Computer Science – Criteria B- Design

DATABASE TABLES:

- Table Name: loginmst

Field Name	Field Type	Properties	Description	Additional characteristics
UserID	int(11)	Not Null	• Unique identification of the user • Created using PHP and inserted in the database	• PRIMARY KEY
UserName	text	Not Null	• Name of the user	
Password	text	Not Null	• Password for User	
OTP	text	Not Null	• For user to change password	

- Table Name: medicinemst

Field Name	Field Type	Properties	Description	Additional characteristics
MediID	int(11)	Not Null	• Unique identification of the medicine • Created using PHP and inserted in the database	• PRIMARY KEY
HSN Code	varchar(64)	Not Null	• An identifier for the medicine	
MedName	text	Not Null	• Name of Medicine	
Company Name	text	Not Null	• Name of Company supplying medicine	
Units	text	Not Null	• Number of Units	

TypeofMedi	text	Not Null	• Categorize the type of medicine • Consists of option tablet, capsule and syrup	
Packingsize	text	Not Null	• Includes number of medicine in one strip	
ItemCategory	text	Not Null	• Shows the category for the medicine • There are preset options	
Schedule	text	Not Null	• Registers the Schedule Status of the medicine	
IsTaxable	text	Not Null	• Checks whether medicine is taxable or not	
CGST	double	Not Null	• Measures CGST on the product	
SGST	double	Not Null	• Measures SGST on the product	
MRP	double	Not Null	• Meaures MRP for the medicine	
Purchase Rate	double	Not Null	• Calculates rate at which medicine is purchased	
Sales Rate	double	Not Null	• Calculates rate at which medicine is sold	

- Table Name: suppliermst

Field Name	Field Type	Properties	Description	Additional characteristics
SupplierId	int(11)	Not Null	• Unique identification of the supplier • Created using PHP and inserted in the database	• PRIMARY KEY
Supplier Name	text	Not Null	• Name of Supplier	

CompanyName	text	Not Null	• Name of Company supplying medicine	
Address	text	Not Null	• Address of Supplier	
City	text	Not Null	• Supplying the company's city details	
MobileNo	text	Not Null	• Mobile Number of Supplier	
EmailId	text	Not Null	• Email ID of supplier	
GSTNo	text	Not Null	• GST Number registered to supplier	
Bank Name	text	Not Null	• Name of Supplier's Bank	
IFSC Code	text	Not Null	• Code for identifying bank and branch details	
Account No	text	Not Null	• Bank account number for the supplier's bank	
Account Name	text	Not Null	• Name affiliated to bank account	

- Table Name: invoicemst

Field Name	Field Type	Properties	Description	Additional characteristics
InvoiceId	int(11)	Not Null	• Unique identification of the invoice • Created using PHP and inserted in the database	• PRIMARY KEY
InvoiceDate	date	Not Null	• Record of the date at which transaction occours	
CustomerName	text	Not Null	• Name of Customer	
Address	varchar(255)	Not Null	• Address of customer	
City	text	Not Null	• Customer's city details	

Mobile	text	Not Null	• Customer's Mobile Number	
RefDoctName	text	Not Null	• Name of reference doctor	
BillAmount	double	Not Null	• Total Bill Amount for customer	
Roundoff	double	Not Null	• Round off amount for customer's purchase to nearest amount	
Net Amount	double	Not Null	• Payment to paid after all deductions are accounted	

- Table Name: medicinedetails

Field Name	Field Type	Properties	Description	Additional characteristics
TrasactionID	int(11)	Not Null	• Unique identification of the transaction • Created using PHP and inserted in the database	• PRIMARY KEY
MediID	varchar(64)	Not Null	• Automatically generated for each medicine • Identification for the medicine	• FOREIGN KEY
TransactionDate	date	Not Null	• The date at which the transaction occurs • Automatically generated	
SupplierId	int(11)	Not Null	• Identification of Supplier • Automatically generated	• FOREIGN KEY
PurchaseDate	date	Not Null	• Date of Purchase	
BatchNo	text	Not Null	• Medicine Batch number	
Qty	int(11)	Not Null	• Qty sold during the transaction	
SalesRate	double	Not Null	• The rate at which	

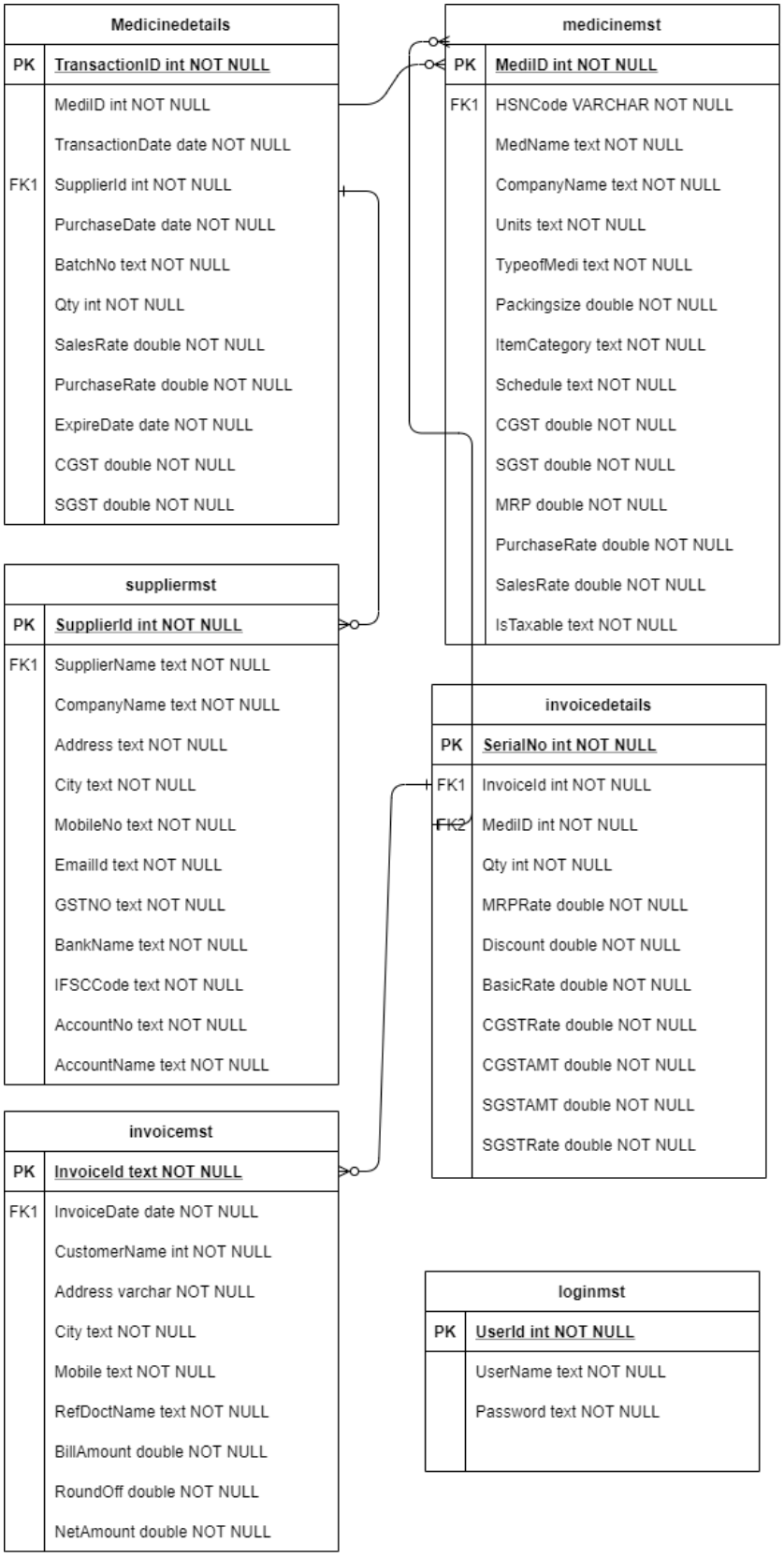
			medicine is sold	
PurchaseRate	double	Not Null	• The rate at which medicine is purchased by the hospital	
ExpireDate	date	Not Null	• Date of Expiry	
CGST	double	Not Null	• CGST Rate	
SGST	double	Not Null	• SGST Rate	

- Table Name: invoicedetails

Field Name	Field Type	Properties	Description	Additional characteristics
SerialNo	int(11)	Not Null	• Unique identification for Invoice generation and stock management • Created using PHP and inserted in the database	• PRIMARY KEY
InvoiceId	varchar(64)	Not Null	• Automatically generated for each medicine • Identification for the invoice generation	• FOREIGN KEY
MediID	int(11)	Not Null	• Identification for the medicine	• FOREIGN KEY
Qty	int(11)	Not Null	• Qty sold during the transaction	
MRPRate	double	Not Null	• MRP rate at which medicine is sold	
BasicRate	double	Not Null	• Standard rate charged for the medicine	
CGSTRate	Double	Not Null	• Rate of CGST	
CGSTAMT	double	Not Null	• Amount of CGST	
SGSTAMT	double	Not Null	• Amount of SGST	

SGSTRate	Double	Not Null	• Rate of SGST	
Amount	double	Not Null	• Net Amount for Medicines	

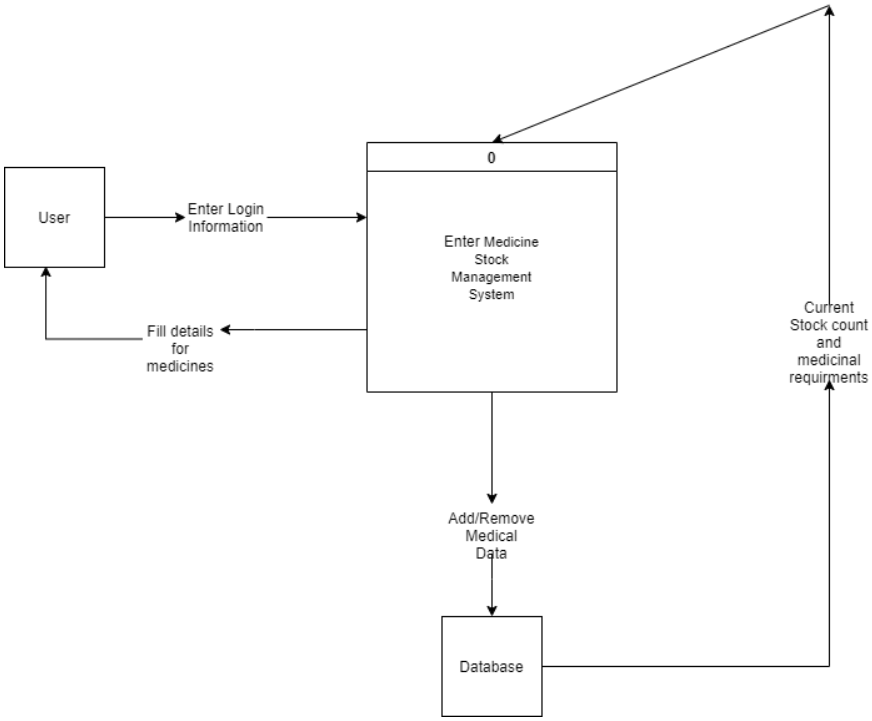
ENTITY RELATIONSHIP(ER) DIAGRAM:



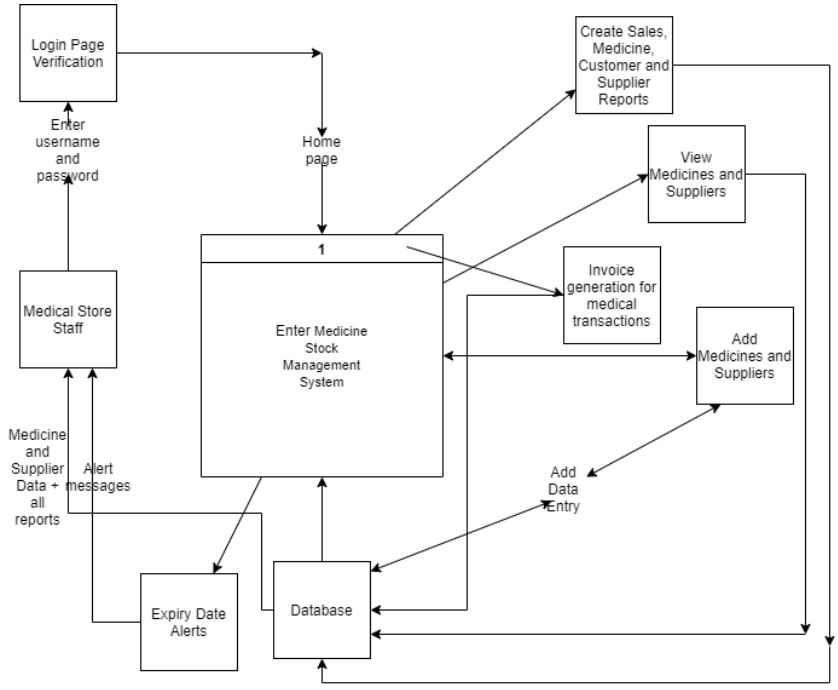
OTP text NOT NULL

DATA FLOWR DIAGRAM(DFD):

Level 0:

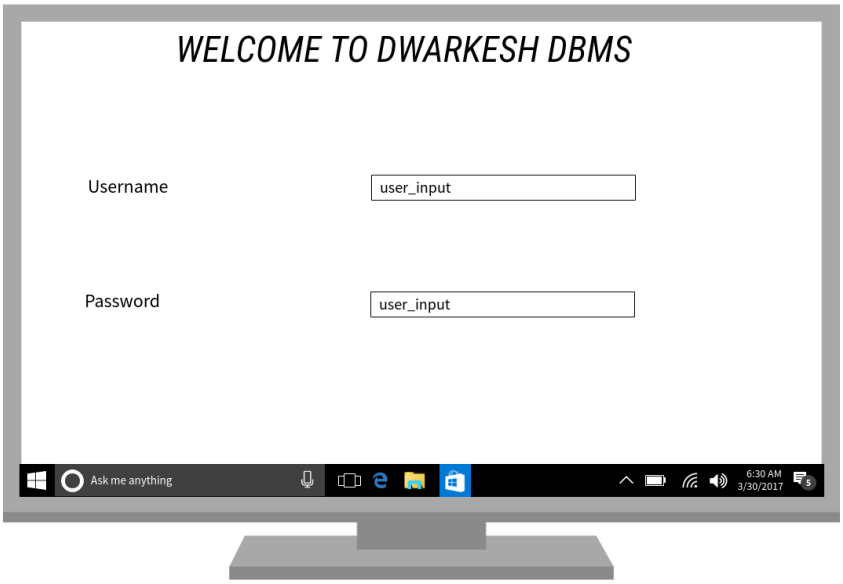


Level 1:

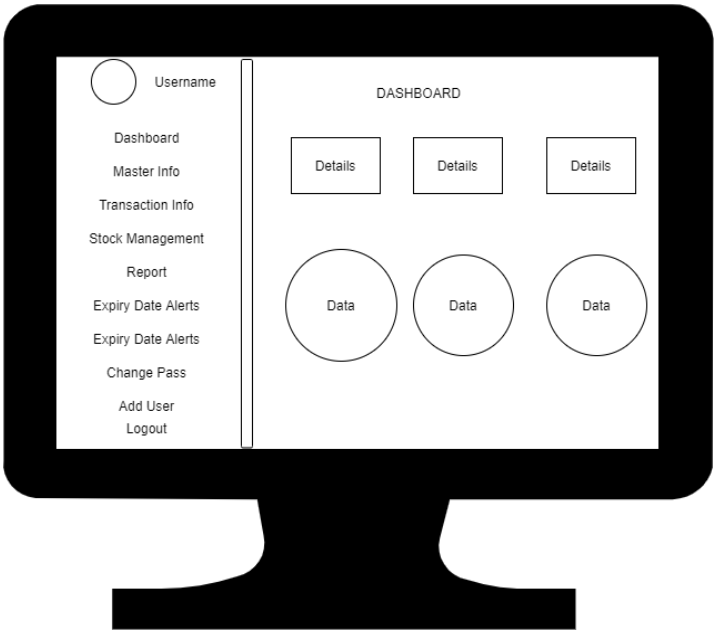


SYSTEM INTERFACE(GUI)

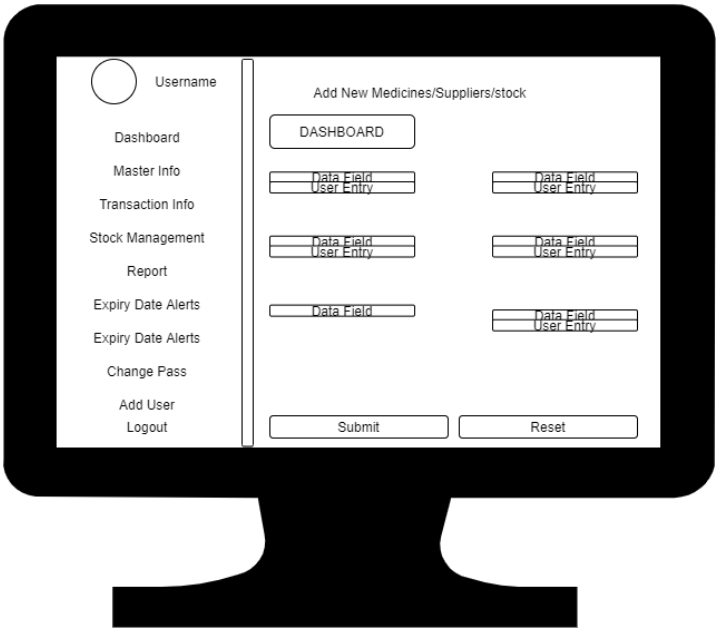
Login Page:



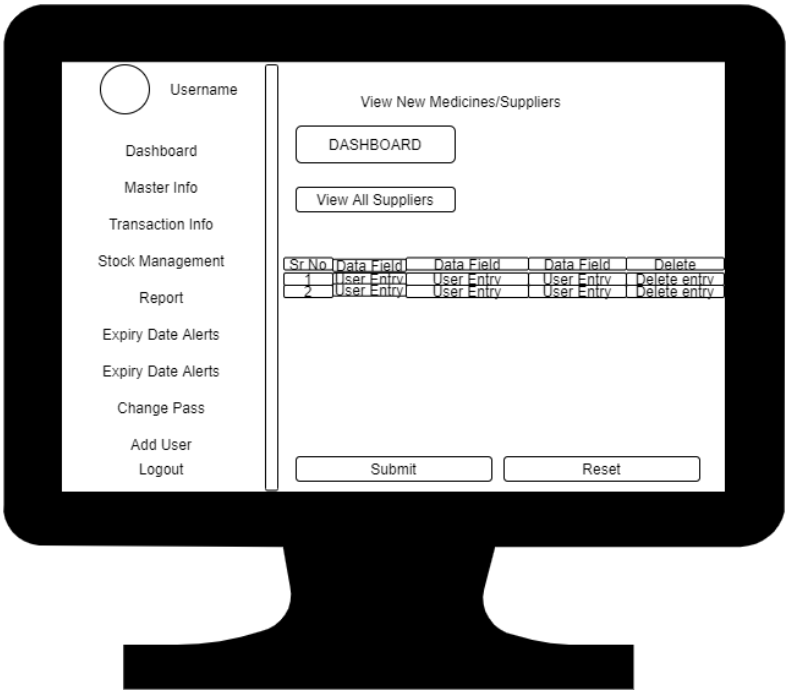
Home Page:



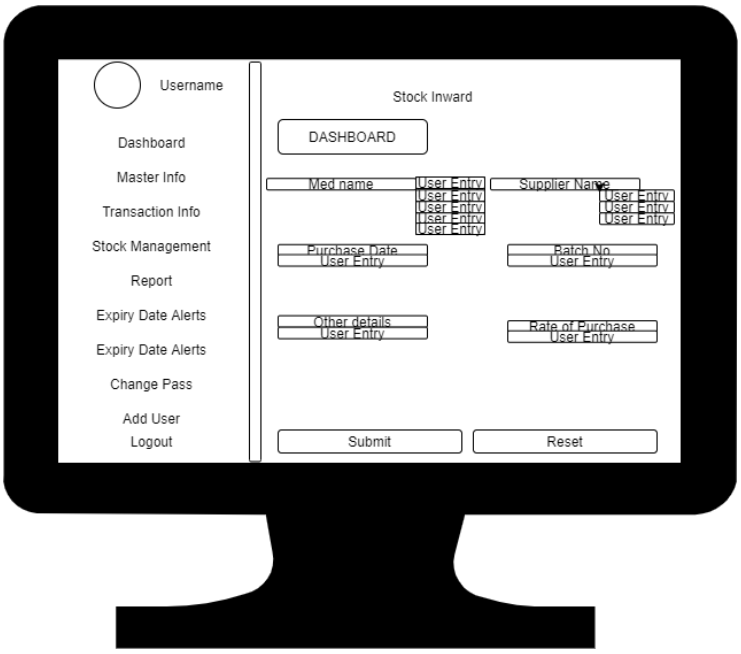
Add Medicine/Suppliers:



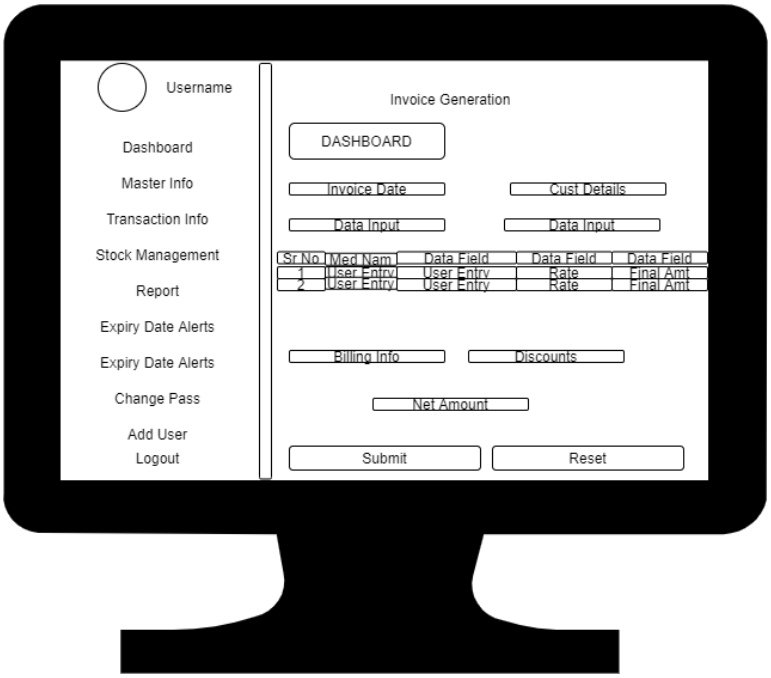
View Medicine/Suppliers:



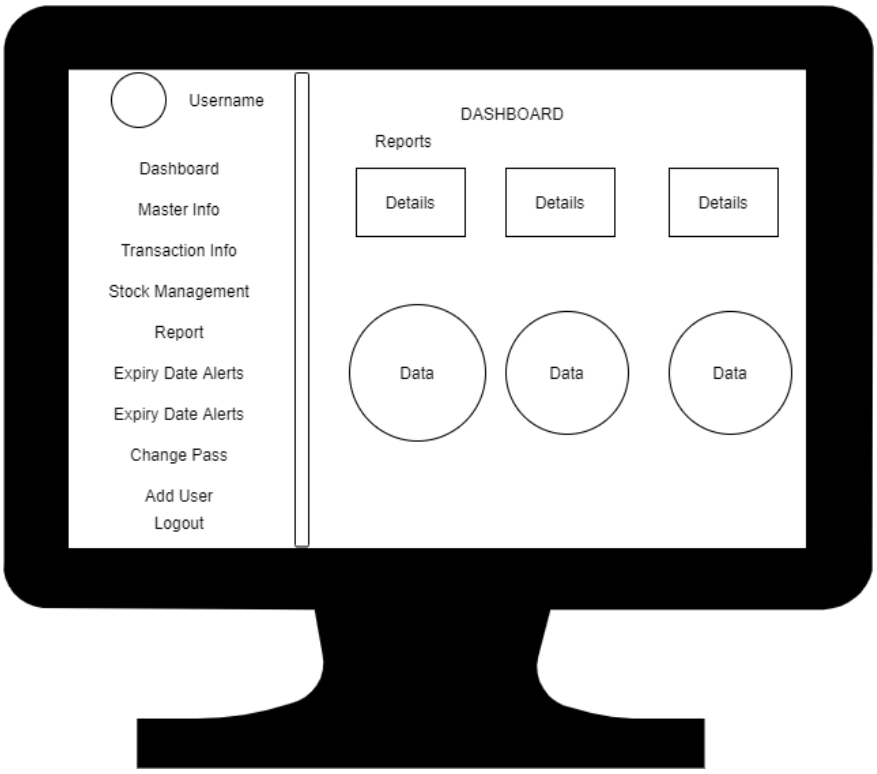
Add Stock:



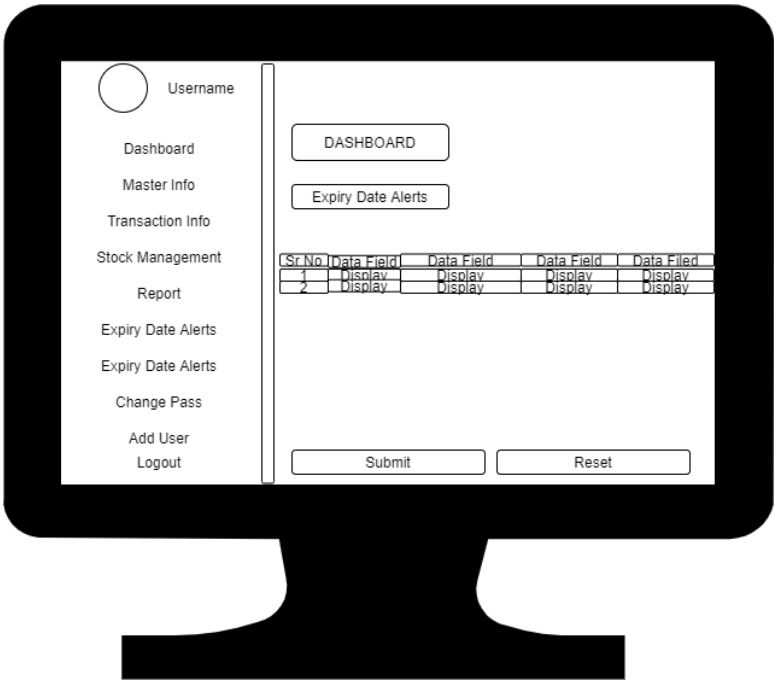
Generate Invoice:



Reports:



Expiry Date Alerts:



Alpha/Beta Testing:

Criterion	Solution	Indicating	Testing
Secure access for the web application	Having Username and Password	Security	Users registered on the database will be able to access the app
Password should not be intercepted by a hacker	Use of PDO to ensure no SQL injection to access data records	Security	Checking login status and not allowing direct entry to the app
User should be able to Change Password	Keep a change password option on the home page	Security	Re-entry of password after changing password
User should be able to seamlessly navigate through the application	Create a Dashboard which has a side menu consisting of all function menus	Feasibility	All function menu buttons should work
Users should be able to understand the use of buttons	The side menu is broken down into categories like “Master Info”,” Transaction” and “Reports”	Feasibility and Organization	The user to reach to the desired pages under the categories on the first try.
User should be able to add or delete medicines and suppliers from the software itself	Create an insert and delete query for the respective databases	Feasibility	Ensuring each query corresponds to the correct database from data needs to be added or deleted

User should be able to view medicines and suppliers	Data is shown from the databases using the by preparing a query and then printing through echo function	Feasibility	Ensure that all data fields from the correct database table are shown
Users should be able to add new stock shipments	Data is extracted from medicinemst and suppliermst. The option values are references through primary keys which are MedicineID and SupplierID	Organization	Users should be able to select relevant suppliers and medicine before adding other fields like date of purchase
Ensuring appropriate calculation for net amount and rates	Using JScript in PHP(<script>), various functions were created to perform calculations	Efficiency	The user inputs for BasicRate, CGST and SGST rate as well as the discount is used to create a final round figure for the net amount.
Update the medicine stock accurately	Using function(Calculate) in Javascript, the sum of purchase quantities and the sales to find the Close Qty using SubQuery in Script	Accuracy	A stock is added to check if Total Purchases increase in the Stock Report and create an invoice to check if quantity is added to the Total Sales. Close Quantity shows final

			amount of medicines
Accurate Invoice generation for customer sales	With data entry of the number of each medicine purchased, discount amount and so on, using “Onclick” submit to guide the user to print the invoice page	Efficiency and Feasibility	The user would be able to view which invoice number pertains to particular customers purchases.
Create appropriate sales reports	Creating a select query from all relevant databases to extract some essential data fields like Invoice No,Invoice Date etc	Efficiency and Organization	The sales report should be successfully saved and printed if required and should display all customer details and invoice numbers. Total revenue generated should also be shown
Create accurate stock reports	Creating a select query from all relevant databases to extract some essential data fields like MediID,MedName ,HSN Code etc	Efficiency and Organization	The reports accurately extracts medicine ID,HSN Code from medicinemst and Qty from medicinedetails databases.
Create accurate	Creating a select	Efficiency and	On adding

Customer Reports	query from all relevant databases to extract some essential data fields like CustomerName,City,Mobile No etc	Organization	customer details in Generate invoice, accurately check if database records from invoicemst are shown in Customer report.
Create accurate supplier reports	Creating a select query from all relevant databases to extract some essential data fields like SupplierName, MobileNo,BankName,IFSC Code etc	Efficiency and Organization	On adding suppliers, the supplier details are selected from suppliermst table.

Word Count: 657 words