fulfills the information and data architecture requirements. These technologies cover the entire BI life cycle of design, development, testing, deployment, maintenance, performance tuning, and user support.

IV. RESULTS

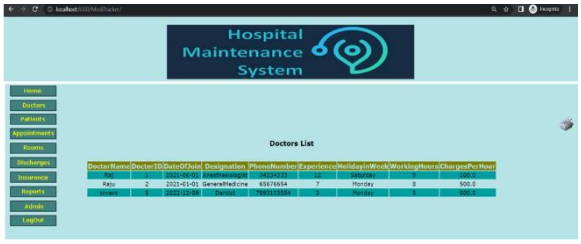

Fig 4.1 Doctors List

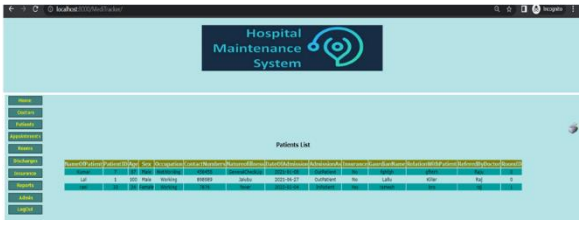

Fig 4.2 Patients List

Fig 4.3 Admission Form

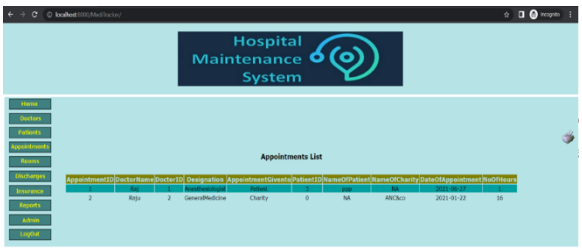

Fig 4.4 Appointments List

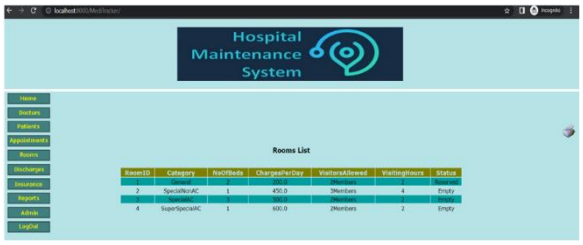

Fig 4.5 Rooms List

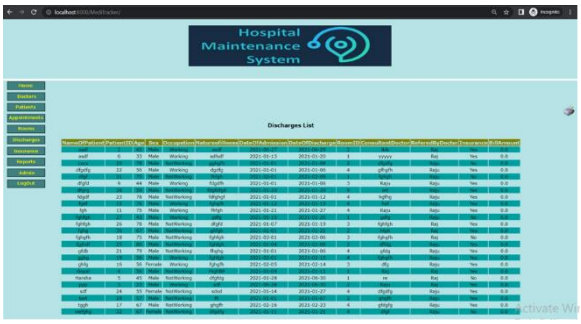

Fig 4.6 Discharges List

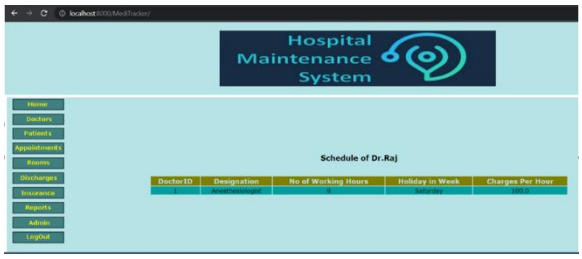

Fig 4.7 Schedules List

Fig 4.8 Appointments for each doctor

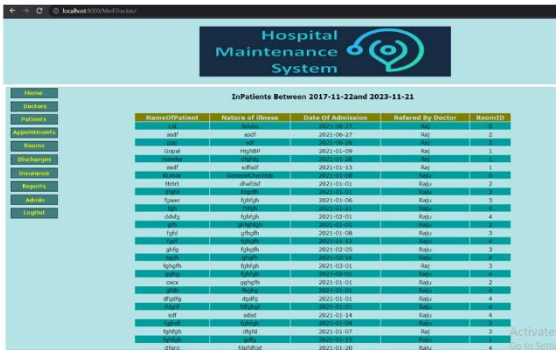

Fig 4.9 Inpatients List

Fig 4.10 Bill Details

V. CONCLUSION AND FUTURE SCOPE

The expected Hospital Maintenance System is that it is to be integrated with the already existing system in such a way that it ensures smooth operation of hospital management tasks in faster and effortless way. This system is expected to meet the requirements of the users and departments making the management of daily records and reports of hospital easy and centralized.

In future we can enhance the patients and the hospital to serve more quickly and efficiently. We can add any functionality based on requirement easily. We can enhance the easy access of all hospital information.

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