

PATIENT INVENTORY MANAGEMENT SYSTEM

Team Members:

S. No	Roll Number	Name
1.	2020115082	Shivaani S
2.	2020115062	Ramya R

Abstract

The Patient Inventory Management System is a comprehensive software solution designed to streamline and enhance the management of patient information, medication dispensing, and diagnostic tests within a healthcare facility. This system incorporates features such as patient registration, medication management, pharmacy services, diagnostic test scheduling, and separate login functionalities for healthcare professionals. The separate login mechanisms and role-based access control embedded in the system play a pivotal role in safeguarding patient data. Pharmacists benefit from a secure login system that not only enhances the confidentiality of patient data but also enables them to manage medication inventories with precision and the pharmacists can issue medicines . Furthermore, the system addresses the essential need for efficient diagnostic test management. Healthcare professionals can seamlessly prescribe and schedule diagnostic tests for the patients.

Introduction

In the dynamic landscape of healthcare, the Patient Inventory Management System with Pharmacy and Diagnostic Integration emerges as a transformative solution designed to address the evolving needs of hospitals and healthcare facilities.

This comprehensive project is positioned at the intersection of patient care, medication management, and diagnostic efficiency, aiming to enhance the overall quality, safety, and efficiency of healthcare services. In a healthcare ecosystem where accurate and timely information is paramount, this system offers a streamlined approach to patient management. By facilitating the efficient registration, maintenance, and retrieval of patient records, healthcare providers gain quick access to crucial medical information. This enables them to deliver more personalized and timely care, contributing to improved patient outcomes.

The integration of pharmacy and diagnostics services within the system is a pivotal response to the challenges of medication management. With secure logins and precise inventory control, pharmacists can ensure the accurate dispensing of medications, promoting patient safety and adherence to prescribed treatment plans. The diagnostics incharge will be easily able to assign and bill the patients for tests. In essence, the Patient Inventory Management System with Pharmacy and Diagnostic Integration stands as a beacon of innovation in healthcare technology, offering a holistic solution to the multifaceted challenges faced by modern healthcare providers.

Tech Stack:

Front end: HTML, CSS

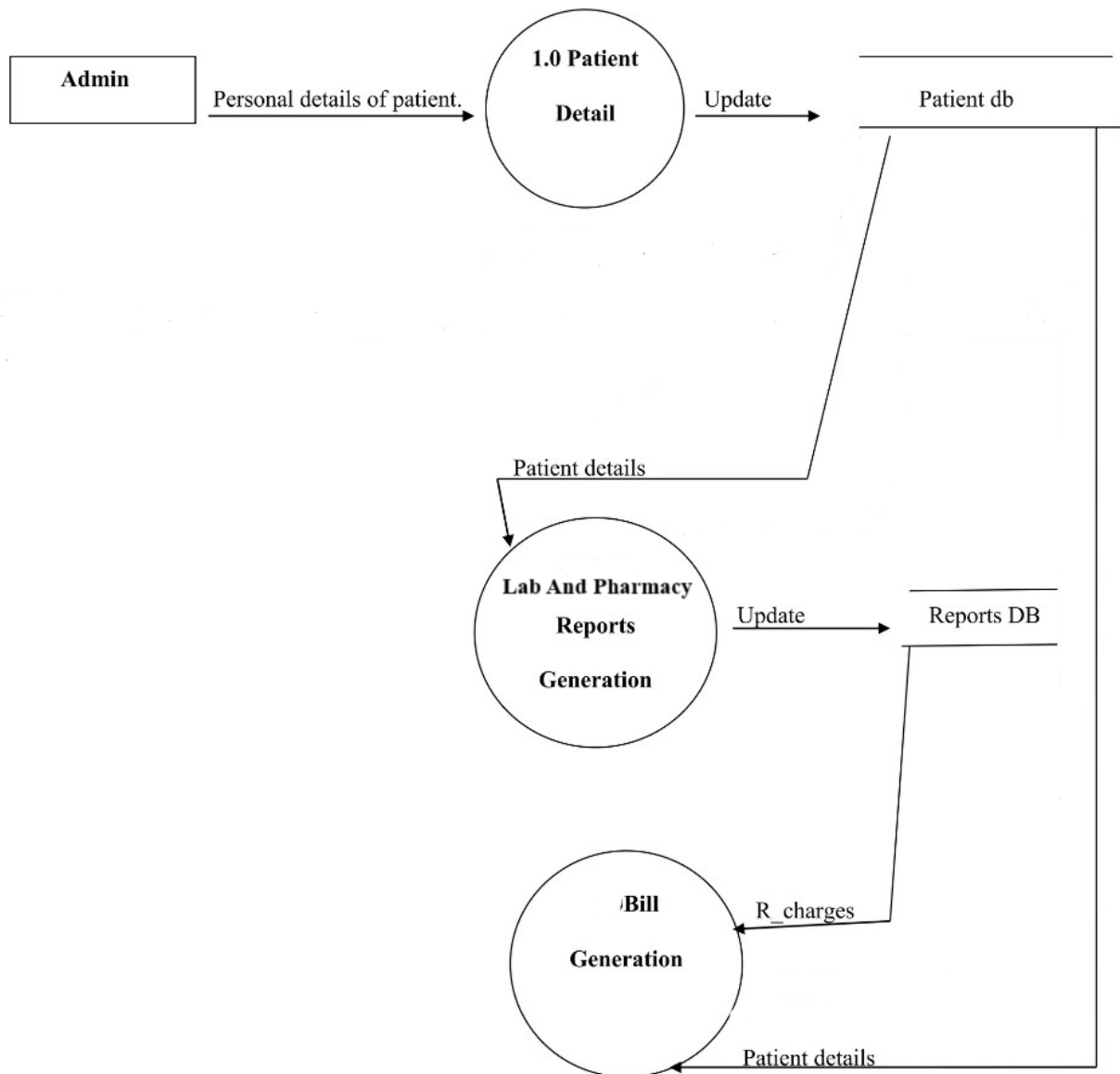
Backend: Flask

Database: SQL Alchemy

Tools Used:

Visual Studio Code, Flask, SQLAlchemy

Architecture Design:



Features and functionalities:

There are three logins:

The usernames and passwords are also validated. All the form fields are also validated.

1. REGISTRATION DESK ADMIN

All the patient records and details are managed by this admin. The detailed functionalities are as follows:

- **Create Patient** : Patient name, id, age, address date of joining, bed type (**General ward/Semi Sharing/Single Room**) city, state is entered in a wtf form and the record is added to the db.
- **Update Patient** : Patients details can be updated by the admin using the id of the patient. All the details filled above can be updated.
- **Delete Patient** : If a Patients record is no longer needed it can be deleted.
- **View Patients:** This tab displays a table of all registered patients so far. The columns of the table are patient id, name, age, date of joining, bed type and address.
- **Search patients:** Patients' details can be searched using patient id
- **Bill Patient Tab:** All the bills of the patients are displayed here. The medication taken and the diagnostic tests costs are displayed and total is calculated. When confirm button is clicked, the patient is said to get discharged and the record is removed from the table.

2. PHARMACY EXECUTIVE

The issual of medicines according to the prescription provided is done by this executive. The detailed functionality descriptions are given below:

- **Issue Medicines** : This person is responsible for issuing the medicines for the patients. Given the patient id, the pharmacy executive can choose the medicine prescribed for him. After the issue medicine button is clicked, a form appears.
- When the patient id is entered the medicine needed for him is displayed.
- A dropdown consisting of all the available medicines is shown.

- Once the prescribed medicine is chosen, the quantity is specified and then button present will be clicked to issue it and its updated in the database for the respective patient.
- The cost for these medicines will be visible at the billing patients tab.

3. DIAGNOSTIC EXECUTIVE

This executive is responsible for conducting the tests for the patients based on the disease/illness. The description is given below:

- **Conduct Diagnostics** : Patient id is to be entered. The respective test that has to be conducted for that particular patient will be displayed.
- On clicking conduct diagnostics a form with a dropdown of the tests will be shown. The prescribed test is chosen along with the cost.
- Once thats chosen it gets added and updated in the database for that particular patient.
- The cost for these tests and medication will be visible at the billing patients tab.

Output Screenshots:

LOGIN PAGE:

My Hospital Management System

Home Login

Login

12345678@A

login

Heart icon with pulse line

Facebook, Twitter, LinkedIn, Email icons

REGISTRATION DESK ADMIN SIDE:

- Creating, Updating And Deleting Patient Details :

Patient Registration

ssn id

SSN ID

patient name

Patient name

patient age

Age

enter date

25-11-2023

bed type

General ward

enter address


Address

Select State

Select State

Select City

create

 Reset

Update patient

Patient ID

111111119

SSN_ID

999858777

patient name

Varsha

patient age

32

enter date

03-07-2020



bed type

General ward



enter address

255 Church Street

Stored State

Kerala

Update State

Select State



Stored City

Thiruvananthapuram

Update City

- View Patient Details :

My Hospital Management System

Home

Patient ▾

Pharmacy ▾

Diagnostics ▾

Logout

Filter by Patient ID

Patient ID	Name	Age	Address	DOJ	Room Type
111111111	John Wick	38	Beach House, Benipur , Bihar	2020-06-24	General ward
111111113	Vignesh	22	2855 Island Avenue, Sanvordem , Goa	2020-06-17	single room
111111115	Sara	42	105 Brookfield Avenue, Bangarpet , Karnataka	2020-06-30	General ward
111111116	Vijay	21	Silverline Street, Yercaud , Tamil Nadu	2020-07-01	Semi sharing
111111117	Shiva	25	2855 Island Avenue, Daman , Daman & Diu	2020-07-03	General ward
111111118	Ramya	11	2855 Island Avenue, Bangalore , Karnataka	2020-07-03	Semi sharing
111111119	Varsha	32	255 Church Street, Thiruvananthapuram , Kerala	2020-07-03	General ward
111111120	ABC	23	Guindy, Chennai , Tamil Nadu	2023-11-25	General ward
111111121	Shivaani	21	Nandanam, Chennai , Tamil Nadu	2023-11-25	General ward

9 Patients in Record!

- Search For Patient Details:

patient found

Search for Patient

Patient id

111111113

Search

Patient id

111111113

Patient name

Vignesh

Age

22

Admission date

2020-06-17

Bed type

single room

Address

2855 Island Avenue

State

Goa

- **Displaying The Patient's Bill:**

Current Patient ID: 111111120

Patient Details

Patient ID	Name	Age	Address	DOJ	Room Type
111111120	ABC	23	Guindy, Chennai , Tamil Nadu	2023-11-25	General ward
📅 No. of days: 0-00-00			🏠 Room Charges: ₹0-00-00		

Medicines Issued

Medicine ID	Medicine	Quantity Issued	Rate of Medicine	Total Amount
6	Tolnaftate	2	320	640
📄 Bill for Medicines: ₹640				

Diagnostics Charges

Test ID	Test Name	Test Charges
5	X-ray	400
📄 Bill for Diagnostics: ₹400		

Grand Total: ₹1040

Confirm ✓

PHARMACY EXECUTIVE SIDE :

- **Issue Medicines To A Patient:**

Issue Medicine

Amodiaquine || Qty: 100

This field is required.

4

Please enter quantity

Add

DIAGNOSTIC EXECUTIVE SIDE :

- Conduct And Prescribing Diagnostic Tests To A Patient :

Current Patient ID: 11111120

Add Diagnosis

Full body test :- ₹10000

please select a test

Add

Diagnostics Conducted

Conclusion

In conclusion, this Patient Inventory Management System with Pharmacy and Diagnostic Integration stands as a transformative solution, revolutionizing patient care and operational efficiency in healthcare. By seamlessly integrating patient information, medication management, and diagnostic processes, this project ensures precision and easy management in healthcare delivery. From streamlined patient management to secure medication dispensing and diagnostic efficiency, the system addresses critical needs while prioritizing data security and privacy. As a comprehensive tool, it not only enhances the quality of healthcare services but also represents a strategic investment in modernizing and optimizing hospital operations.