

Janaushadhi Database Management System

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1. INTRODUCTION

The pharmaceutical industry has evolved from merely Rs.1500 crores in 1980 to more than Rs.1,19,000 crores by 2012. Medicines in almost every therapeutic category are sold primarily as branded drugs, at disproportionately very high prices.80% of out-patient care and 60% of all in-hospital care occurs at private facilities in India and majority of households are exposed to a private-sector market to buy drugs.

'Ensuring the availability of quality medicines at affordable prices to all' has been the key objective of the Department of Pharmaceuticals, Government of India. Hence, it has launched 'Jan Aushadhi' as a direct market intervention strategy where the high quality generic medicines would be sold at low prices. Such medicines would be equivalent in potency and efficacy to expensive branded drugs.

This project primarily directs towards providing online web facility to all its customers under Jan Aushadhi Scheme for efficient distribution of generic medicines under prescription throughout the country mainly focusing on rural areas where citizens are deprived of basic knowledge about the consumption of proper drugs and their compositions.

Through Jan Aushadhi system can be managed by categorising the activities performed by the client, admin and the salesman with a simple and user friendly

ABSTRACT

The pharmaceutical industry has evolved from merely Rs.1500 crores in 1980 to more than Rs.1,19,000 crores by 2012. Medicines in almost every therapeutic category are sold primarily as branded drugs, at disproportionately very high prices.80% of out-patient care and 60% of all in-hospital care occurs at private facilities in India and majority of households are exposed to a private-sector market to buy drugs. According to NSO estimates, up to 79% of health care expenses in rural areas are due to the cost of medicines. Thus, access to low-priced generic drugs is very critical in ensuring health care at affordable prices.

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KEYWORDS: *Janaushadhi, Database, Medicine, Supplier, customer*

application. Medicines of all genres are accepted and dispatched easily with the ease of this application.

It is a well-known fact that branded medicines are sold at significantly higher prices in India. Given the widespread poverty across the country, making available reasonably priced quality medicines in the market would benefit everyone especially the poor and the disadvantaged. This has always been a major concern and this is achieved by a novel project "Jan Aushadhi" launched by Government of India in the year 2008 for the noble cause-Quality Medicines at Affordable Prices for All. The campaign was undertaken through the sale of generic medicines through exclusive outlets namely "Jan Aushadhi Kendra" in various districts of the country.

This project can be widely used by all citizens of India and shall be accessible at their fingertips using an internet connection. It also persuades government doctors to prescribe generic drugs with proactive help from State Governments.

1.1 EXISTING SYSTEM

Here a form is given to the patient in which he/she has to fill their details such as name, city, contact details, prescription etc. Here the record of transactions of the patient, salesman and the admin is maintained in record books rather than in an equipped database server.

1.1.1 PROBLEM STATEMENT

- Time-consuming.
- Chances of obtaining inaccurate information.
- Doubled efforts in seeking proper help and assistance to approach med stores.
- Leads to lack of knowledge in the intake of drugs.
- Causes travel expenses.
- May lead to out of stock conditions.
- Many times patient is prone to take the wrong dosage and composition of medication without adequate information during the period of buying the drug.

1.2 PROPOSED SYSTEM

Jan Aushadhi management system is a web-based management system that is developed for patients under this scheme to manage their medicine orders in an automated manner.

First on the website its necessary to make sure that only admin is able to change the system's data. So in this system, admin id and password is used and without the knowledge of admin id and password, none can enter into the system's data. Therefore the data is totally secure here and it's not possible for any patient or salesman to manipulate data like insertion, deletion, modification, and updating of record. Authentication is provided to every actor involved in the system and any unauthorized user does not get access to any extra information from the admin site.

1.3 HARDWARE REQUIREMENTS

- Processor – i3 or i5
- RAM – 2GB
- Hard Disc – 80GB

1.4 SOFTWARE REQUIREMENTS

- Programming Language: C#, .NET
- Storage: SQL Server Management Studio 2014
- Front end language: C#
- Operating System: Windows 7 and above

1.5 FUNCTIONAL REQUIREMENTS

A functional requirement document defines the functionality of a system or one of its subsystems. It also depends upon the type of software, expected users and the type of system where the software is used. Functional user requirements may be high-level statements of what the system should do but functional system requirements should also describe clearly about the system services in detail.

- **ADMIN:** Authentication to be done while admin enters into the portal and website asks for the admin id and password for authentication purpose.

The administrator is responsible for every update and addition of information about medicines, salesman etc.

- **CLERK:** The customer or the patient under the Janaushadhi scheme can be managed with the help of this module.

The entry of the new patient with their detail profile and contact information can be done through this module, and information will be stored in the database for further use and avoid duplication.

- **SUPPLIER:** The supplier here functions as a delivery man for the dispatch of medicines to respective customers.

He/she will be allocated with a respective patient id to who he must deliver the respective medicines.

- **CUSTOMER REGISTRATION:** The customers who mostly wish to enter their prescription for the delivery of medicine need to register thro clerk who enters the name, address, mobile number, email id and so on.

A prescription through registration online becomes reliable, as it is easy to maintain the record in an organized way where there is no loss of data.

Mobile no of the customer is taken for authentication purpose.

Admin needs to check the customer's registration and update the details in the database.

Patients can view their previous orders as well.

- **SALESMAN REGISTRATION:** The salesman who is involved in delivering the medicine package need to register for the first time using the name, address, mobile number, and so on.

A salesman can also send a conformational mail while the item is being shipped to the customer's email-id.

Admin needs to keep in control of their orders and regularly check new salesman registrations.

1.6 NON-FUNCTIONAL REQUIREMENTS

Non-functional requirements are constraints that must be adhered to during development. They limit what resources can be used and set bounds on aspects of the software's quality.

- **Usability:** The application which we are developing is going to be used by the customer or the stakeholders. This is going to help them in predicting the order of processing books.

- **Efficiency:** Our application takes less time to accomplish a particular task such as placing orders which also reduces time complexity. It reduces the complications when information has several functionalities thus increases the efficiency.

- **Reliability:** The application that we are designing is designed to deliver a set of services as expected by the users. The application provides many modules and each module is developed to satisfy the non-functional requirements by the customer.

- **Maintainability:** The application that we are developing is going to provide a high-performance measures, for example, the data updates are done automatically without loss of data that already exists.

2. SYSTEM DESIGN

The most creative and challenging phase of system development is System Design. It provides the understanding and procedural details necessary for implementing the system recommended in the feasibility study. Design goes through the logical and physical stages of development. In designing a new system, the system analyst must have a clear understanding of the objectives, which the design is aiming to fulfill. The first step is to determine how the input is to be produced and in what format. Second, input data and master files have to be designed to meet the requirements of the proposed output. The operational

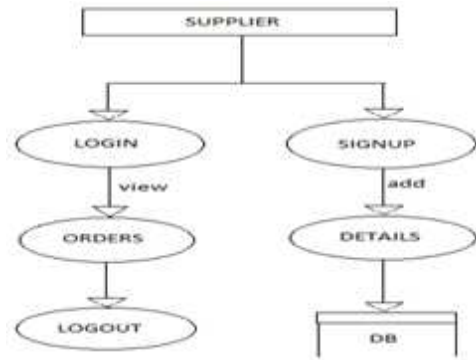
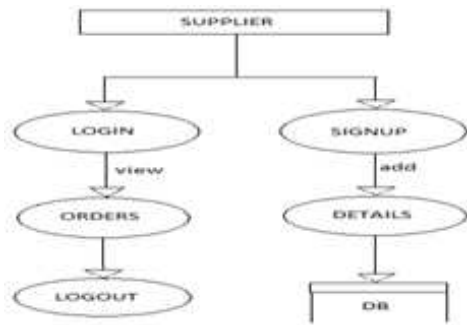
phases are handled through program construction and testing.

2.1 DATA FLOW DIAGRAM

A data flow diagram (DFD) is a diagram that describes the flow of data and the processes that change data throughout the system. It's a structured analysis and design tool that can be used for flowcharting in place of or in association with information.

2.1.1 DATA FLOW DIAGRAM FOR SUPPLIER

Here, the supplier can register himself newly or may directly login to the portal and view his orders issued by the admin and correspondingly deliver them to the customer or the patient who has placed the order along with the prescription and the quantity.

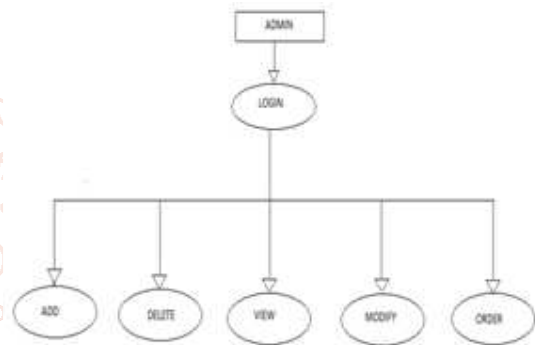


2.1.3 DATA FLOW DIAGRAM FOR ADMIN

Here, the admin is already registered and first login to the portal to perform respective operations. Admin can add clerk and supplier and therefore delegate the task respectively. Any manipulation in the record is in the hands of the admin only

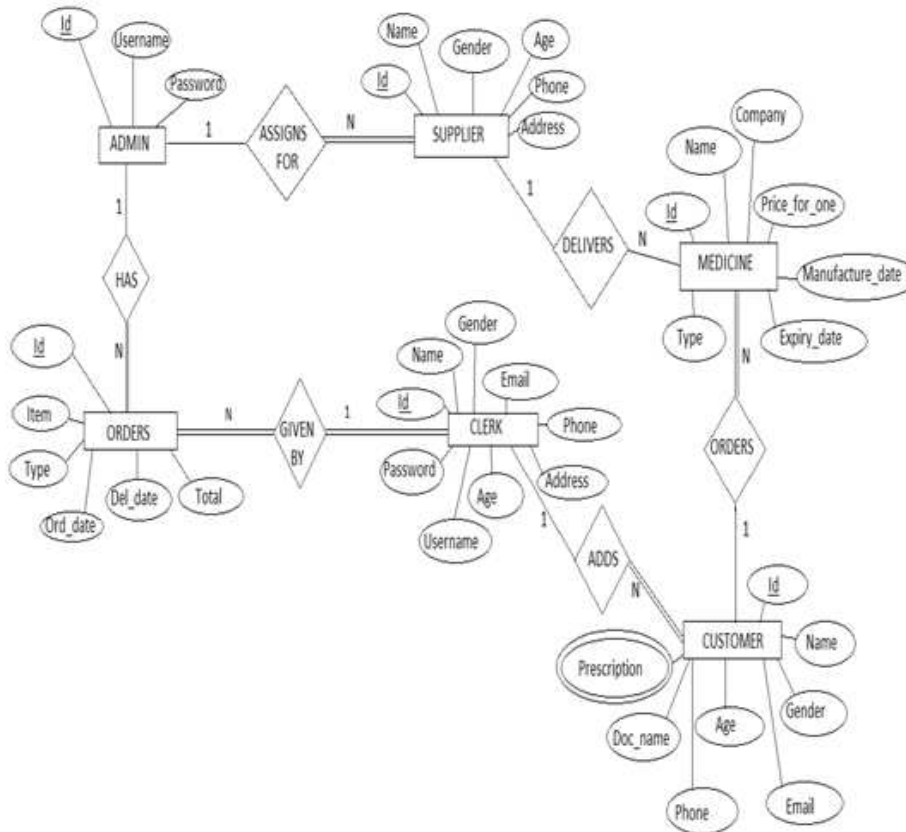
2.1.2 DATA FLOW DIAGRAM FOR CLERK

Here, the clerk first login to the portal and with his help the customer or patient can register himself with his personal details if he is a new user or can directly login and enter his prescription and also view his details.



2.1.4 ENTITY RELATIONSHIP DIAGRAMS

Entity Relationship Diagrams (ERD) illustrates the logical structure of databases.



2.2 TABLE DESCRIPTION TABLES



ORDERS



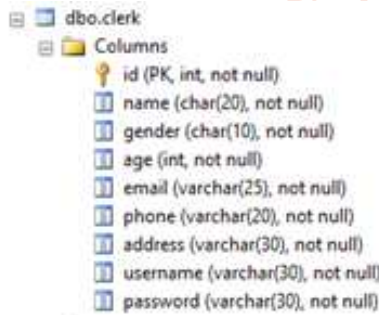
ADMIN



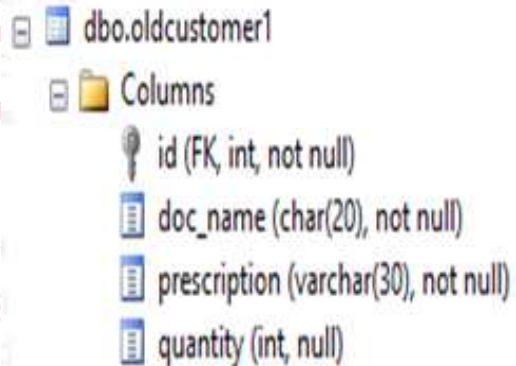
SUPPLIER



CUSTOMER



OLD CUSTOMER



CLERK



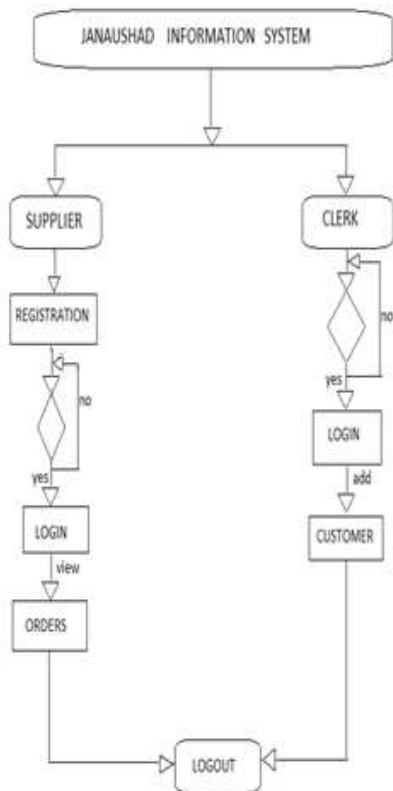
MEDICINE



This portal mainly consists of 8 tables:

- Admin uses username and password where he logs in and performs addition, deletion, updating operation on table data.
- Clerk by entering the personal details and logins into the system to perform customer transaction operations.
- Customer newly registers himself by providing personal details stored with respect to the semantics of this table.
- Supplier table consists of all the personal details of the supplier supplying the medicine package.
- The old customer table is composed directly of the prescription provided which does not require any personal registration details.
- Medicine table comprises of all the details regarding prescribed medicine and through which clerk order is placed.
- Order table consists of all details regarding orders placed like the patient id, salesman id, clerk and also any update or deletion and addition is allowed to the admin on this table.

2.3 FLOW CHART



performing the required action on the table that they are assigned to.

3.1.1 TRIGGER CODE

```
ALTER TRIGGER [dbo].[cusbill] on [dbo].[medicine]
```

```
AFTER INSERT
```

```
AS
```

```
BEGIN
```

```
declare @id int;
declare @name char(20);
declare @type char(20);
declare @company varchar(20);
declare @price float;
declare @quantity int;
```

```
select @id = medlist.id from inserted medlist;
select @name = medlist.name from inserted medlist;
select @type = medlist.type from inserted medlist;
select @company = medlist.company from inserted medlist;
select @price = medlist.price from inserted medlist;
select @quantity = medlist.quantity from inserted medlist;
```

```
INSERT INTO billing(id,name,type,company,price,quantity)
VALUES(@id,@name,@type,@company,@price,@quantity);
```

```
END
```

3.1.2 STORED PROCEDURE CODE:

```
CREATE PROCEDURE view_med
```

```
AS
```

```
BEGIN
```

```
SETNOCOUNTON;
```

```
SELECT*from medicine
```

```
END
```

3. DATABASE TECHNIQUES AND RESULTS

3.1 TRIGGER

A trigger is a special kind of a stored procedure that executes in response to certain action on the table like insertion, deletion or updating of data. It is a database object which is bound to a table and is executed automatically. You can't explicitly invoke triggers. The only way to do this is by

4. TESTING

The purpose of testing is to discover errors. It's the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub-assemblies, assemblies and/or a finished product. It's the process of exercising the software with the intent of ensuring that the software system meets its requirements and user expectations and doesn't fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement

Test Case ID	Test case name	Test case Description	Test steps				Test Status Pass/ fail
			Step	Input given	Exp OP	Actual Input	
TC01	Registration	To check that all user has entered all the details	Registering with Supplier/ Customer	Details for registration	Registration is Successful	Registration is Successful	Pass
	Registration	To check that all user has entered all the details	Registering with Supplier/ Customer	Details for registration missing	Registration is Successful	Registration is Unsuccessful	Fail
TC02	Login	To verify admin/ Clerk/ Supplier is already registered	Admin/ Clerk/ Supplier login	Username and password	Login Successful	Login Successful	Pass
	Login	To verify admin/ Clerk/ Supplier is already registered	Admin/ Clerk/ Supplier login	Username and password	Login Successful	Error/ Un registered are not allowed	Fail
TC03	Delete and View	Admin can login and they can delete/view	Delete/view the Customer/ Clerk/ Medicines/ Supplier	If details are stored	Deleted/ View Successful	Deleted/ View Successful	Pass
	Delete and View	Admin can login and they can delete/view	Delete/view the Customer/ Clerk/ Medicines/ Supplier	If details Are not stored	Deleted/ View Successful	Deleted/ View Unsuccessful	Fail

5. SNAP SHOTS



Fig 5.1 Home page



Fig 5.6 Delete option page



fig 5.2 Login Page



Fig 5.7 Modify option page



Fig 5.3 Admin Login Page



Fig 5.8 View option page



Fig 5.4 Admin Option page



Fig 5.9 Order page



Fig 5.5 Add option page



Fig 5.10 View customer page



Fig 5.11 Clerk login



Fig 5.16 Customer registration page



Fig 5.12 Customer



Fig 5.17 Supplier login Page



Fig 5.13 Supplier registration page

CONCLUSIONS

The various roles which can be assigned are admin, clerk, and salesman. Financial transactions can be made securely and integrated into the existing accounting software. Rural villagers can also access the portals safely and order medicines for door delivery. Transactions are extremely safe since only one hand (admin) is involved in the manipulation of any record of customer or patient. Any supplier can register himself to voluntarily work in delivering packages and also has easy access to his orders through this portal.

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Fig 5.14 Supplier view page

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Fig 5.15 Customer login page