DISPENSARY MANAGEMENT SYSTEM

(SRS REPORT)

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DISPENSARY MANAGEMENT SYSTEM

1) INTRODUCTION:

There are a large number of patients visiting the dispensary of MNIT that include Students, Teaching staffs, Non-teaching staffs and the local workers too. The dispensary management system focuses on providing an improved, systematic, transparent system for the ease of the patients, medical personnels and the doctors too. “What if the patient could see that the concerned doctor is available or not?”, “What if the doctors could see the patient’s history in just one click?”, “What if the medical staff see the stock of medicine without physical counting?”. This system will be built on the web platform which will provide ease to all those problems.

1.1) PURPOSE:

The purpose of this project is to provide the patients with all the information they require in context to the dispensary (E.g. : availability of the doctors, availability of the ambulance etc.), to provide the doctors with all the medical history of the patient so that he could refer to the past illness before prescribing the medicine, to make the things easy for the medical staff to maintain the stocks of medicine etc. All these features will be accessible to the stakeholders on the web portal.

1.2) SCOPE:

- All the statistics of the patients, doctors, medicine requirements, medicines availability and stocks of the medicines can be analyzed easily using this management system.
- The patients can give their respective feedback which will help in making the required changes in the dispensary.
- The accessibility and the transparency of the system will increase by this system.

1.3) DEFINITION, ACRONYMS, ABBREVIATIONS:

SRS -> Software Requirement Specification
NODE JS -> platform independence
FIREBASE-> Structured query Language
JSON->Java Script Object Notation
DFD -> Data Flow Diagram
CFD -> Context Flow Diagram
ER -> Entity Relationship
IDE -> Integrated Development Environment

2) OVERALL DESCRIPTION:

2.1)Product Perspective:

The proposed Dispensary Management System web portal would be a software application designed to streamline the operations of a dispensary. The system would allow dispensary owners to manage their inventory, track sales, monitor patient information, and comply with regulatory requirements.

2.2)Software Requirement:

- **Frontend:**
  HTML, CSS

- **Backend:**
  NODE JS, FIREBASE

2.3)Hardware Requirements:

Any operating system (Android, Ios, Windows, Linux) will support it easily.

2.4.1) Functional Requirements:

R.1 : Register-

Description : First the user will have to register/sign up. There are four different types of users

(a) **The Dispensary Head/Administrator** : The admin has to provide details about the name of dispensary, admin Institute Id, password, address, phone number, email id.
(b) **Doctor & Medical Staff** : The doctor has to provide details about his/her name, Institute Id, password, address, phone number, email id, specialization.
(c) **Students** : The Student has to provide details about his/her name, Institute Id, password, address, phone number, email id, gender, dob, age (derived).
(d) **Teaching Staff** : The teaching Staff member has to provide details about his/her name, Institute Id(Family Id), password, address, phone number, email id, gender, dob, age (derived).
(e) **Non-Teaching Staff** : The Non-Teaching Staff member has to provide details about his/her name, Family Sub-Id, password, address, phone number, email id, gender, dob, age (derived).
(f) **Others** : The Other member has to provide details about his/her name, Auto Generated Id, password(last 4-digit-phone number), address, phone number, email id, gender, dob, age (derived).

R.1.1 : Sign up

- **Input**: Detail about the user as mentioned in the description.
- **Output**: Confirmation of registration status and a membership number (Institute Id) and password will be and mailed to the user.
- **Processing**: All details will be checked and if any errors are found then an error message is displayed else a membership number and password will be generated.

R.1.2 : Login

- **Input**: Enter the Institute Id and password provided.
- **Output**: Users will be able to use the features of software.

R.2 : Patient Portal:

R.2.1 : Patient Information (Profile)

- **Description**: All the personal information of patients will be shown here including last Visit to the Doctor, data of past Disease, Name and Specialization of Visited Doctor.

R.2.2 : Search

- **Input**: Enter the date of visit or Doctor's name or disease name.
- **Output**: List of dates related to keywords.

R.2.3 : Medicines

- **State**: List of medicines prescribed will be shown datewise.
- **Description**: Patient can view the prescribed and provided quantity of medicines.

R.2.4 : Feedback

- **Input**: Feedback of doctor (some common questions regarding mental support etc.).
- **Output**: Feedback will be sent to the Admin portal anonymously only containing the details of the doctor.
- **Description**: Patients can give their suggestions for improvement of facilities in dispensaries.

R.3 : Doctor Portal

R.3.2 : Personal information

- **Description**: Personal Information of doctor will be shown here.

R.3.2 : Patient information

- **Input**: Enter the patient Id.
- **Output**: Patient information including disease, report will be shown here.

R.3.2 : Prescription

- **Input**: Enter name and Quantity of medicine to be prescribed.
- **Output**: Prescribed medicines sent to the database of patient and medical staff.

R.4 : Medical Staff Portal

R.4.1 : Personal information

- **Description**: Personal Information of staff members will be shown here.

R.4.2 : Prescription

- **Input**: Enter the patient Id.
- **Output**: Prescribed medicine name list including quantities will be shown.

R.4.2 : Update Stock

- **Input**: Enter Quantity of medicine.
- **Output**: Stock will be updated in the database.

R.5 : Admin Portal

R.5.1 : Personal information

- **Description**: Personal Information of Admin will be shown here.

R.5.2 : Doctor Management

- **Input**: Enter Doctor Id.
- **Output**: Doctor details will be shown here.

R.5.3 : Staff Management

- **Input**: Enter Staff member Id.
- **Output**: Staff details will be shown here.

R.5.4 : Patient Management

- **Input**: Enter id of patient.
- **Output**: Patient details will be shown here.

R.5.5 : Stock Management

- **State**: Search the name or Brand of medicine.
- **Input**: Select the medicine.
- **Output**: Stock details of selected medicine will be shown here.

2.4.2)Non-Functional Requirements:

- **Usability:** The system shall allow the users to access it from their phone and laptop or any such device using the web-application. The system uses a website as an interface. Since all users are familiar with the general usage of the website, no special training is required.The system is user friendly and robust which makes it easy to use.

- **Availability Requirement:** The system is available 100% for the user and can be used 24 hrs a day and 365 days a year. The system shall be operational 24x7.

- **Efficiency Requirement:**
  Mean Time to Repair(MTTR): Even if the system fails, it will be recovered within an hour or less.

- **Accuracy:** The system should accurately provide real time information taking into consideration various concurrency issues. The system shall provide 100% access reliability.

- **Performance Requirement** : The information is refreshed depending upon whether some updates have occurred or not in the application. The system shall respond to the member in not less than two seconds from the time of the request submittal. The system shall be allowed to take more time when doing large processing jobs. Responses to view information shall take no longer than 5 seconds to appear on the screen.

- **Reliability Requirement**: The system has to be 100% reliable due to the importance of data and the damages that can be caused by incorrect or incomplete data. The system will run 7 days a week, 24 hours a day.

2.5)User Characteristics:

We have 4 levels of users:

1) User/Patient module :

- View Prescription
- View their medical history.
- Give Feedback

2) Doctor Module:

- Add new prescription (based on latest illness)
- View Patient's medical history

3) Staff Module:

- Register new user
- Add/update details
- Update/View stock
- View latest prescription

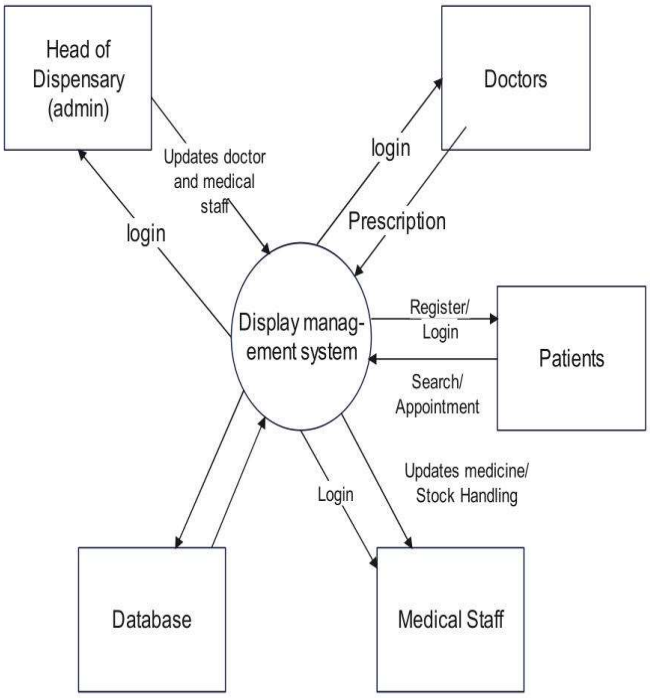
4) Administration module:

- View feedback
- View stock details
- Examine overall functioning

2.6) Constraints:

Any medicine going out of stock should be notified as soon as possible and should be restocked before it goes completely out of stock.

2.7) FLOW DIAGRAM:



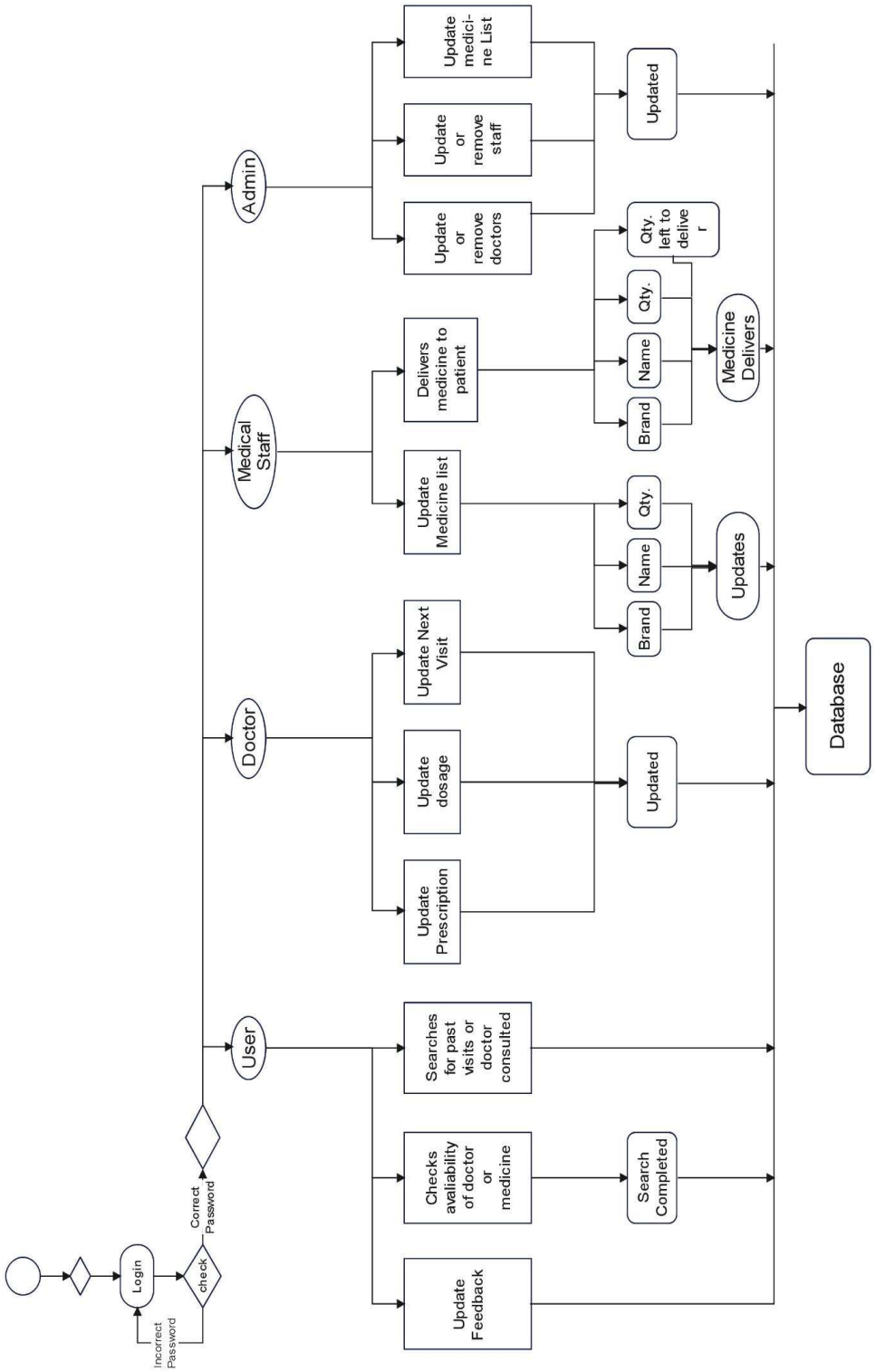
2.8) USE CASE MODEL DESCRIPTION:

Use Case Selection	**Description**
Use Case Name	Add user and visit record
Level	Sub-Functional Level
Primary actor	User and doctor
Stakeholders and interest	User: wants to register into the system ,check his past visit record and give feedback Doctor: wants to check the user history and update about user's visit Admin: responsible for controlling the overall functionality of dispensary, keep a check on doctors and medical staff ,the stock of medicine and entertain the feedback of user. Stock Keeper: Provides prescribed medicine to patients and keeps the check of the quantity of medicine in stock.
Pre-condition	User, Doctor, stock keeper and admin have submitted their registration form.
Post-condition	Record for users visiting has been added.
Main success scenario	1. User/Doctor opens the application to access the services of the DMS. 2.User sign-up to get registered online. 3. He/ She provides correct information and a secret password. 4. He/ She got registered.

Alternative flow	1. User/Doctor opens the website . 2. He/ She tries to sign-up 3. He/ She fails and receives an error of wrong password. 4. He/ She will select to forget the password and can generate a new password to sign-in.
Specific Requirement	1. The response time for registration is 1 minute. 2.The response time for login is 1 minute.

2.9) USE-CASE DIAGRAM:

3.0) ACTIVITY DIAGRAM:



3.1) ER- DIAGRAM: